

CASE RECORDS AND COMMENTARIES

IN

OBSTETRICS AND GYNAECOLOGY

SUBMITTED BY

DR. CALLEB G.H. OBONG'O

TO

THE UNIVERSITY OF NAIROBI, KENYA

AS

PART FULFILLMENT OF THE REQUIREMENTS

FOR

MASTER OF MEDICINE DEGREE

IN

OBSTETRICS AND GYNAECOLOGY

APRIL, 1989

University of NAIROBI Library



0390297 0

UNIVERSITY OF NAIROBI
LIBRARY

TABLE OF CONTENTS

	<u>PAGE</u>
Book Cases	1-11
Acknowledgements	iii
Dedication	iv
Declaration	v
Certification	vi
Introduction	1

OBSTETRIC SHORT CASES

	<u>PAGE</u>
1. Premature Rupture of Membranes. Conservative management, Live Baby Delivered at term	18
2. Cervical Incompetence. McDonald Stitch put. Live baby Delivered at term	24
3. Polyhydramnios with fetal malformation. Labour induced successfully	32
4. Umbilical cord prolapse. Emergency Caesarean Section done, live baby delivered.	39
5. APH with placenta previa type III. EUA and Caesarean Section done, Live baby delivered.	46
6. An anticipated breech presentation in second stage, vaginal delivery to live baby.	54
7. Trial of Scar, successful vaginal delivery to live baby.	61
8. Intrauterine fetal death. Induction of labour extramniotic prostaglandin and syntocinon successful delivery	68
9. Cardiac disease in pregnancy Grade II Vaginal delivery at term	76
10. Diabetes Mellitus in Pregnancy, Live baby Delivered at term	85
11. Hypertensive Disease in Pregnancy; foetal distress at term, live baby delivered.	95
12. Rhesus Isoimmunization, live baby delivered at term.	103
13. Malaria in pregnancy: premature labour and live twin deliveries	110
14. Triplet Gestation with malpresentation. Caesarean Section done at term and live babies delivered.	118
15. An anticipated P.P.H.; Active management third stage	125

LONG COMMENTARY IN OBSTETRICS

132

GYNAECOLOGY SHORT CASES

	<u>PAGE</u>
1. Incomplete abortion: Uterine Evacuation done.	170
2. Ectopic tubal pregnancy: Emergency Laparotomy done.	177
3. Hydatidiform mole induction of labour and Suction curratage done.	185
4. Pelvic Abscess: Laparotomy and drainage done.	193
5. Bartholin's Abscess: Marsupilization done.	200
6. Infertility: Bilateral Salpingostomy done.	206
7. Multiparity: Laparoscopic Tubal Ligation done.	214
8. Translocated IUCD: Removal at laparotomy.	222
9. Vesico-vaginal fistula: Successful Abdominal Repair.	229
10. Uterine fibroids, Total abdominal Hysterectomy.	238
11. Ovarian Cyst: Cystectomy done.	246
12. Mullerian Dysgenesis, Bilateral Salpingectomy and total hysterectomy done.	253
13. Carcinoma of the cervix stage 18: Wartheim's Hysterectomy and radiotherapy	260
14. Ovarian Cystadenocarcinoma Stage IV: Debulking and Chemotherapy	269
15. Burst abdomen following Total Abdominal hysterectomy: Repair with tension sutures.	277

GYNAECOLOGY LONG COMMENTARY

Knowledge, Attitude and Practice of Contraception (Family Planning Methods) among Teenagers in South Nyanza District, Kenya	285
---	-----

ACKNOWLEDGEMENT

Preparation of this book would not have been possible without contribution of so many people materially and otherwise. It is not possible to mention all by names. I have, however, to record my thanks and appreciation to Professor Ojwang, Chairman of the Department for his invaluable encouragement and that spurred me to completing this book. To Dr. Oyieke, J.B.O., my supervisor, I feel in debt. You have been so available whenever I needed you. The advise and ease with which you always sorted out my problems will remain in my heart. This book would be far from finished if it were not for your speed and sense of commitment. I would also want to record my appreciation to Dr. Sinei S.K. for his encouragement toward finishing this course.

Many sincere appreciation go to our consultants without whose help this course would be a nightmare; to my fellow registrars, doctors, nurses and the patients who have made this learning enjoyable and practical.

I am grateful to Mr. Allen Furgeson of GTZ support of the West German Government for his assistance in preparation of the long Gynaecology Commentary and to the Government for the sponsorship. Without this assistance this project would not have taken off the ground.

I would like to register my thanks to my able assistants Jeremiah Osogo, and Symon Too. The latter spent sleepless night at Pumwani Maternity Hospital to ensure completion of the Obstetric project.

I would also like to register my thanks to the District Education Officer, South Nyanza for allowing me to carry on the research in his schools; and to the Medical Officer of Health, Nairobi City Commission for allowing me the opportunity to do my Obstetric project at Pumwani Maternity Hospital.

Typing of this whole book was done by Florence Ndolo whom I owe unmeasurable gratitude.

DEDICATION

I dedicate this book to my wife, Naomi, our sons, Gregory, Allan and Andrew for their love, understanding and support during this period of training. I will never forget the innocence of these young boys' "bye-bye, see you" no matter how odd the time was, to come back to hospital to finish the book.

To my parents who have been monitoring my progress every single day, for their encouragement.

To my brothers and sisters for their support.

DECLARATION

This is to certify that the case records and commentaries presented in this book are my original work and have not been presented for any degree in any other University. The case records presented here are those of patients managed by myself and long commentaries are projects that were designed and carried out by me under the supervision of Senior members of the Department of Obstetrics and Gynaecology, University of Nairobi, Kenya.

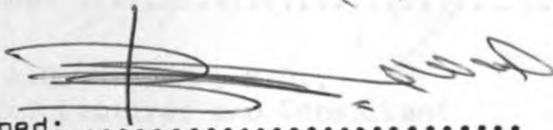
Signed: 

DR. CALLEE G.H. OBONG'O M.B.Ch, B.

Date: APRIL, 1989

CERTIFICATE I

This is to certify that Obstetrics cases numbers
1,2,3,10,11 and Gynaecologic cases Numbers
13.14 were treated and/or operated upon
by Dr. Caleb G.H. Obong'o under my guidance and supervision
during his training for a Master of Medicine degree in
Obstetrics and Gynaecology at the University of Nairobi.



Signed:

PROF. S.B.O. OJWANG M.D., M.MED., DIP. GYN. ONCOLOGY
Chairman
Department of Obstetrics and Gynaecology
College of Health Sciences
University of Nairobi

28.6.89.
Date

CERTIFICATE 2

This is to certify that Obstetric cases Numbers
6,8,12 and Gynaecologic cases numbers 1,3,7
were treated and/or operated upon by Dr. Calleb G.H. Ubong'o
under my guidance and supervision during his training for a
Master of Medicine degree in Obstetrics and Gynaecology at
the University of Nairobi, Kenya.

Signed: 

DR. A.E. MAKOKHA, M.D.,
Senior Lecturer and Consultant
Department of Obstetrics and Gynaecology
College of Health Sciences
University of Nairobi.

Date

CERTIFICATE 3

This is to certify that Obstetric cases numbers 4,5,14 and Gynaecological cases Numbers 9,10,15,11 were treated and/or operated upon by Dr. Caleb G.H. Obong'o under my guidance and supervision during his training for a Master of Medicine degree in Obstetrics and Gynaecology at the University of Nairobi, Kenya.



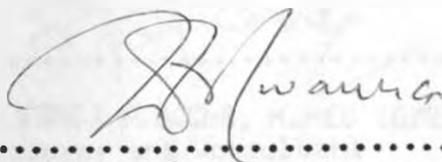
Signed

DR. J.B.C. GYIEKE, M.B. ChB, M.MED (G/G), C.F.P. (Shfa).
Senior Lecturer and Consultant
Department of Obstetrics and Gynaecology
University of Nairobi

Date 28.6.89.

CERTIFICATE 4

This is to certify that Obstetric cases Numbers 15,7
and Gynaecological cases Numbers 4,5,12
were treated and/or operated upon by Dr. Caleb U.H. Obong'o
under my guidance and supervision during his training
for a Master of Medicine degree in Obstetrics and Gynaecology
at the University of Nairobi, Kenya.



Signed:

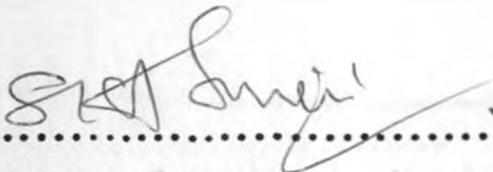
DR. W. MWAURA, M.B., B.S., M.MED (O/G)
Chief Government Consultant
Division of Obstetrics and Gynaecology -
Kenyatta National Hospital .

Date 28th June 1989

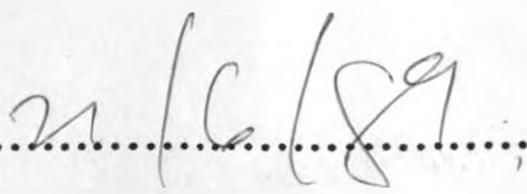
(x)

CERTIFICATE 5

This is to certify that Obstetric cases numbers 9,13
and Gynaecological cases Numbers 2,6,8
were treated and/or operated upon by Dr. Caleb G.H. Obong'o
under my guidance and supervision during his training
for a Master of Medicine degree in Obstetrics and Gynaecology
at the University of Nairobi, Kenya.

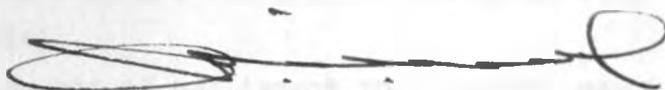
Signed: 

DR. S. K. SINEI M.B.ChB, M.MED (O/G)
Senior Lecturer and Consultant
Department of Obstetrics and Gynaecology
University of Nairobi

Date 

CERTIFICATE 6

This is to certify that the long commentaries in Obstetrics and Gynaecology were designed and written by Dr. Caleb G.H. Ubong'o under my supervision and guidance . during his training for a Master of Medicine degree in Obstetrics and Gynaecology at the University of Nairobi, Kenya.



Signed:

DR. J.B.C. OYIEKE M.B.ChB M.MED (O/G), C.F.P. (Shfd).
Senior Lecturer and Consultant
Department of Obstetrics and Gynaecology
University of Nairobi

28. 6 89.

Date:

INTRODUCTION

All the short cases in this book were done in the Department of Obstetrics and Gynaecology of Kenyatta National Hospital between the years 1985 and 1989.

Kenyatta National Hospital is a National Referral Hospital receiving patients from all over the country. It also offers services to patients needing special care from other neighbouring countries. It has a bed capacity of about 1500.

The hospital also accomodates the Medical School for undergraduate and postgraduate training as well as training of the paramedical staff. Curative and tuition services are offered by lecturers from the Nairobi University as well as doctors from the Ministry of Health working at the Hospital.

By act of parliament the hospital now has assumed a parastatal status and it is envisaged that it will be able to generate some income from charges on patients. This obviously will make the services rendered better.

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

This is amongst many Departments at Kenyatta National Hospital.

The department is manned by consultants, Senior Registrars, Registrars, Medical Officers in Casualty Department and Interns.

Other than the provision of curative services the department plays a role in family planning services. It is also actively involved in Research work in Human Reproduction and other related field within the community and within the hospital.

It is a department among others which train medical officers.

In collaboration with John Hopkins University in U.S.A. it offers 'up date' training to specialists here and from other countries in Diagnostic Laparoscopic techniques and contraception.

The department comprises of Obstetric and Gynaecological units, for management purposes, the staff in the department are divided into three teams:-

a. ACUTE OBSTETRIC TEAM

This is made up on any given day of 1 intern working for 12 hours and changes with another who also covers for 12 hours, 3 Registrars during the day excluding weekends and public holidays (1 registrar manages the labour ward and is always in contact with the second registrar who does caesarian sections both planned and emergencies; the third registrar does tubal ligation in the second theatre). This group works for 12 hours from 8am to 8pm at which time they hand over to the next group. The night group is composed of one registrar and one intern. The registrar manages the labour ward and also does emergency operations. Should there be many emergencies the registrar who was covering theatre two is called upon to help.

For difficult decisions a senior registrar is available all the time for consultation. The senior registrar can also consult the consultant on call. Consultants rotate monthly and senior registrars weekly.

there

Every morning from 8am is a major ward round which is also used as a teaching session for registrars and undergraduate students.

b. ACUTE GYNAECOLOGY TEAM

This also has one intern and three registrars during the day. One registrar manages the acute gynaecological ward, the second does emergency laparotomies and the third does evacuation of uteri dilatation and curettage and other minor procedures.

Again at night there is only one registrar to cover all the procedures. This team is covered by senior registrars and consultants.

At weekends and public holidays only two registrars from each team work.

c. COLD WARD TEAM

This is responsible for the ward used by the patients who have no emergency problems, they are also responsible for the running of the outpatient clinics i.e. antenatal clinic, postnatal clinic and gynaecological clinic.

The team is also responsible for the planned operations (cold operations).

The senior registrars and consultants are the same ones covering the acute teams.

The department has two units:-

1. Gynaecology Unit: This comprises

a. The Clinics

These are on Tuesdays, Wednesdays and Thursdays. On Mondays there is infertility clinic for investigating infertile couples.

The clinics get patients referred from other hospitals and from Casualty. Patients are also seen in these clinics as followups from the gynaecology wards.

Those needing admission are admitted as emergency into our acute wards, or for cold operation in the cold wards.

b. Acute Gynaecological Ward (Ward Six)

This caters for emergency gynaecological emergencies. Patients with carcinoma of the cervix are also admitted in this ward for examination under anaesthesia (EUA) staging and biopsy.

Emergency operations here are done round the clock.

c. Cold Gynaecological Wards (Wards 4 and 5)

These are two but are divided into three firms. Patients are admitted into these wards from gynaecology clinic and also from acute gynaecology wards and other wards.

d. Gynaecology Oncology Ward

This recently opened ward is intended in the near future to accommodate the patients with gynaecological cancers. At present, not all patients go there and is mainly having patients with carcinoma of the cervix radiotherapy and awaiting operation.

e. Rahimtulla Wing

This is where diagnostic laparoscopy, interval laparoscopic and minilaparotomy sterilization are done. These are done on daily basis from Monday to Friday.

f. Family Welfare Clinic

Here many family planning services are done from Monday to Friday. It is run by specially trained nurses and a registrar who have a monthly rotational duties there. The duties of the registrar include teaching medical students and also managing complicated cases resulting from contraceptive use.

g. Gynaecology Room - Casualty

This is manned by the medical officer under direct supervision of the registrar in ward 6. Patients are seen here on unbooked basis. It is also an inlet to unbooked expectant mothers who get admitted for delivery into our labour ward.

Other patients who are seen here either are sent to gynaecology clinic, acute gynaecology ward or treated and discharged.

2. OBSTETRIC UNIT

This is composed of:-

a. Antenatal Clinic

This is where mothers of high risk pregnancy are seen. Bookings are done every monday morning. During their first visit their venous blood are taken for grouping and Rhesus typing, and also for haemogram and Khan test. Urine is checked for protein and sugar. Their blood pressure and their weight are also taken.

Some of the high risk cases that are seen in our clinic include:-

- grand multiparity i.e. para 5 and above
- Young primigravida(teenagers)
- old primigravidas
- Hypertension, Diabetes, renal disease, cardiac disease in pregnancy etc.

- Bad obstetric history e.g. stillbirths
- previous obstetric or gynaecological problems e.g. PPH, VVF, ruptured uterus etc.
- Other obstetric indications like multiple pregnancy, breech etc.

The patient booked will be thoroughly examined and those found to have some problems will be admitted in our antenatal wards; those with no problems will be given appointment to be seen in our clinic on subsequent days.

Unless there is good reason for more frequent visits those ladies with pregnancy of gestation 32 weeks and below will be seen every 4 weeks; between 32 and 36 weeks are seen every 2 weeks; after 36 weeks they are seen every one week.

Urine is tested on every visit and physical examination done.

Primigravidas, patients with Caesarean scars and patients with pelvic deformities must have their pelvis assessed at 36 weeks.

Investigations are done as and when necessary e.g. amniocentesis for assessing foetal maturity, ultrasound scan for placental localisation and for assessing well-being of the fetus, X-ray pelvimetry and others.

Consultation with the members of other disciplines also go on.

b. Antenatal Wards (Wards 1,2, and 3)

The three wards are divided amongst the three firms.

Patients admitted here are those with problems and are admitted for investigations and/or delivery. Elective caesarean sections, placental previa awaiting EUA are but some of the cases.

Patients who have delivered normally and have no problems are discharged after 24 hours; those who had operations are kept for 7 days and cardiac patients are kept for 14 days after delivery. Depending on postpartum condition of the patient the stay can be variable.

6. Post Natal Clinic

Mothers who have delivered in our labour ward are given appointment to be seen in this clinic after 6 weeks.

This is where their condition is assessed by complete physical examination and any of their problems solved. This period also offers them a chance of discussing contraceptive methods.

PROCEDURES MENTIONED

To avoid monotony of mention of some procedures and common abbreviations used in this book, I have decided to write in full and describe the procedures in detail.

a. Pelvic Examination

This type of examination in this book denotes digital vaginal examination only, or speculum examination. Occasionally speculum examination only is indicated as in premature rupture of membranes.

1. Speculum examination

Specula used here are Cusco's and Sims'.

Some of the indications for this examination include antepartum haemorrhage, premature rupture of membranes, during procedure for taking cervical smear and in taking high vaginal swab for microbiology.

A sterile pair of gloves is worn by the doctor; the patient is put in lithotomy position and vulvovaginal toilet done the area is draped with sterile towel. Using the thumb and finger of left hand labia are separated and the genitalia is examined for any abnormality.

Cusco's speculum is then introduced into the vagina under good vision with blades vertical, after introduction the speculum is turned so that the blade is in horizontal position. The valves are then open to visualise the cervix, and vaginal wall. Any abnormality is noted.

Sims' speculum is used in VVF to visualise the anterior vaginal wall, cervical lesions, and bleeding from cervix. It is good in a cervix that bleedseasily because you can insert it without touching the cervix.

In using Sims' a speculum the patient is put in left lateral position with the left leg straight along the couch; the right leg is flexed at the hip and knee joints and pushed towards the chest.

The Doctor holds speculum in the right hand and retracts the patient's right buttock by the left hand so that the introitus is exposed. The speculum is then introduced after lubrication or without lubrication, along the posterior vaginal wall towards the cervix gently under good view. The cervix can be clearly visualised.

Patients with VVF may be put in lithotomy position so as check the site of leakage of urine. This position may also be used for any of the above conditions. The speculum is withdrawn after examination is over.

11. Vaginal examination

Except in cases where digital examination is contraindicated e.g. antepartum haemorrhage, speculum examination is followed by digital examination.

The patient is placed in lithotomy position. The doctor putson mask, scrubs and putson sterile gloves. Vulva is cleaned with antiseptic solution of hibitane. Inspection of the vulva is made, then the right index and middle finger are introduced gently into the vagina.

In obstetric patient cervical dilatation, effacement, position, consistency are noted. Presence of membranes is also noted as is cord, caput, moulding and colour of liquor. When pelvic assessment is required the fingers are slid along the sacral curve till they reach the sacral promontory. Prominence of ischial spine is noted, curvature of sacrum, subpubic angle are also noted. The intertuberosity space is checked whether it can accomodate four knuckles of a closed fist.

All these findings are noted and correlated with estimated foetal weight. Adequacy or otherwise of the pelvis is then arrived at.

b. Conduct of labour

1. First stage

Patients in labour are admitted through labour ward admission room into first stage section of the labour ward.

Full history is taken from the patient who are unbooked or are referred from other hospitals, or clinics.

In all, patients full physical examination is done including an abdominal examination to determine the uterine size, lie and presentation of the fetus. level of

presenting part, contraction of the uterus and normalcy or otherwise of foetal heart.

Vaginal examination is then done as above. If membranes are intact and cervical dilatation is more than 3cm in a mature fetus artificial rupture of membranes (ARM) is done. Here colour of liquor is checked ; cord is checked whether it has prolapsed or it is presenting.

All above observations form the baseline from which subsequent observations are compared. Subsequent observations are done using partogram every half an hour.

Any time the cervical dilatation has reached 3 to 4cm a line is drawn from that point to the point when the cervical dilatation would be 10cm assuming the rate of cervical dilatation from 3cm or 4cm to full dilatation, 10cm would be 1cm/hour. This rate is observed in 20% of cases; this line is called 'Alert line'. 'Action line' is drawn parallel to 'Alert line' but four hours later. Any patient whose progress is so slow as to cross the action line must have appropriate action taken.

Analgesia is usually given in early labor. First stage of labor ends when there is full cervical dilatation.

ii. Second Stage

This commences when there is full cervical dilatation and ends when the baby is delivered. The patient is taken to second stage cubicle .

This is a sterile procedure where the doctor or midwife scrubs and puts on a sterile pair of gloves.

The patient is in lithotomy position, her vulva and perineum is cleaned with antiseptic solution, draped with sterile towels. Vaginal examination is done to confirm the stage of labour.

The patient is encouraged to bear down with every contraction the perineum being infiltrated with local analgesia at the site episiotomy will be made. With the crowning of the foetal head a mediolateral episiotomy is made using a sterile pair of scissors.

The perineum is supported with sterile gauze as the foetal head comes out. The mouth and nostrils are wiped with a sterile gauze, the neck is palpated for cord which is freed if it is there.

As the baby's anterior shoulder is delivered ergometrine or syntometrine is given intramuscularly (except where there is contraindication as in cardiac disease in pregnancy). The rest of the baby is then delivered. The umbilical cord is clamped and divided between the clumps. The baby is scored (APGAR SCORE) and shown to the mother. It is wrapped in a warm sterile cloth weighed and put a label for identification. The baby is put in a warm cot.

iii. Third Stage

The placenta is received with a kidney dish put against the patient's perineum. As soon as there are signs of placental separation the placenta is delivered by controlled cord traction.

The placenta is examined for completeness, infarcts, retroplacental clots, number of blood vessels in the cord, the insertion on the placenta; membranes are checked for completeness and finally is weighed.

The third stage thus begins with the end of the baby's delivery and ends with the delivery of the placenta.

The uterus is palpated for contractions, it can be massaged to facilitate strong contractions. The cervix, vaginal wall and perineum are inspected for any injuries. These are repaired accordingly. The episiotomy is then repaired.

iv. Repair of episiotomy

In lithotomy position still the patient's vulva and perineum are cleaned with antiseptic solution and the patient is draped with clean towels.

Local analgesia can be infiltrated again at the site of repair. The tip of the episiotomy is identified by retracting the vaginal wall using fingers of the left hand, ne being held in the right hand. Vaginal wall/mucosa is sutured using chromic catgut No 2/0 or 0, it is interrupted.

The deep muscle is now stitched care being taken not to injure the rectum. Chromic catgut number 2/0 is used and interrupted sutures applied.

Skin is finally stitched using chromic catgut 2/0, mersilene or polypropylene stitches. Care is particularly taken here not to injure the rectum.

Perineum is cleaned and sterile pad is applied on the perineum. The patient now rests in supine position and her post delivery observations taken. All delivery data and birth notification are recorded and written by the staff who conducted the delivery.

v. Vacuum Extraction

This is done electively or as emergency procedure. Some elective indications include cardiac disease, hypertension; and some emergency indications include poor maternal effort in second stage, foetal distress in late first stage or second stage, mild disproportion, some malpositions e.g. occipito-posterior and occipito-transverse positions.

The patient is put in lithotomy position vulva is cleaned and draped.

Digital examination is done to ascertain cervical dilatation the presenting part and its station.

The Malstrom cup is selected so that the biggest which can be accommodated by the vagina is used. This is applied to the scalp of the fetus, area around it is swept by finger to exclude cervix being bit by the cup.

Suction pressure is built slowly at a rate of $0.1\text{kg}/\text{cm}^2$ per minute to a maximum of $0.9\text{kg}/\text{cm}^2$ upto 8 to 10 minutes can be allowed in order to have proper chignon formation. In emergency however a shorter duration may be taken.

Now with uterine contraction and maternal effort, traction is applied in the axis of perineum. Episiotomy is made as soon as the head distends the perineum. Once the head is delivered the suction is released and the cup removed. The cup should not be applied for more than 30 minutes as there are chances of injury to the foetal scalp.

ABDOMINAL INCISIONS

1. Subumbilical midline incisions

This incision is variable but is between umbilicus and symphysis pubis. First knife is used to incise the skin and second knife is used to cut through the subcutaneous fat to reach the rectus sheath, a small opening being made on the rectus. This incision is increased upwards and downwards using a pair of curved scissors.

The rectus sheath is now deflected to expose the parietal peritoneum. The peritoneum is now lifted using two pairs of long straight artery forceps placed about 1 to 2cm apart. After palpation for absence of gut a small incision is made using a pair of curved scissors. Under direct vision the incision is now extended upwards and downwards to approximately the length of skin.

ii. Pfannenstiel incision

This incision is made transversely about 2cm above the pubic bone. The skin is first incised. A clean knife is then used for subcutaneous fat. The rectus is then reached; all bleeding spots are coagulated or ligated. The rectus is then opened transversely and released from underlying muscles along the linea alba.

After reasonable exposure has been achieved, parietal peritoneum is thus approached through the linea alba and opened vertically as above.

iii. Lower uterine Segment Caesarean Section

Subumbilical incision is used in this book; pfannenstiel incision can also be used.

After opening the parietal peritoneum, the bowels are packed upwards to clear the pelvic area using a pair of sterile wet abdominal pad.

Uteroversical peritoneum is lifted up using a pair of non-toothed pair of dissecting forceps and an incision is made. The incision is extended elliptically using a pair of curved scissors. The lower position is then reflected downwards to displace the bladder.

A superficial elliptical incision is thus made using a knife, it is deepened at the centre. The uterine cavity is opened by extending the deep central incision along the line of the elliptical superficial incision using a pair of curved scissors. A Doyen's retractor is used during the process to hold the bladder down. The retractor is now removed and the baby delivered by scooping the fetal head and the rest of the body is delivered by gentle traction.

Intravenous ergometrine is given. The placenta is separated and delivered manually. Haemostasis is achieved, partly by using Green Armytage clamps. The uterus is then stitched using No. 2 chronic catgut on round body needle in two layers. The first layer is usually interlocking but can be continuous. Uterovesical peritoneum is closed using chromic catgut number 1.

Abdominal packs are removed and peritoneal cavity cleaned. It is done for any bleeders and any area that is not closed. The abdomen is then closed.

iv. Total abdominal hysterectomy

This operation is done for a variety of indications. In this book it is mentioned in more than one case.

The abdomen is opened either by subumbilical midline incision or pfannenstiel incision. After opening the peritoneum, the pelvic organs and other abdominal organs are inspected. Specifically one looks for any pathology and its extent, mobility or otherwise of the organs and adhesions.

The intestines are packed as above. The uterus is then held by myomectomy screw or stitch and held out of the pelvis if this is possible.

The right round ligament is then held by two long straight artery forceps just apart to allow easy division by curved scissors. The lateral end is stitched using chromic catgut No. 2. The anterior leaf of the broad ligament is divided and cut in an elliptical fashion above the uterovesical peritoneal junction.

The right fallopian tube and ovarian ligament are clamped using two long straight forceps and again divided using the knife or a pair of curved scissors. When the ovary and the tubes are to be removed the infundibopelvic ligament is clamped and divided instead. The lateral end is stitched using chromic catgut No. 2.

The same procedure is repeated on the left side. After being cut in the elliptical fashion anteriorly as above, the uterovesical peritoneal reflection is gently separated from the lower uterine segment, cervix uteri and upper part of the vagina using a swab on a finger.

The areolar tissue over the lateral aspect of the uterus are trimmed off and the uterine vessels are clamped using two long straight artery forceps or strong Kochers forceps and then divided in between.

The lateral portion is ligated with chromic catgut No. 2, the same procedure being repeated for the other side. The cardinal ligaments are then clamped and cut alongside uterus and stitched using chromic catgut No. 2. Uterosacral ligaments are cut and separated from the cervix uteri using blunt dissection.

The cervix is then felt with the fingers and a pair of little-wood clamps are applied to hold the upper end of vagina just below the cervix. A stab-incision is made between the two clamps using a knife. Using a pair of curved scissors the incisions are extended laterally, thus circumscising the cervix. The uterus with the adnexia are removed and taken for histology.

The vaginal vault is held by long straight artery forceps. Haemostasis is ascertained and the vault is closed using number 2 chromic catgut starting at the centre. The central stitches are left long to be tied together, during peritonisation. When haemostasis is achieved the vault is now peritonised to cover the raw areas. The reflected peritoneum anteriorly and posteriorly are stitched together incorporating the round ovarian ligament or infundibulopelvic and uterosacral ligaments using chromic catgut No. 1.

The abdominal packs are removed and after ascertaining swab and instrument count, the abdomen is closed.

LABORATORY

The department has laboratories for routine investigations and research work.

a. Main departmental laboratory

This is situated within the department and deals with:-

- i. Infertility studies including seminalysis and antisperm antibodies.
- ii. Hormonal assays using radioimmunoassay
- iii. Biochemistry handling lipid assays, blood sugar, serum fructose assays.
- iv. Microbiology which handles **chlamydia** and gonococci cultures.

b. Labour ward laboratory

This handles surfactant test, bilirubin spectrophotometry, pregnancy test and oral glucose tolerance test.

c. Cytology Laboratory

This is within the annexe of the department and deals with cervical cytology, buccal smears, chromosomal analysis and karyotyping.

OTHER SERVICES

a. The department also offers colposcopic and cryosurgery services every Friday morning.

b. In our labour ward we now have sonicard which is useful in ascertaining foetal heart normality or otherwise.

We also have ultrasound machine for screening special obstetric cases like identifying low-lying placenta, ascertaining foetal maturity and normalcy among other things.

PREMATURE RUPTURE OF MEMBRANES AT 29 WEEKSCONSERVATIVE MANAGEMENT, LIVE BABY DELIVERED AT TERM

Name: H.M.

Age: 25 years

Parity: 0+1

IP NO: 903467

LNMP: 3.12.1987

EDD: 10.9.1988

OCA: 29.6.1988

DOD: 15.8.1988

PRESENTING COMPLAINTS

The patient complained of drainage of liquor for the past 4 days.

HISTORY OF PRESENT ILLNESS

The patient was well until four days before admission when she noted some fluid dripping down her legs. There was no history of trauma, no history of any illness prior to this. She had no accompanying pain nor did she have vaginal bleeding.

She had first gone to Erbu Provincial General Hospital when the problem started and was managed with tablets ventolin, phenobarbitone and ampicillin capsules without improvement.

PAST OBSTETRIC AND GYNECOLOGICAL HISTORY

She was para 0+1. The abortion was at 3 months and no curratage was done. Her last monthly period was 3.12.87. She was getting periods every 28 days lasting 3-4 days. It was not accompanied by any pain. Her menarche was at 13 years. She had not used any method of contraception.

PRESENT OBSTETRIC HISTORY

She was 25 weeks pregnant according to her last normal monthly periods, and had not attended any antenatal clinic. There had been no problem with this pregnancy.

PAST MEDICAL HISTORY

Not contributory

FAMILY AND SOCIAL HISTORY

She was a married housewife staying with her husband in Embu. Her husband was a peasant. She did not smoke nor drink and had no medical problem in her family.

ON EXAMINATION

She was in good general condition. She was not pale neither was she jaundiced. Other general examinations were normal.

Her pulse rate was 80/minute normal character, blood pressure 120/70mmHg, respiratory rate was 20/minute normal. Her body temperature was 36.6°C.

Central Nervous System)
Respiratory System) were all normal
Cardiovascular system)

ABDOMINAL EXAMINATION

The abdomen was distended especially the lower aspect, uterine size was about 28 weeks. Fetal lie was longitudinal, the head was presenting and it was above the pelvic brim. Fetal heart beat was heard and was 152/minute regular. There were contractions.

VAGINAL EXAMINATION

She had a normal external genitalia, there was obvious liquor draining from the vagina. She had no vaginal bleeding.

Speculum examination:

- Normal vaginal wall
- Cervix was healthy and closed. Clear liquor was draining from the cervical os.

DIAGNOSIS

A diagnosis of premature rupture of membranes at 29 weeks gestation was made.

MANAGEMENT

In view of the gestation and previous history of pregnancy loss the patient was admitted to our antenatal ward for conservative management. She was started on ampicillin 500mg 6 hourly and bed rest. Her pulse and temperature was closely observed to be within normal limit throughout her stay. Liquor loss was observed for any smell or colour change which would indicate infection.

She had weekly white blood cell count, urine for culture and sensitivity. She had her antenatal profile done.

Her serial white blood cell count ranged from $8.4 - 9.5 \times 10^9/l$, and her serial urine culture yielded no growth. She was of blood group A rhesus positive; her haemogram was 13g/dl with packed cell volume of 34%. Her serological screening was negative.

The patient however continued to drain liquor and on 29.7.88 was taken for ultrasound to check the quantity of amniotic fluid in view of her continued drainage. The report was that there was scanty liquor, single live fetus of biparietal diameter corresponding to 32 weeks. A decision to continue with conservative management was upheld.

Other than the drainage of liquor the patients observation remained stable. She went into spontaneous labor on 14.8.88, progressed well and delivered a baby girl of apgar score 9 in 1 minute, 10 in 5 minutes and of weight 2200gms. Her postpartum observations were normal and was discharged after 24 hours to be followed up in Emlu Provincial Hospital.

COMMENT

This was a patient who presented with premature rupture of membranes for whom conservative line of management was instituted and a live baby successfully delivered.

Premature rupture of membranes denotes an obstetric situation in which the fetal membranes rupture before pregnancy reaches term; some authors say that the terminology applies irrespective of gestational age (1). Our patient presented at 29 weeks by dates.

Incidence of premature rupture of membranes (PRUM) ranges between 0.7-2.1% (4). Mati et al (1982) reported an incidence of 1.5% (2).

Factors that predispose to PROM include malpresentation, infection of urinary tract and that of the fetal membranes, trauma as during coitus, incompetent cervix, and overdistension of uterus (1,3,4,6). Majority of cases are of unknown cause (3). Infection occurs 2-3 times more frequently when PROM occurs just before onset of premature labor than when PROM occurs after the onset of premature labor (5). This would indicate that infection may present as PROM or premature labor.

Infections could come by ascending vaginal route, haematogenous or through lymphatics. Ascending route seems to be the commonest and that is why digital examination is contraindicated in PROM (1,3). Our patient had no evidence of infection and did not give any history suggestive of other predisposing factors.

Diagnosis is based on history which has to be confirmed by speculum examination. Amniotic fluid will be seen as collection at posterior fornix and/or oozing from the cervical os. If in doubt other tests that can be done include pH of liquor tested with intrazine paper and should turn blue indicating alkaline environment, ferning on dried amniotic fluid on slide is yet another easy test that can be done (1).

Management will depend on gestation and previous obstetric performance. Conservative management is generally upheld for gestation less than 34 weeks and more than 26 weeks. The aim is to buy time and in so doing get a maturer baby capable of extrauterine existence, to avoid infection the onset of which would be an indication to terminate the pregnancy, and to avoid labor (1,3). Routine observation for infection like abdominal tenderness, fever, high pulse rate, might not really rule out infection as the commonest infecting organism is haemolytic streptococcus which is of low virulence and might not cause high fever (8). Other features of infection include foul smelling liquor, fetal tachycardia and leucocytosis of 50% above normal (7). Our patient had obvious liquor drainage, was managed conservatively and showed no evidence of infection throughout the period.

There is generally increased perinatal mortality due to prematurity and respiratory distress syndrome (8). PROM also predisposes to cord prolapse and foetal distress thereby increasing caesarian section rate. Post partum infection has been reported upto 20% of cases. Our Patient recovered well and was discharged with a baby who was healthy.

REFERENCE

1. Pritchard J.A., McDonald P.C., Gant R.F.
 - Premature rupture of membranes. In Williams Obstetrics 17th Edition pg 754-756
 - Appleton-Century-Croft/Norwalk, Connecticut
2. Mati J.K.G., Aggarwal V.P., Sanghvi, H.C.V., Lucas S.
 Nairobi Birth Survey I
 Journal of Obs.Gyn. East. Centr. Afr. 1:132, 1982.
3. Benson R.C.
 - Premature rupture of membranes
 - In current Obs.Gyn. Diagnosis and Treatment
 5th Edition pg 757, 1984.
 LMP California U.S.A.
4. Varner M.W., Calsk R.F.
 - Conservative management of Premature rupture of membranes
 - America J. Obs.Gyn. 140: 39, 1981.
5. Heeya R.L.
 Causes and consequences of premature rupture of membranes
 Lancet 1: 192-194, 1980
7. Queen J.T., Treffers P.E., Kloosterm L.J.
 - Managing Premature Rupture of Membranes
 - Contemporary Obs.Gyn. 228-245
8. Ledger W.J.
 - Premature rupture of membranes and maternal fetal infection
 - Clinical Obs.Gyn. 22(2): 329, 1979.

CERVICAL INCOMPETENCE, McDONALD STITCH PUT.LIVE BABY DELIVERED

Name: M.G.

Age: 30 years

Parity: 2+5

IF No. 871186

LNMP: 4.4.87

EDD: 11.1.88

DOA: 7.12.87

DOD: 8.12.88

PRESENTING COMPLAINTS

The patient presented with labor pains for the last 5 hours.

HISTORY OF PRESENT COMPLAINTS

The patient was well until 5 hours earlier when she started having abdominal pain which was intermittent and was increasing in frequency and intensity. She was also noted to have blood stained mucoid discharge.

PAST MEDICAL HISTORY

Nothing contributory

PAST OBSTETRICS AND GYNECOLOGICAL HISTORY

She was para 2+5, her last delivery was in 1983 and her first delivery was in 1982. Both were at 7½ months spontaneous vertex delivery. In both she had cervical stitch. Her abortions were as follows:

1978 - 2 months

1979 - 4 months

1980 - 4½ months

1981 - 6½ months

1981 - 6½ months

In all cases of abortion except that of 1980 evacuation of uterus was done, and all abortions except the first one,

started with drainage of liquor, then abdominal pain and then vaginal bleeding and expulsion of the fetus.

She had not used any contraceptives methods and her menarche was at 14 years.

PRESENT OBSTETRIC HISTORY

Her last monthly period was 4.4.87. She had been getting her periods regularly every 28 days and lasting 4-5 days.

She was first seen in our clinic at 11 weeks pregnancy, she was booked on the basis of the bad obstetric history. She had been previously diagnosed as having cervical tear at 3 o'clock and her cervix was only 1cm long. She was admitted on 8.7.88 at 14 weeks for McDonald Stitch which was put on the following day and was discharged the following day on capsules amoxil 500mg, 8 hourly, tabs ventolin 4mg 8 hourly and she was advised on bed rest.

She subsequently attended clinic 13 times which were essentially uneventful except for few 2 occasions when she complained of heaviness in the lower abdomen for which she was prescribed bed rest and ventolin 4mg orally 8 hourly.

Her blood group was O rhesus positive, haemoglobin level was 14.4g/dl, packed cell volume of 39.7% and serology screen was negative.

FAMILY AND SOCIAL HISTORY

She was a married lady working in Town as a typist. Her husband was a clerk with Teachers Service Commission. They stay at Kiruta in Nairobi. There was no contributory history in the family. She does not smoke nor drink alcohol.

ON EXAMINATION

She was in good general condition. She was not pale, nor was she jaundiced. Other general examinations were normal. Her blood pressure was 110/60mmHg, pulse rate was 84/minute, respiratory rate was 20/minute and her body temperature was 36°C.

Central Nervous System)
 Cardiovascular System) Were essentially normal
 Respiratory System)

ABDOMINAL EXAMINATION

The abdomen was uniformly distended, uterine size was 36 weeks. The fetus was lying longitudinally and head was presenting station 2/5 above the pelvic brim. She was having two contractions in 10 minutes each lasting 30-40 seconds. Fetal heart was heard at rate of 138/min regular.

VAGINAL EXAMINATION

She had normal external genitalia, there was bloody mucous at introitus. Speculum examination revealed normal vaginal wall; bloody mucous was noted to be coming through the os, silk suture was seen, it was held by sponge holding forcep and cut with a long pair of scissors and pulled out.

Digital examination found a cervix which was 5cm dilated, membranes were bulging and artificial rupture of membranes done using middle and index fingers and clear liquor came out. On further inspection no cord was felt. Head was lying in left occipito-anterior position.-

DIAGNOSIS

A diagnosis of parous lady with bad obstetric history at 36 weeks in established labour was made.

PLAN

The patient was taken to first stage of our labor ward was given intramuscular injection of pethidine 100mg, she was put on left lateral position and progress of labor monitored by the use of partogram.

She had smooth labor progress and delivered a female infant weighing 2250 gms and score 9 at 1 minute and 10 at 5 minutes. Placenta and membranes were delivered whole and weighed 400mls.

On inspection, perineum, vaginal wall and cervix were normal.

Post partum observations were normal, Sp was 110/70mmH, PR was 84/minute and respiratory rate was 24/minute. She was taken to our post natal wards where her condition remained stable and after 24 hours observation she was discharged with her baby in good condition.

The patient was not seen at the appointed date at our post natal clinic.

Addendum

Procedure for McDonald stitch as is done at our unit is described. The patient is admitted the day before the operation and pre operative procedure done.

In theatre the patient is put in lithotomy position and EUA done to determine length of cervix and any of the lesions. Cervical dilatation is also assessed. Cervix is held by sponge holding forcep and using round bodied needle silk number 2 suture is placed at the junction of smooth muscle of portio vaginalis and rugosa mucosa of vagina. The needle is now pushed to cervical stroma bites are now taken at 11-10, 8-7, 5-4 and 2-1, o'clock.

Suture is then tied with surgical knot anteriorly being braided about 2-3cm to allow easy access and removal.

COMMENT

This was a patient who had had a number of abortions, was subsequently diagnosed as having cervical incompetence and managed with cervical stitch successfully.

The concept of incompetent cervix was **first** described by Fulmer and Lacoume in 1940 (1). Cervical incompetence is characterised by painless cervical dilatation in second or early third trimester with membranes prolapsing through cervix and ballooning into vagina followed by their rupture and almost immediate expulsion of fetus who is too immature and usually succumbs (1,2).

Definitive diagnosis makes clear incidence difficult to establish. This is because some of the patients end up with the diagnosis and even cervical suture who actually have other aetiological conditions. Njage (1979) at Kenyatta National Hospital found an incidence of 0.1-1% (3). Elsewhere it has been reported to range between 0.1-1% (1).

Acquired causes of cervical incompetence include those related to child birth 95% (7,9). Some of these are delivery of excessively large baby, occiput posterior and breech; these have tendency to cervical laceration or tear. Other acquired causes include dilatation for curratage or for treatment of dysmenorrhoea, radium placement, chronic inflammation, **cervical conization**, cauterization or amputation. Exposer to stilbesterol utero also predisposes to cervical incompetence later (2). A few unexplained cases are due to congenital abnormality of cervix for example congenitally short cervix (1).

Our patient had had five abortions which except for the first one have all been in mid-trimester. She had been found to have a cervical tear at 3oclock and cervix was short, 1cm. On two previous pregnancies, she had delivered viable babies following McDonald stitch. Sequence of events in her 4 last abortions also are typical of cervical incompetence.

Generally the gestation at which these patients present diminish the subsequent abortions. This was **not** characteristic in our patient.

Explanation is difficult but perhaps she had some residual cervical musculature and the increasing ability of the uterus to accommodate with subsequent pregnancies.

Diagnosis of cervical incompetence is reached by typical history offered like in our patient; there will be vaginal pressure followed by rupture of membranes and brief or painless labour and delivery of the fetus (1,2,6,9). Gestation will usually be mid trimester to early third trimester. Vaginal examination will reveal short cervix with some degree of dilatation of internal os, lesion like tear might be apparent. Our patient had both shortness and defect of cervix.

In non pregnant state diagnosis can be confirmed by easy passage of Hagar size 8-10 through the cervical canal (1,7). hysterosalpingogram will fail to show the usual sharp junction of the internal os, instead there is bending of the lower uterine segment into the cervix, cervix may be short or may be flush with vaginal wall, that is, there are no fornices, ultrasound can also be used for diagnosis (7).

Many Gynaecologists were aware of the occurrence of this condition but prospect of surgical correction was only first offered by Lash and Lash (1950). Shirodkar (1953) and McDonald (1957) It was even then known that conceptus is retained in the uterine cavity by pregnancy hormones, but at three months onwards it is the constrictive influence of the circumferential fibromuscular tissue at level of internal os that assumes the duty (7) Lash and Lash procedure used to cause cervical stenosis and infertility, and Shirodkar's procedure was technically difficult; McDonald procedure was less traumatic, less blood loss and simple (1) It is the method which is used in our unit and it is the method which was used in this patient.

McDonald's cervical cerclage is a simple procedure as described. It is important to keep the ligature external to internal cervical vessels.

Generally the procedure is carried out just after the first trimester and seldom before 16 weeks (1,2,8). In our unit it is carried out within 14-18 weeks. Too early insertion is unnecessary as it amounts to futile attempts to keep fetuses most of which have congenital abnormalities, and too late procedures might cause rupture of membranes. Our patient had cerclage put at 14 weeks. We routinely put our patient on broad spectrum antibiotics following cervical cerclage to take care of any infection though some workers have seen no need of such action (4,8). These workers suggest that amniocentesis should be done and specimen submitted for culture and sensitivity any growth would be an indication for uterine evacuation (8). It is also said there is nothing achieved by giving progestagens and **beta-mimetics as adjuvants (4)**.

Complication of cervical cerclage include rupture of membranes, infections, haemorrhage, premature labor, slipping of suture and rarely the rupture of uterus and/or tear of cervix if suture is not removed with uterine contraction (3) Charles et al (1981) reported lower incidence of complication if procedure is performed by 18 weeks.

Our patient did not have any of these complications.

If there is no early labour or other complication warranting early removal of stitch, it is usually done at 37 completed weeks. Removal at 37 completed weeks is a good test of whether the or not the suture was necessary for it was labor usually starts immediately.

Success rate with cervical cerclage is 50-80% (7) Njage (1978) reported it at 64.2% (3).

REFERENCES

1. Aladjem S.
General Gynaecological problems in pregnancy
Obstetrical practice pg 719-720, 1980 Edition
The C.V. Mosby Company
St. Louis Toronto. London
2. Pritchard J.A., McDonald P.C., Gant F.N.,
Abortion
Williams Obstetrics 17th Edition pg 475, 1985
Appleton-Century-Croft/Norwalk Connecticut.
3. Njage P.,
Management of Cervical Incompetence by Purse String Suture.
M.Med Thesis University of Nairobi 1979
4. Thomason J.L., Sampson M.B.
The incompetent Cervix. A 1982 update.
Journ. Reprod. Med. 27: 187, 1982.
5. Kuhn R.P.J., Pepperell K.J.
Cervical Ligation; a review of 242 pregnancies.
Aust. New Zealand Journ. Obs.Gyn. 17: 79, 1977
6. Benson, C.R.
Disorders of Uterine Cervix
Current Obs.Gyn. Diagnosis and Treatment pg 170, 1976
Lange Medical Publication, Los Altos, California.
7. Dewhurst J.
- Abortion
- Integrated Obs.Gyn. for Postgraduate Students 3rd Edition
1981, pg 214-5
- Blackwell Scientific Publications
- Oxford London. Edinburg. Boston. Melbourne.
8. Charles D., Edward W.R.
Infectious complications of cervical cerclage
Am Jn. Obs.Gyn. 141: 1066, 1981.

POLYHYDRAMNIOS

Name: R.M.

Age: 25 years

IP No. 906458

Parity: 5+0

LD: 1986

LMP: Lactational amenorrhoea

DDA: 17.7.88

DDD: 21.7.88

PRESENTING COMPLAINTS

Generalised abdominal pain for 1/12.

- Backache.

HISTORY OF PRESENT ILLNESS

Abdominal pain has been accompanied with fullness of abdomen for one month.

Backache has been there more at times but no relation with time. Over the last one month the backache has been continuous and progressively become worse.

She gives no history of fall nor any history of any trauma.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

Para 5+0 now gravida 6. All deliveries have been term and all except the first one which was at Pumwani Maternity Hospital have been at Ngong Health Centre. The children are alive and well. Her puerperia were uneventful. Her first delivery was in 1978 when she was 15 years and her last delivery was in 1986

She attained menarche at 13 years. Her cycles had been regular at 3-5 days every 28-30 days.

She had no period since last delivery and was not using any contraceptive method.

Past Medical and Surgical History

She had had uneventful life with no major illnesses before.

Family and Social History

She is a married housewife staying together with her husband at Ngong. She does not drink alcohol nor smoke.

Her husband has no permanent job but does any manual labour available.

No history of any medical problem in her family nor from the parents' side. No family history of any obstetric complication of the like in the family.

HISTORY OF PRESENT OBSTETRICS PREGNANCY

The patient was booked at Ngong Health Centre and no records were available but patient says the first 4 attendances were uneventful. The last time she attended two weeks prior to admission, she had the presenting complaints and was given tablets which did not help her.

She does not know her last menstrual period because she got pregnant while she was breastfeeding her last born.

PHYSICAL EXAMINATION

She was in fair general condition, was in pain but had no palor, no jaundice, no adenopathy She had no pedal nor sacral oedema.

- PR - 72/minute
- RR - 22/minute
- Bp - 110/80mmHg
- Temperature - 36⁰C.

Central Nervous Syste, respiratory and cardiovascular systems were normal. Breasts were normal and active.

ABDOMINAL EXAMINATION

She had very distended, tense abdomen and tender. Uterine size reached the Xiphisterum, foetal parts difficult to feel, fluid thrill and shifting dullness present.

VAGINAL EXAMINATION

Was not indicated.

DIAGNOSIS

Diagnosis of polyhydramnios was made.

PLAN:

Im pethidine 100mg stat

- Tab panadol 2, 8 hourly

Investigations ordered include:-

1. Urgent ultrasound - maturity - normality
2. Haemogram
3. U/E
4. Blood grouping and Rhesus, Serology
5. Amniotic fluid for cytology and alpha-fetoprotein
6. Blood sugar

Results:

Blood sugar - 3.8mmol/l

Hb - 11.5g/dl

WBC - $8.4 \times 10^9/l$

PCV - 34.2%

Lymp - 21.7%, $1.8 \times 10^9/l$

PLT - $291 \times 10^9/L$

Blood group and Rh - O +ve.

Serology - negative

Amniotic fluid - surfactant test done instead.

It was 1:1 negative X

1:2 negative.

- anencephalic fetus in "cephalic" presentation
- polyhydramnios
- Fetal heart activity seen
- Spine difficult to locate.

DIAGNOSIS

Anencephaly with polyhydramnios

- Plan: - Blood Group and Cross match 2 units
- IV line started
 - Sent to labor ward for induction of labour.

VAGINAL EXAMINATION

Normal external genitalia, cervix was 2cm dilated; 1.5cm long, central. Amniotomy was done 5L of amber coloured amniotic fluid obtained slowly.

- syntocinon 2.5 units in 500mls of 5% dextrose put in a drip.
- observation of vital signs, contractions, liquor colour.
- 5 hours later, she delivered anencephalic fresh stillbirth weight 1000 grammes, placenta 300grams complete.

Cervix and perineum were intact, no bleeding, uterus was well contracted. Patient was kept on syntocinon drip for two hours postpartum. Post delivery observations were normal and patient discharged to post natal ward where she continued good observation. She was discharged home to be seen in our post natal clinic but she did not come back.

COMMENT

This was a patient who presented with polyhydramnios due to anencephalic baby, she was successfully induced and fresh stillbirth was delivered.

Polyhydramnios is excessive amount of amniotic fluid in the pregnant uterus; a lower limit of 2000 mls anything excessive is polyhydramnios (1,2).

Incidence of polyhydramnios have been reported by various workers. Abdalla (1980) reported an incidence of 0.14% at Kenyatta National Hospital (1). In other places it has varied between 0.1-1.6% (3,4). The incidence of acute hydrops in Abdalla's series was 0.02%. As defined by Queenan et al (5) acute polyhydramnios occurs before 24 weeks gestation while chronic polyhydramnios is usually diagnosed in third trimester. Chronic polyhydramnios is rare and incidence is reported of 1:150 (6).

Factor usually operational in keeping equilibrium include fetal deglutition, fetal micturation, uteroplacental blood flow, fetal respiratory movement, fetal membrane physiology and a host of other factors. Primigravidas seem to be less affected, 8.8% and age group seem to peak at 21-30 years with range of 18-40 years (1,7). Our patient was para 5+0 she was 25 years old and estimating from fetal weight she could have been in the second trimester. So she had more of the attributes of acute polyhydramnios.

Polyhydramnios is found in pregnancies complicated with diabetes mellitus, rhesus isoimmunization, multiple gestation especially with transplacental transfusion syndrome, pre-eclampsia, chorioangiomas, circumvalate placental syndrome, congenital abnormalities like anencephaly and gastrointestinal obstruction (1,2,3,4,5,6,7). Central Nervous system abnormality seem to account for more cases of hydramnios 50% of which 60% are anencephalic (7,8). Our patient was investigated for other possible causes but the results obtained were negative. The only finding was anencephally. The mechanism by which anencephalic fetus is associated with polyhydramnios is thought to be absence of deglutition so that fluids accumulate.

Diagnosis of polyhydramnios clinically depends on accurate menstrual history, finding of uterine size bigger than dates, difficulty in feeling foetal parts either because of tense abdomen or due to fetal abnormality and muffled fetal heart. Definitive diagnosis, unless the fluid quantity is too much is by ultrasound. Our patient had not gotten her menses but her other findings were so pathognomonic that the diagnosis was not a question, rather it was the cause. In other cases where the cause of the polyhydramnios is not obvious other investigations as had been started in our patient are useful (3,6,7,9). In other cases despite elaborate investigation no apparent cause is demonstrable. These are of idiopathic cause and the management is to wait till delivery when the diagnosis will be established (9). Queenan found incidence of idiopathic case to be as high as 34% (5).

Management is governed by whether the fetus is normal or not. Conservative approach with bed rest sedation and analgesic are the cornerstone for those with normal fetuses with minimal discomfort. Antidiuretic hormone intrauterine has been used in some cases to reduce the amount of fluid but with temporary result (1). If gestation is low and the patient has symptoms from gross distension then controlled removal of amniotic fluid is the treatment of choice, although initiation of premature labor, infection, placental abruption, premature rupture of membranes and possible fetal injury are inherent problems with such therapeutic amniocentesis (1,2). Our patient had fetal abnormality and the management was termination of pregnancy.

Maternal complication include antepartum haemorrhage, post partum haemorrhage and infection; fetal complication are many and give a mortality of between 48.6-69% (1). These include cord prolapse, malpresentation, preterm deliveries, intrauterine infections and effects arising from primary complicating diseases like diabetes mellitus (1). In our patient we knew the inherent problem of post partum haemorrhage and we started the patient on syntocinon drip and also took blood for group and crossmatch. The patient had no problem, recovered well and was discharged home.

REFERENCES

1. Abdalla S.M.
 - Incidence of Hydramnios at Kenyatta National Hospital
 - M.Med Thesis 1980 University of Nairobi
2. Sieck, V.U.; Ohlsson, A.
 - Fetal Polyuria and Hydramnios associated with Bartholin Syndrome
 - J.A.M.A. 63(3): 22, 1984
5. Quenenan, J.I., Gadow, E.
 - Polyhydramnios, chronic verses acute
 - Am. Journ. Obs. Gyn. 108: 349, 1970
6.
 - Liquor Amnii
 - Brownes antenatal care Pg 146, 1978
7. Jacoby, H., Charles D.,
 - Clinical Conditions associated with hydramnios
 - Am. Jrn. Obs.Gyn. 94: 910, 1966
8. Sagar, H.J., Desa, D.J.
 - The relationship between hydramnios and some characteristics of the pregnancies complicated by fetal anencephaly.
 - Jrn. Obs.Gyn. Brit. Comm. 80: 429, 1973.
9. Murray, S.
 - Hydramnios: A study of 846 cases
 - Amer. J. Obs.Gyn. 88: 105, 1964.

UMBILICAL CORD PROLAPSE, EMERGENCY CAESARIAN SECTION.LIVE BABY DELIVERED

Name: R.w.K.

Age: 27

Parity: 1+0

IP No. 875631

LNMP: 15.5.87

EDD: 22.2.88

DDA: 16.2.88

DOD: 23.2.88

PRESENTING COMPLAINTS

Patient presented with 4 hours history of labor pains and drainage of liquor.

HISTORY OF PRESENT ILLNESS

The patient was well until four hours prior to admission when she noticed a sudden gush of water flowing down her legs from the vagina, about an hour later she started having lower abdominal pains which later on became generalised and intermittent in nature.

There was no history of fall and no history of any sickness prior to the onset of the problem.

PAST MEDICAL HISTORY

Nil of note.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 1+0, her delivery was in 1986 and was normal spontaneous vertex.

Her menarche was at 14 years. She had had regular periods prior to the last one which was 15.5.87. She used to get her menses every 28 days and could last 3-4 days. She had not used contraceptives.

PRESENT OBSTETRICS HISTORY

At the time of admission, the pregnancy was 39 weeks. She was booked in our clinic at 36 weeks because of variable lie. She was to be admitted for stabilizing induction on 10.2.88 but she refused.

She had no other problem when she was seen in the clinic, and her vital signs were normal.

She was blood group O Rhesus positive, her haemoglobin level was 10.3g/dl and PVC 31%. **Serology was negative.**

FAMILY AND SOCIAL HISTORY

She was a single lady working at Kahawa Barack as a secretary. She drinks alcohol but does not smoke. There were no other contributory history.

ON EXAMINATION

She was in good general condition. She had no palor nor jaundice. Other general examinations were normal. Her blood pressure was 120/70mmHg, pulse rate was 80/minute normal, respiratory rate was 22/minute and her body temperature was 36.4°C.

Central Nervous System)
 Cardiovascular System) were normal
 Respiratory system)

ABDOMINAL EXAMINATION

Her uterine size was term, the baby was lying in oblique position. She was getting one contraction lasting 30-40 seconds in 5 minutes. Foetal heart was heard and was 142/minute regular.

VAGINAL EXAMINATION

Clear liquor was oozing from otherwise normal external genitalia. No bleeding was noted. Vaginal wall felt normal and umbilical cord was felt to be in the vagina, it was pulsating at a rate of 142/minute. Cervix was about 3cm dilated and 2cm long.

DIAGNOSIS

A diagnosis of cord prolapse at 39 weeks was made.

MANAGEMENT

The patient was put immediately in knee chest position to lessen pressure on the umbilicus. Venous blood was taken for group and cross match 2 units of compatible blood. Intravenous fluid was started, informed consent got from the patient, a quick preparation was made and patient was taken to theatre.

The operation table was reclined head down, oxygen was given by mask. A quick vulvovaginal toilet was done and bladder emptied by catheterization. Vaginal examination revealed a cord that was still pulsating, patient was cleaned, draped, anaesthetised and caesarian section done as in the introduction. A live baby delivered of apgar score 10 at one minute, 10 at 5 minutes, birth weight was 3340 grams. Placenta was fundal more anterior and with its membranes were delivered whole. Uterus and abdomen were closed as described. Anaesthesia was reversed and patient taken back to the wards. She made steady recovery post operatively, her check haemoglobin was 9.8g/dl. She was discharged in good state with her baby, on the seventh post operative day.

She was reviewed six weeks later in our post natal clinic and she had healed completely. She had already started on intrauterine contraceptive device. She had no complaints.

COMMENTS

This was a patient who presented with a complete cord prolapse for which emergency caesarian section was done and live baby delivered.

Cord prolapse can be occult where the cord lies over the face or head but can not be felt on examination; it can be forelying cord in which the cord precedes the presenting part but is inside the intact membranes and can be palpated. and a complete prolapse, like in our patient where the cord descends past the ruptured membranes into the vagina or introitus. (1)

Cord prolapse is caused generally by imperfect **adaptation** between the presenting part and pelvic inlet (1,2,3) Factors therefore in association would include abnormal presentation like breech, **transverse**, shoulder, multiple pregnancy; hydramnios pelvic tumors or distortion of the pelvis; placental praevia or premature rupture of membranes. Our patient had abnormal lie and abnormal presentation. Other factors were **grandmultiparity**, too long umbilical cord, amniotomy and fetal hypotension (1,3).

Incidence of cord prolapse has been reported by Mati (4) as 0.8%. Other workers have reported it between 1-1.5 per 200 births (1,3). Majority of these are due to malpresentation 53% of which 40-50% are breech (3). Our patient had malpresentation.

Amniotomy and manual rotation account for 20% of all cord prolapse (3).

Diagnosis of cord prolapse can be relatively easy as in our patient who had complete cord prolapse, and can be very difficult in a set up like ours for an occult prolapse where close intrapartum foetal monitoring is not possible. Clinically compression of the cord would give hypoxia and this will result in violent activity which the mother or an observer might note. Further more there is usually bradycardia during contraction followed by quick recovery when contraction is over (1). Vaginal examination as above might confirm presence of cord. Our patient had had variable lie and at the same time of admission had an oblique lie. This is a possibility

This position is unlikely to cause cord compression because of the very imperfect way it fits the pelvic inlet. Changing the patients position result in no change in the fetal heart rate pattern. Further confirmation of the diagnosis can be achieved by blood gas analysis from fetal scalp (5).

Our patient presented with spontaneous rupture of membranes, labour pains, fetal heart, and pulsating cord in the vagina. Our diagnosis was reached at very easily.

Factors influencing management include maturity of the fetus, whether alive or not, quality of labor, cervical dilatation, presentation and descent of presenting part, parity and type of prolapse. Our patient had term pregnancy, live fetus in oblique lie was having one strong contraction in ten minutes wit cervical dilatation of only 3cm and a complete cord prolapse.

Our patient needed an expeditious delivery and because of the low cervical dilatation the only option which was left was abdominal delivery.

The patient at once should be put in knee chest or deep **Trendelenburg** position and pressure to be applied to the presenting part to lessen pressure on the cord. If vaginal delivery is not feasible then urgen arrangement should be made for abdominal delivery. This was like the case in our patient. Alternative methods for relieving pressure on the cord has been the use of tocolytics like ritodrine intravenously at a rate of 267-400mg/minute. Inflation of the bladder by rapid forceful instillation of 500-700mls of saline via polythene catheter (3).

The cord should be kept in warm moist vagina thus preventing vasospasm which result from cold and irritation, and oxygen by mask should be given all along.

If vaginal delivery is not possible readily then it should not be allowed because dilatation of the cervix forcible by manual or through vibrator, incision of a thick undilated cervix or forceful manual rotation only enhance foetal and maternal morbidity.

However, if the baby is too small to survive **outside** the abdominal delivery is better withheld, also if the presenting part is two-fifth or less above the pelvic brim and cervical dilatation is 8cm then vacuum extraction should be done without further delay.

Patients in whom to anticipate possibility of cord prolapse include those with malpresentation and malposition; those with unstable lie, and premature rupture of membranes or early rupture of membranes. These types of patients should have an elective admission into the lying wards. For rupture of membranes delivery should be **contemplated** for **variable** lie like in our patient stabilising induction should be done. Our patient refused to be admitted for stabilising induction and she ended up with emergency abdominal delivery.

Amniotomy has been noted above to predispose the cord prolapse. Prevention in this aspect must therefore be the aim. Before doing amniotomy the head should be engaged and the liquor should be released slowly. Spontaneous rupture must be followed by speculum and/or vaginal examination.

Complications of cord prolapse include trauma to birth canal; hypoxia, brain **damage**, death or premature delivery with all its sequelae.

Kazimoto(6) found perinatal mortality associated with cord prolapse to be 4% and **Aggarwal (7)** found it to be 19.4% of all perinatal deaths.

In this case, the dangers of cord prolapse were recognised early and best available method of management suggested to the patient. The patient however refused and on admission the only rational way of management which was caesarian section was offered.

However, if the baby is too small to survive **outside** the abdominal delivery is better withheld, also if the presenting part is two-fifth or less above the pelvic brim and cervical dilatation is 8cm then vacuum extraction should be done without further delay.

Patients in whom to anticipate possibility of cord prolapse include those with malpresentation and malposition; those with unstable lie, and premature rupture of membranes or early rupture of membranes. These types of patients should have an elective admission into the lying wards. For rupture of membranes delivery should be **contemplated** for **variable** lie like in our patient stabilising induction should be done. Our patient refused to be admitted for stabilising induction and she ended up with emergency abdominal delivery.

Amniotomy has been noted above to predispose the cord prolapse. Prevention in this aspect must therefore be the aim. Before doing amniotomy the head should be engaged and the liquor should be released slowly. Spontaneous rupture must be followed by speculum and/or vaginal examination.

Complications of cord prolapse include trauma to birth canal; hypoxia, brain **damage**, death or premature delivery with all its sequelae.

Kazimoto(6) found perinatal mortality associated with cord prolapse to be 4% and **Aggarwal (7)** found it to be 19.4% of all perinatal deaths.

In this case, the dangers of cord prolapse were recognised early and best available method of management suggested to the patient. The patient however refused and on admission the only rational way of management which was caesarian section was offered.

REFERENCES

1. Fritchard J.A., McDonald P.C., Gant N.F.
 Prolapsed Cord in Williams Obstetrics
 17 th Edition pg 680 1985.
 Appleton-Century-Croft, Norwalk Connecticut
2. Benson R.C.
 Prolapse of Umbilical Cord in Current Obs.Gyn.
 Diagnosis and treatment pg 617-618 1976 Edition
 Lange Medical Publication
 Los Altos, California
3. Dewhurst J.
 - Malposition and Malpresentation
 Intergrated Obs.Gyn for postgraduates 3rd Edition
 pg 393-6, 1981.
 - Blackwell Scientific Publication
 - Oxford, London, Edinburg, Boston, Melbourne.
4. Mati J.K.G., Aggarwal K.P., Lucas S., et al
 - The Nairobi Birth Survey I Study design, population
 outline results.
 - Journ. Obs.Gyn. East and Central Africa 1:132, 1982.
5. Laveson N.H., Miller F.C., Paul, H.
 - Continuous Intrapartum monitoring of fetal scalp pH.
 - Amer. J. Obs/Gyn. 133: 44, 1979.
6. Kazzimoto T.P.K.
 Review of Perinatal mortality at Muhumbili block
 Journ. Obs.Gyn. East and Central Africa 1:105, 1982.
7. Aggarwal V.P., Mati J.K.G.
 - Review of Ferinatal Mortality at Kenyatta National
 Hospital. - Journ Obs.Gyn. East and Central Africa 1:1, 1982.

PLACENTA PRAEVI TYPE III, EUP AND CAESARIAN SECTION DONE:
LIVE BABY DELIVERED

Name: A.M.

Age: 30 years

Parity: 6+0

IP No: 717496

LNMP: 19.3.87

EDD: 26.12.87

DOA: 23.12.87

DOD: 24.12.87

PRESENTING COMPLAINTS

The patient was admitted to our labor ward through casualty with history of lower abdominal pain and vaginal bleeding for five hours.

HISTORY OF PRESENTING COMPLAINTS

She was well until five hours ago when she started having lower abdominal pain and slight vaginal bleeding. The complaints increased in intensity and abdominal pain became more generalised. There was no history of trauma and no history of fall, and no other contributory history.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 6+0, her last delivery was in 1985. All her deliveries have been normal with normal puerperium.

Her last normal monthly period was on 19.3.87. She otherwise used to have regular menses lasting 4-5 days and coming after every 26 days. Her menarche was at 14 years. She had not used any method of contraception.

PRESENT OBSTETRIC HISTORY

At the time of admission she was 39 weeks pregnant. She was attending antenatal clinic at Makina Health Centre in Nairobi, where she had been seen six times without any problem. She and her husband had filled forms for surgical sterilization of the patient.

PAST MEDICAL HISTORY

There was nothing contributory

FAMILY AND SOCIAL HISTORY

She was a married housewife staying with her husband at Kibera Estate in Nairobi. Her husband works with East African Industries. She does not smoke nor drink alcohol.

ON EXAMINATION

She was in good general condition. She had no peler and had no jaundice. Her other general examination were normal.

Her blood pressure was 110/70mmHg, pulse rate of 90/min normal character, respiratory rate of 24/min regular. She had a body temperature of 36.4°C.

Central Nervous System)
Respiratory System) Were all normal
Cardiovascular system)

ABDOMINAL EXAMINATION

She had a uniformly distended abdomen, uterine size was 38 weeks. The baby was in longitudinal lie, presenting part was difficult to make out as both felt bresch.

She was having two contractions lasting 10-20 seconds in ten minutes. Foetal heart was heard and was 152/minute regular.

SPECULUM EXAMINATION

She had normal external genitalia; some clots were noted to be coming out of the introitus. Vaginal wall was otherwise normal. Cervix was normal and was loose, dilated about 6cms. Membranes were seen. Active bleeding was noted from the os.

DIAGNOSIS

Intrapartum Haemorrhage at 39 weeks was made.

MANAGEMENT

An urgent venous blood for group and cross match was taken and three pints requested. Intravenous line was started with normal saline. The patient gave informed consent of administration of anaesthesia and operation. The patient was then prepared urgently for and was taken to theatre.

In theatre patient was prepared for both EUA and caesarian section. The surgeon and his assistant were scrubbed up. In dorsal position the abdomen was cleansed and draped ready for caesarian section.

Vulval toilet was done and bladder aseptically catheterised. Speculum was gently inserted, alot of clots were evacuated from the vagina, bleeding actively from os was continuing. Gentle digital examination was done. There was an obvious boggy feeling at the lateral and anterior fornices. The procedure was abandoned and a quick caesarian section was done.

Placenta was found covering anterior lower segment and felt to have gone lower towards the os. Placenta was cut and baby delivered through the placenta by vertex. Baby's score was 6 in 1 minute, 7 in 5 minutes and 9 at 10 minutes, and weight was 2710gm. Placenta weighed 450gm.

Uterus was closed and haemostasis achieved. Bilateral tubal ligation was done, and abdomen closed in layers. Estimated blood loss at operation was 800mls.

She was transfused two units of compatible blood. Under cover of chloroquin tablets. Her third postoperative check haemoglobin was 9.2g/dl. The patient recovered uneventfully and was discharged on 29.12.87 to come to our postnatal clinic after six weeks. She was seen in our clinic and had no problem. She was advised on diet.

COMMENT

This was a patient who had placental praevia type III who was done caesarian section and live baby delivered.

Placental previa is the implantation of the placenta partly or wholly in the lower uterine segment in which case the internal os is partly or wholly covered. (1,2,5). It is arbitrarily divided into four types depending on the extent of placental encroachment to the lower uterine segment. Our patient had type III placental previa which means placenta goes upto the internal os and partially covers it (1,2).

Before 10 weeks gestation there is no lower uterine segment but thereafter the upper part of the cervical canal is incorporated into the uterine cavity and forms the lower uterine segment (1,5).

Vaginal bleeding during pregnancy can occur before 28 weeks of gestation in which case it is considered abortion or after 28 weeks gestation in which case it is termed antepartum haemorrhage. This division takes into account whether the fetus at that stage is viable in which case it antepartum haemorrhage or the fetus is not viable in which case it is abortion.

Incidence of placental previa has been reported to be 0.3%-0.9% at Kenyatta National Hospital (8,9).. Incidence of other places have been shown to vary perhaps depending on differing diagnostic methods (10,11,12,13).

Causes of placental previa are not known but is thought to be associated with multiparity, advancing age, short stature, previous caesarian section, prior perinatal deaths, pri preterm deliveries, or cases of abnormally large placentas or multiple gestation. (1,2,3,5,13).

Other cause would include delayed implantation (1,13). Our patient though was multiparous was young, average height, her placenta weighed 450g, and had no other aetiological factors mentioned above that was easily demonstratable.

Presentation of placenta previa is vaginal bleeding which is causeless, painless, and recurrent subsequent bleeding being more severe than the first one, this usually happens around 32 weeks of gestation, but could occur in labor in the fourth or occasionally third type (3,4,5,6). Depending on how much blood has been lost patient could be seen in shock with hypovolaemia or could come with slight anaemia. Cotton et al (1980) reported bleeding without labour pains in 70.6% of patients and 20% occur in the presence of uterine contraction and 7% were without symptoms (7). Our patient was at 39 weeks gestation came with labor pains and vaginal bleeding.

Abdominal palpation revealed a soft abdomen, with easily felt foetal parts and foetal heart. Malpresentation is common and presenting part might be difficult to make out, the head may be high if it is cephalic (3,4,5,6,13). Breech presentation is three times more common in such cases (13). In our patient we had problems identifying what was presenting otherwise there was no problem with other palpation findings.

Management aims at delivering the fetus capable of survival outside, and who has not been jeopardised by intrauterine anoxia; and to avoid maternal shock and its sequelae. All patients with antepartum haemorrhage are admitted and any resuscitating measures taken. Conservative approach is adopted in patients with gestation below 37 weeks. Localisation of placenta is done by ultrasound. If placental previa is established then the patient is kept in the ward until 38 weeks of gestation when she is taken to theatre for examination under anaesthesia and delivery.

At examination under anaesthesia placenta type I and IIA amniotomy is done and are put on syntocinon. In the rest of the types caesarian section is done. Our patient had type III at examination under anaesthesia and was delivered by caesarian section without complication.

Chances of getting placenta anteriorly exist it is better to cut through it quickly, clamp the cord and deliver the baby. Another hazard is morbidly adherent placenta on the lower uterine segment with uncontrollable haemorrhage; hysterectomy is advised if all efforts fail (1,2,5,13).

Complications include puerperal infection, anaemia to both mother and baby (13). Perinatal mortality rate is increased (4,6,12) and maternal mortality is also appreciable (12,13). Our patient was discharged on haematinics with a haemoglobin level of 9.2g/dl. The baby was normal.

REFERENCES

1. Dewhurst J.
 - Antepartum haemorrhage
 - Integrated Obs Gyn for Postgraduates 3rd Edition pg. 248, 1981.
 - Blackwell Scientific Publication. London
2. Myerscough P.R.
 - Antepartum Haemorrhage
 - Munro Kerr's Operative Obstetrics 10th Edition pg 400, 1981
 - Baillier, Tindall, London.
3. Green-Thompson R.W.
 - Antepartum Haemorrhage
 - Clinics in Obs-Gyn 9(3): 479, 1982.
4. Silver R, Lepp R.
 - Placenta previa, Aggressive expectant management
 - American J. Obs-Gyn 150: 15, 1984.
5. Donald I.
 - Antepartum Haemorrhage
 - Practical Obstetrics Practice. 5th Edition pg 420, 1979
 - Lloyd Medical Books Limited, London
6. Browne J.C.M., Dixon G.
 - Antepartum haemorrhage
 - Brownes antenatal care, 11th Edition pg 176, 1980.
7. Cotton D.D., Reed, J.A., Paul R.H.
 - Conservative Aggressive management of placental previa
 - American Journal Obs-Gyn. 137, 687, 1980.
8. Ojwang S.B.O.
 - Placenta previa at Kenyatta National Hospital
 - M.Med Thesis University of Nairobi, 1974.
9. Kirima J.
 - Antepertum Haemorrhage at Kenyatta National Hospital
 - M.Med Thesis, University of Nairobi, 1981.

10. Mati J.K.G., Aggarwal K.P., Sanghvi H.C.G., et al
Labor and Delivery NBS II.
J. Obs-Gyn East and Central Africa 2:47, 1983.

12. McShane P.M., Heyl R.M., Epstein M.F.
- Maternal and perinatal morbidity resulting from
placental previa.
- Obs/Gyn 65: 176, 1985.

13. Aladjem S.,
- Bleeding in Pregnancy
- Obstetrical Practice, pg 467-469 1980 Edition.

- The C.V. Mosby Company
- St. Louis Toronto, London (1980)

BREECH PRESENTATION IN LATE FIRST STAGE IN PRIMIGRAVIDA
VAGINAL DELIVERY TO LIVE FETUS

Name: H.W.

Age: 20 years

Parity: 0+0

IP No : 865850

LNMP: 8.3.87

EDD: 15.12.87

DGA: 9.12.87

DGD: 10.12.88

PRESENTING COMPLAINTS

The patient presented to our labor ward as a referral from Ngong Health Centre where she had presented with labor pains for 6 hours. She had started draining liquor since two hours before she was seen in our labor ward.

HISTORY OF PRESENT ILLNESS

The patient started experiencing abdominal pain which was intermittent and had increased in both frequency and intensity over the six hours. She had also started having liquor drainage but no vaginal bleeding.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 0+0. Her last normal monthly period was 8.3.87. She had been getting her periods every 30 days lasting 3-4 days. There was no accompanying pain. Her menarche was at 11 years and had not used any contraception.

PRESENT OBSTETRIC HISTORY

She was 39 weeks pregnant by dates. She was attending Ngong Health Centre, where she had attended four times. There was no problem noted during her attendances nor was breech noted till labor ensued.

PAST MEDICAL HISTORY

Not contributory.

FAMILY AND SOCIAL HISTORY

She was an unmarried lady staying with her parents who are farmers at Ngong. She was the last born in a family of 10, and reached standard 4 level of education. She neither smokes nor drinks.

PH. EXAMINATION

She was in good general condition, she was not pale, nor jaundiced. Other general examinations were normal. Her breasts were normal and active.

Her respiratory rate was 22/minute normal, pulse rate 88/minute regular, and Bp 120/70mmHg.

Central Nervous System)
Respiratory System) Were all normal
Cardiovascular System)

ABDOMINAL EXAMINATION

Abdomen was uniformly distended with uterine size of about 38 weeks. Fetus was in longitudinal lie and breech was presenting about 2/5 above the pelvic brim. The baby felt about 2500gms. Uterus was having three contractions in 10 minutes lasting 30-40 seconds. Fetal heart was heard and was 132/minute regular.

VAGINAL EXAMINATION

She had normal external genitalia, vaginal wall was normal cervix was dilated 8 centimetres and was fully effaced. Breech was felt with sacrum at right anterior. Pelvis felt adequate. Umbilical cord not felt.

DIAGNOSIS

A diagnosis of primigravida with breech presentation at 39 weeks in established labor was made.

PLAN

Patient was to be allowed vaginal breech delivery in view of size of the baby, size of pelvis, quality of labor and state of cervix.

Venous blood was taken for group and cross match and intravenous fluid started to keep the line open in case a need for theatre could arise. The patient was nursed in left lateral position and was observed using partogram in first stage.

One and half hour later the cervix was fully dilated and breech could be visualised at the introitus and was transferred to second stage of our labor ward.

Patient was put in lithotomy position on a delivery couch. Vulva-perineal toilet was done and draped with sterile gowns. Bladder was catheterised and drained of clear urine.

As the buttocks were distending the perineum was infiltrated with 15mls of 2% lignocaine hydrochloride and a mediolateral episiotomy made on left side. The patient was encouraged to bear down with each contraction.

Progress was well, fetus was delivered down to the umbilicus when the cord was pulled gently to form a loop. Foetal hips were held with a towel wrapped round so as to make sure the back is anterior. Shoulder blades were visualised with gentle rotary traction one shoulder was brought anteriorly and the arm was delivered by placing one finger of the right hand over the clavicle and sweeping it round the shoulder point and down the humerus to the elbow and then freeing the forearm. The ankles were lifted up and posterior arm was freed the same way.

Mauriceau - Smellie - Veit manouvre was used for head delivery. The baby was laid along the left arm and middle finger was placed in the mouth. The index and ring finger was placed over the molar processes. Traction of these fingers promoted flexion of the head. Index finger and the right thumb grasp the left shoulder while the middle finger pressed the occiput and the other two fingers the right shoulder. Traction of the two hands kept the head in flexion, it was done slowly to decrease trauma to the brain by sudden release. Air passage was cleaned as soon as the head was delivered. A female baby was delivered of apgar score 6 in 1 minute, 9 in 5 minutes and 10 in 10 minutes,

weight was 2350 grams.

Uterus was well contracted. Cervix and vaginal walls were intact. Episiotomy was sutured.

Post delivery observations:-

Bp 130/70mmHg.

PR 90/minute normal

RR 24/minute

Baby was reviewed by paediatrician and discharged to join her mother. She had satisfactory recovery and was discharged to be followed up in Ngong Health Centre.

COMMENT:

This was a patient who presented in advanced labor with breech presentation and successfully delivered vaginally.

In a good set up breech presentations will usually be diagnosed before labor unless the patient does not attend any clinic. This usually permits evaluation to be done and mode of delivery determined. In the patient presented breech delivery was not anticipated and by the time the patient reached our hospital, the labor was already advanced and risk of vaginal delivery had to be undertaken.

Breech presentation is common before the third trimester and only 3-4% persist to term in singleton deliveries (1). Njuki (1974) found an incidence of 3.5% at Kenyatta National Hospital (2).

Factors which predispose to breech presentation include prematurity, multiple gestation, hydramnios, uterine tumors, contracted pelvis, placental previa, hydrocephalus, anencephaly and lax uterus as in multiparity (1,3,4).

Placental previa is associated with breech in 7% of cases, and in 25% of breech presentation, no cause can be demonstrated (1,4).

Our patient had no predisposing factor. Various degrees of posture of the limbs in relation to the buttocks exist and forms the basis for naming as frank, complete sitting or foolting breech (1,3). Our patient had frank breech which is commonest and usually found in primigravidas (4).

A high index of suspicion might be called upon to diagnose breech presentation in the absence of the usual round, hard foetal head presenting (1,3,6). In labor this is easily confirmed by vaginal examination, ultrasonogram is a handier tool in confirming the diagnosis and also assessing possibility of vaginal delivery before labor. In the absence of ultrasound then X-ray of the abdomen and pelvis is indicated. Our patient did not pose any problem of diagnosis as fetal head was easily palpable at the fundus and breech could be felt at pelvic examination.

Breech presentation poses significant risk to mother and fetus. This very fact has led most obstetricians to opt for abdominal delivery instead of vaginal route (3,4). Njuki (1974) found a perinatal mortality rate of ten times in breech compared to vertex delivery (2). Other workers have found three-fold increase in perinatal death at term compared to vertex presentation (5). Some workers argue that morbidity associated with abdominal delivery compounded with high chances of delivery through same route in subsequent pregnancies tends to be underplayed in comparison to trauma to birth canals, yet some maintain that morbidity is actually **decreased by doing caesarian section** (1,6).

Fetal morbidity is related to asphyxia from compressed or prolapsed cord; difficult extraction can cause injury to internal organs, traction on brachial plexus, fractures of the limbs, and intracranial haemorrhage (3,4,5,6).

In a bid to rectify the presentation to cephalic some obstetricians prefer to do external cephalic version before 36 weeks; it is easier in lax abdominal wall like the multiparous patients, this procedure is not without complications and these include premature rupture of membranes ante-partum haemorrhage, premature labor and even foetal death. Our patient came at term in advanced first stage and uneventful vaginal delivery was effected.

Some guidelines are however, worth mentioning in trying to decide on breech delivery vaginally, maternal pelvis must be radiologically adequate, presentation must frank breech, there should not be any hyperextension of the head, estimated fetal weight of not more than 3500gm and previous breech delivery of fetus of weight more than 3500gm (1,3,6). Some authorities claim that fetal mortality is higher in multiparous patients.

REFERENCES

1. Pritchard J.A., McDonald P.C., Grant N.F.
Breech presentation pg 651-659
Williams Obstetrics 17th Edition 1985.
Appleton-Century-Croft/Norwalk Connecticut.
2. Njuki S.K.
M.Med Thesis 1979
University of Nairobi
3. Benson R.C.
Operative Delivery
- Current Obstetrics and Gynecology, Diagnosis and
Treatment, pg. 807-820, 1976
- Lange Medical Publications
- Los Altos, California
4. Donald I.
Breech Presentation
Practical Obstetrics Problems, 4th Edition pg 336, 349.
Lloyd-Luke. London
5. Crawford J.S., Weaver, J.B.
Breech Delivery
Clinics Obs.Gyn. 9 (2): 291-6 August, 1982.
6. Goldenbery R.L., Kathleen G.N.
Un anticipated breech in labor
Clinic Obs Gyn 27(1): 95-105 March 1984.

SUCCESSFUL TRIAL OF SCAR

Name: D.A.
Age: 30
IP No. 865442
Parity: 4+1
LNMP: 6.3.87
EDD: 13.12.87
DOA: 7.12.87
DOD: 8.12.87

PRESENTING COMPLAINTS

The patient was admitted in labour ward complaining of labour pains since 1pm the previous day.

HISTORY OF PRESENT ILLNESS

The patient was well until 1pm the previous day when she started having intermittent abdominal pain. The pain was general. There was no history of vaginal bleeding nor any history of vaginal discharge.

The pain had progressed and it was more frequent by the time the patient came to the hospital.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 4+0, her last delivery was in 1984. She had an abortion at 3 months and evacuation of the uterus was performed.

Her first delivery was by vacuum extraction and was fresh stillbirth, the second was a normal spontaneous vertex delivery, the third was a caesarian section due to transverse lie, and the fourth one was spontaneous vertex delivery. Her menarche was at 15 years.

PRESENT OBSTETRIC HISTORY

Her last monthly period was on 13.12.87 and she was expected to deliver on 7.12.87. By dates the maturity of the pregnancy was 39 weeks.

She was booked in our clinic at 26 weeks gestation and attended 7 times.

She had no problem during the antenatal period. Her haemoglobin level 10.6g/dl, her blood group was A RhD positive, and serology was negative, She was five feet 5 inches tall and her pelvis was assessed at 36 weeks, and was found to be adequate then assessed radiologically. A decision for trial of scar was then made.

PAST MEDICAL HISTORY

Nil of significance

FAMILY AND SOCIAL HISTORY

She was a married lady staying with her husband in Kawangware estate in Nairobi. The husband is an accountant in Nairobi. She does not drink alcohol nor smoke. She has no contributing family and social history.

ON EXAMINATION

She was found to be in good general condition, she was not pale, she had no oedema, and was not jaundiced.

Her blood pressure was 120/80mmHg, pulse rate was 88/minute regular, respiratory rate was 20/minute and temperature was 36°C.

Central Nervous System)
 Respiratory System) Essentially normal
 Cardiovascular System)

ABDOMIANL EXAMINATION

Gaesarian section scar was seen. She had a uterine size which was term, the lie of the fetus was longitudinal cephalic presentation. Presenting part was 4/5 up; foetal heart was heard and was 144/minute regular.

VAGINAL EXAMINATION

She had a normal external genitalia, there was no vaginal bleeding nor discharge. She had a normal vaginal wall, cervix was soft, parous but closed, it was about 1cm long and central.

DIAGNOSIS

A diagnosis of multipara in early labour with a previous scar was made.

PLAN

The patient was admitted to first stage in labour ward, her venous blood was withdrawn for group and cross match and intravenous fluid put to keep the vein open.

She was put on ½ hourly partogram; a close watch for vaginal bleeding, any tenderness at the previous scar site, and particular watch for maternal pulse not to exceed 100/minute.

All observations went on well. The patient progressed well with labour and delivered on 7.12.87 at 8.55am a female infant weighing 2900gm with an apgar score of 10 in one minute and 10 in five minutes.

Placenta and membranes were delivered whole, weight was 500gm. Estimated blood loss was 100mls. Uterus was explored and found to be intact. Post partum observations were normal and the patient was discharged to maternity ward.

She was observed in the ward for one day and was discharged in satisfactory condition.

The patient was seen 6 weeks later and had no problem. Contraceptive methods were discussed.

COMMENT

This was a patient who had a previous scar for a non-recurrent indication whom trial of scar was done and delivered vaginally to live baby.

First caesarian section was done during the rule of Caesar in 1715 BC. Since then improvements have occurred in technique and the advent of lower uterine segment scar has allowed possibility of vaginal route to be possible.

Incidence of trial of scar is not known here, but incidence of Caesarian at Kenyatta National Hospital and Pumwani Maternity Hospital is 17.1% and 4.4% respectively (2)

Reasons for clear cut repeat section are various amongst which are two caesarian sections unless the baby is extremely premature. Classical caesarian section scars are also prone to rupture and therefore should also be repeat section (3)

Criteria for choice of subjects for trial of scar still hinges on Walton's (1978) (4). These are:-

- Caesarian section done for non-recurrent cause
- Only one lower uterine scar.
- Absence of other obstetrics or medical complications
- Absence of previous history uterine rupture.
- True conjugate of 10.5cm or more.

Our patient met all these criteria.

Clinical assessment is invaluable as a finding of clinically contracted pelvis is ascertained in 81.6% of time by radiology; patients who have adequate pelvis radiologically need to have radiological confirmation but those with clinically inadequate pelvis should be sectioned. (5)

Our patient was first assessed clinically and was found to have adequate pelvis, she was then subjected to radiological examination where she was found to have adequate pelvis.

Some authors have maintained that real measure of fetopelvic disproportion was progress of labor, they argue that there is little or no constant relation between pelvimetry and caesarian section rate (6).

Patients who have been screened for trial of scar are advised to come to labor ward incase they start having labor pains. Those for elective operation are admitted and prepared.

Spontaneous onset of labour is desired in a case of trial of scar, induction when indicated is limited to amniotomy and sweeping the lower segment. Augmentation of labor with uterine stimulants is controversial. It is not the practice in our unit to augment labor. It is important that intravenous line is set and blood taken for group and cross match, patient also very ready should induction fail or any undesired observation is noted she is taken to theatre. Chances of uterine rupture increases with decrease in chances of vaginal delivery (7). With electronic fetal monitoring oxytocin can be used (8).

During labor critical look is kept for any observation which would tilt the decision towards abandoning the trial; these observations include maternal tachycardia which is the earliest symptom, maternal distress, fetal distress, vaginal bleeding, falling Bp and failure of progress (4,9). Some authorities argue that lower abdominal tenderness and scar tenderness are not valuable indication for abandoning the trial, (9). Our patient had smooth progress of labour and delivered without any bad observation.

After delivery of the placenta, exploration of uterus, lower segment is important. Some people argue that exploration is not necessary as it could give rise to infection, post partum haemorrhage and they argue that close observations are enough (9). Our patient was explored and lower segment found to be intact.

Good selection of patients, well staffed centre, availability of operating and transfusion services are prerequisite for deciding on trial of scar.

REFERENCES

1. Benson R.C.
Caesarian Section
- Current Obs-Gyn. Diagnosis and Treatment pg 822, 1976
- Lange Medical Publication
- Los Altos California.
2. Mati J.K.G., Aggarwal V.P., Sanghvi H.C.G., et al
The NBS IV early perinatal mortality rates.
Journ Ob.Gyn. for East and Central Africa
2:129, 1983.
3. Obayeim, T.O.B.
Maternal Mortality in ruptured uterus
Niger. Med. Journal 8(5): 433, 1979
4. Walton S.M.
- The antenatal and intrapartum management of patients
with previous caesarian scar
- E.A.M.J. 55:1, 1978
5. Fraser R.B., Colden J.F., Awiti J.A.
- An Assessment of value of radiological pelvimetry at
Kenyatta National Hospital
- E.A.M.J. 56: 513 1979
6. Kelvin M.K., Dave A.M., Joseph S.A.
- Evaluation of X-ray Pelvimetry and normal Labor
- Clinical Obs.Gyn. 25: 148, 1982.
7. Lavin, T.P., Stepheus R.J., Miodovink M., Berden T.P.
- Vaginal Delivery in patients with previous caesarian
section scar.
- Journ Repr Medic. 29: -3, 1984

8. Eglinton G., Phelan J., Yeh S., Diaz F.
 - Outcome of Trial of labor after prior caesarian delivery
 - Journ Reproduct Medicine 29: 3, 1984.
9. Walton, S.M.
 - Uterine Rupture in Kenya, A guide to prevention and early diagnosis
 - E.A.M.J. 55:9, 1978.

INTRAUTERINE FETAL DEATH: LABOUR INDUCED WITH PROSTAGLANDIN
AND SYNTOCINON

Name: M.N.
Age: 30 years
Parity: 4+0
IP No: 870810
LNMP: 16.6.87
EDD: 23.3.88
DOA: 4.1.88
DOD: 9.1.88

PRESENTING COMPLAINTS

The patient presented with history of fetal movement and abdominal pain for one week.

HISTORY OF PRESENT ILLNESS

The patient noted that she was not getting foetal movements as before and at same time she felt some dull pain in the lower abdomen over the uterus.

There was no history of trauma and no history of vaginal bleeding. She had not been ill the last few days.

The pain which initially felt like labour pains had since been less over the last one day.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 4+0, the last delivery was in 1984. All deliveries have been spontaneous vertex and puerperium have been uneventful.

She had her last monthly period on 19.6.87. She used to get it after every 28 days and could last 3 to 4 days, usually there could be some discomfort but not pain in the lower abdomen. There was no history of intramenstrual discharge.

She had not used any method of contraceptives.

PRESENT OBSTETRICS HISTORY

By the time the patient was admitted, the pregnancy was 28 weeks. She had not had any problem during the pregnancy.

She was attending her antenatal clinic at Coast General Hospital and her attendances were uneventful (ANC card was not available). She said to have had her blood removed for ANC profiles at the clinic.

PAST MEDICAL HISTORY

No contributory past medical history

FAMILY AND SOCIAL HISTORY

She was a married lady working as a typist with a private company in Mombasa town. Her husband was a clerk in Mombasa. They were not smoking nor drinking alcohol.

ON EXAMINATION

She was in good general condition. She was not pale, nor was she jaundiced. Her other general examinations were normal.

She had a blood pressure of 120/80mmHg, pulse rate of 80/minute regular, respiratory rate of 20/minute regular, and temperature of 36°C.

Central Nervous System)
Respiratory System) all were normal
Cardiovascular System) →

ABDOMINAL EXAMINATION

The abdomen was rather full in the lower aspect. She had a uterine size corresponding to 28 weeks; there was no tenderness and foetal parts were difficult to feel. No foetal heart was heard. There were no other masses felt.

VAGINAL EXAMINATION

She had a normal external genitalia. There was no vaginal discharge nor bleeding. Vaginal wall was smooth and cervix was parous but closed, it was long and central; uterine size was about 28 weeks.

Pouch of Douglas and adnexiae were normal.

DIAGNOSIS

A diagnosis of parous patient with intrauterine foetal death at 28 weeks was diagnosed.

PLAN:

A decision was made to have an urgent ultrasound to confirm the diagnosis. This was done on 5.1.88 and comments were as follows: single fetus with no cardiac activity, placenta anterior and not low lying.

The diagnosis was upheld and plan to induce her was reached.

DCNE:

- Blood was taken for group and cross match two units.
- Venous blood was taken for coagulation screen.
- and the patient was taken to antenatal ward for cervical ripening with prostaglandin pessaries overnight.

FINDINGS ON 6.1.88

- She was blood group A Rhesus D positive and one unit was available.
- There were no reagents for coagulation screen and a decision to do a bedside clotting time was reached and effected. It was 3 minutes and 40 seconds.
- the patient was then taken to labour ward where pelvic exam revealed soft cervix, admitting tip of finger with ease

DONE:

20mg of prostaglandin F_{2d} was drawn in a 20cc syringe and topped up with normal saline to 20cc mark.

This was firmly connected to the Folley's catheter using strapping. The dead space of the folley's catheter was got rid of by pushing in about 3cc of the solution

- The patient was put in lithotomy position on delivery coach and vulvovaginal toilet was done and patient draped. Using Cusco's speculum the cervix was visualised, it was then held with tenaculum and the Folley's catheter pushed inside the uterus. The catheter was then ballooned using 30cc of normal saline.

- 5% dextrose drip was started.

- The prostaglandin solution was pushed 2cc at once and was to be pushed 1cc subsequently per hour. This was to continue until she gets uterine contractions and cervical dilatation to expel the ballooned catheter. It was started at 12.30pm on 6.1.88.

By 2am 7.1.88 she had started getting mild contractions . The prostaglandin got finished before the patient getting strong contractions. At 6.15pm another 10mg of prostaglandin was started on 20cc syringe topped to 20cc with normal saline. This was similarly pushed. At this time she was also put on amoxil capsules 500mg 8 hourly and 2.5I.U. of syntocinon was added to 500mls 5% dextrose drip. This was to be titrated in order to get 3 strong contractions. It was started with 10 drops per minute to be increased every 30 minutes by 10 drops to a maximum of 60 drops per minute.

By 10pm she was getting 3 strong contractions in 10 minutes, her blood pressure was 110/70mmHg, pulse rate was 88/minute. These observations had been steady all along. Vaginal examination was done at this time gently. The catheter was out in the vaginal cervix was 6cm dilated. Membranes were intact.

Syntocinon drip was continued and by 1.30am on 8.1.88 the patient delivered a macerated stillbirth weighing 800gm. Placenta and membranes were complete and weighed 300grams. Blood loss was 150mls.

Post partum observations were normal, syntocinon drip was discontinued and patient was taken to post natal ward for investigations.

She was done K_{han} test, and Brucella abortus and malitensis screening test. Both were negative. Her random blood sugar was 4.8mmol/l.

Post mortem examination was not done on the fetus.

The patient was discharged on the 9.1.88 in good condition. She went home on capsules amoxil 500mg for five days and tablets lasix 20mg twice a day for 10 days.

COMMENT

This was a patient who had unexplained intrauterine fetal death at 28 weeks in whom labour was induced with prostaglandin and syntocinon successfully.

Intrauterine fetal death (IUFD) denotes those foetus dying from 28 weeks gestation or those whose weights are 3500mg and over, W.H.O. classifies foetal death for statistical purposes in I-IV. Our patient falls in group III because the gestation was 28 weeks (1,2).

Marceration appears after 12 hours of death and is indicated by peeling off of skin.

Other types of stillbirths is fresh stillbirth and this occurs usually peripartum (1,2). Our patient presented with loss of fetal movements for five days and was found to have a marcerated still birth.

Incidence of IUFD is not available locally, but common causes include hypertensive diseases in pregnancy, hyperpyrexia, rhesus isoimmunization, diabetes mellitus, infections like syphilis, Brucellosis, toxoplasmosis and foetal congenital abnormalities (1,2,3). A large percentage of IUFD can not be explained (2,4). These are usually thought to be due to placental deficiency. Marcerated foetuses are difficult to clearly see the cause of death especially with marked autolysis. Our patient had no obvious cause for IUFD, and looking at the weight and expectant weight for the gestation there seem to be lack of evidence of prlonged suffering in utero.

With the present adjuvants to our diagnostic armamentarium reaching a diagnosis of IUFD should not be difficult. A patient like ours who had the experience of previous pregnancy giving history of missed foetal movements especially when they had consistently been there should be taken seriously. Auscultation is usually useful, ultrasound will be diagnostic especially with a gestation like our patient had. Pregnancy test has not much place as the placenta can be functional for some weeks (1,2). Other diagnostic points especially in prolonged foetal death are failure of uterine size growth, loss of pregnancy symptoms like vomiting (7).

Radiological film will show spalding sign, gas in foetus and a rather exaggerated curvature of fetal spine (1,2).

Management of IUFD is to remove the dead fetus out of uterus. The older conservative approach has dangerous disadvantages of hypofibrinogenaemia with resultant bleeding disorders usually after four weeks (1,24). Our patient had her cervix ripened overnight by protaglandin pessaries, and extramniotic prostaglandin and intravenous syntocinon were used and delivery achieved. In late pregnancy where the cervix is already soft syntocinon alone can be used. Other methods of delivery include hypertonic saline, glucose and even urea, hysterotomy and even caesarean sections. With better methods available, these procedures are giving way, at least they are not routinely used in our unit (1,6).

Intractible bleeding arising from hypofibrinogenesis must always be kept in mind and blood preferable fresh must be at hand, and coagulation screen done before commencement of the induction.

Our patient had blood ready and although coagulation screen was not done, bed side clotting time was normal.

REFERENCES

1. Donald, I.
 - Intrauterine fetal death
 - Practical Obstetrics Problem 5th Edition pg 80, 1979
 - Llyod-Luke Medical Books Ltd. London
2. Aladjem S.
 - Perinatal Mortality
 - Obstetrical Practice pg 264, 1980
 - The C.V. Mosby Company
 - St. Louis Toronto. London
4. Romero, R., Copel, J.A., Hobbins, J.C.
 - Intrauterine foetal Demise and haemostatic failure:- foetal death syndrome
 - Clin. Obs.Gyn. 28: 24, 1985.
5. Marisson, I.; Olsen
 - Weight, Specific Stillbirth and associated causes of deaths
 - Analysis of 765 Stillbirths
 - Am. J. Obs.Gyn. 152: 975, 1985.
6. Cameron, J.M., Dayan, A.D.
 - Associated of Brain Damage with therapeutic abortions induced by amniotic fluid replacements. Report of 2 cases.
 - Brit. Med. J 1:1010, 1966
7. Corell, U., Fernstrom, I., Ohlson L.
 - The Halo Sign in the living and dead fetus
 - Am. J. Obs.Gyn. 87: 906, 1963.

CARDIAC DISEASE GRADE II IN PREGNANCY: LIVE BABY DELIVEREDVAGINALLY AT TERM

Name: F.N.

Age: 19 years

Parity: 0+0

IP No: 901352

LNMP: 29.10.87

EDD: 6.8.88

OGA: 20.6.88

ODD: 15.8.88

PRESENTING COMPLAINTS

The patient presented in our antenatal clinic with complaints of easy fatigability and palpitation for 6 months.

HISTORY OF PRESENT ILLNESS

The patient was well until six months before she was seen in the clinic when she started having palpitations and she also noted that she was getting tired quickly. The complaints had increased over the 6 months. She had had no such problem before.

She gave no history of nocturnal dyspnoea or orthopnoea. She gave no history of swollen legs.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 0+0. Her last normal monthly period was on 29.10.87 and before that she used to get her periods every 28-29 days and were lasting 4-5 days. She had no accompanying pain.

She had not used any method of contraception.

PRESENT OBSTETRIC HISTORY

At the time she was seen in the clinic her pregnancy was 34 weeks by dates. She had not attended any clinic. Other than the problems she presented with, she had had no other.

PAST MEDICAL HISTORY

She have no history of childhood infection of throat nor of the chest. She could not remember any of the infection in adult life. She also gave no history of skin infections. There was no other contributing history.

FAMILY AND SOCIAL HISTORY

She was a married lady staying in Thogoto with her husband. Her husband works in a Textile industry in Nairobi in stitching section. She was a housewife who did not drink alcohol nor smoke cigarettes.

There was no medical condition in the family.

ON EXAMINATION

She was in good general condition. She was in no obvious respiratory distress. She was not pale and had no jaundice; there was no pedal nor sacral oedema. Other general examination were normal.

Her respiratory rate was 22/min; pulse rate was 90/minute regular, not colapsing; blood pressure 110/60mmHg; and temperature was 36.1°C.

Central Nervous System - Nil of note

Respiratory system

Chest was normal in shape and movements. She however had an active precordium. Air entry was normal and equal bilaterally; There were no crepitations nor were there any rales.

CARDIOVASCULAR SYSTEM

Her general observations were as above. Her jugular venous pressure was not raised, she had a systolic thrill.

She had a systolic murmur and diastolic murmur which were best heard at the apex. There was radiation to the back.

ABDOMINAL EXAMINATION

She had a uterine size of 34 weeks, the fetus was in longitudinal lie and the head was presenting and was 5/5 above the pelvic brim. She had no organomegally and fetal heart was heard at 144/minute regular. Uterus was not contracting.

Vaginal Examination - This was not done.

Diagnosis

Cardiac Disease Grade II with mitral stenosis at 34 weeks

MANAGEMENT

Investigations for antenatal profile were done, blood urea and electrolyte, urine for culture and sensitivity, electrocardiogram, and echocardiogram were ordered. Cardiologist was consulted when the investigations were back.

She was put on digoxin tablets 0.25mg daily, tablet lasix 40mg daily, and haematinics. She was observed closely for any cardiac decompensation and infection especially upper respiratory was to be avoided at all costs. Pulse rate and temperature were closely monitored.

LABORATORY RESULTS

- Blood group B Rhesus **Positive**

- Haemogram - Hb 11.1g/dl

- pcv - 32.6%

- WBC $6.4 \times 10^9/l$

- Urea and electrolytes

- K^+ 3.9mmol/l

- Na^+ 150mmol/l

- BUN 2.5mmol/l

- Creatinine 89 umol/l

- Uric Acid 163.4 umol/l

- Urine - pH

- c/s - no growth obtained.

She subsequently had serial haemogram and urine for culture and sensitivity. Haemoglobin ranged from 12.1-13g/dl, WBC 5.8-7.3 x 10⁹/l.

Urine specimens did not grow any organism.

She was reviewed by the cardiologist on 20.6.88 with the res and it was recommended that in view of her cardiac lesion she stays in the ward till delivery.

She had uneventful stay in the ward, and at 37 weeks, her pelvis was assessed and was found to be adequate. She also had a cervix which was 75% effaced and 3cm dilated.

On 31.7.88 the patient went into spontaneous labour which lasted 8 hours. She was given intramuscular morphine 15mg stat. She was in propped-up position and oxygen was available if the need arose. As full dilatation was reached, trolley for vacuum extraction was made, available and as the head was distending perineum, a mediolateral episiotomy was made. Assisted vacuum delivery was performed. She delivered a male baby weighing 3300gms with apgar score of 9 in 1 minute and 10 at 5 minutes. Placenta and membranes were delivered whole. Estimated blood loss was 250mls. Episiotomy was sutured well and after rest in the ac room for 24 hours the patient was taken to postnatal ward where the nursing in prop-up position continued. She was put on capsul ampicillin, tablets lasix 40mg daily. Her third post operative postpartum haemoglobin was 11.8g/dl.

She was reviewed by cardiologist on 5th postpartum day and was found to be in a stable state. She was to continue on lasix and normal diet to include ripe bananas daily, and to be seen in cardiac clinic in six weeks.

The patient made uneventful recovery and was discharged on the 15th postpartum day to attend our postnatal and cardiac clinic in 4 and 6 weeks respectively. She was seen in our post natal clinic and both the baby and mother were well. Contraceptive methods were discussed and patient was sent to Family Planning room for choice on barrier methods.

COMMENT

This was a patient who had cardiac disease Grade II symptomatic with pure mitral stenosis who was managed in our unit and successfully delivered vaginally a live fetus.

According to New York Heart Association, patient with cardiac disease Grade II is that patient who has heart lesion without symptoms at rest but has mild limitation of activity on ordinary performance for example fatigability and dyspnoea (2).

Incidence of heart disease varies from 0.5-3.7; (1,3,6) This variation reflect difference in environments and hence differences in aetiological associations (2,3).

Ngotho (1982) found the incidence at Kenyatta National Hospital of 0.66%.

Incidence of rheumatic heart disease in developed countries has steadily gone down and with good diagnostic technique more and more congenital heart diseases are unveiled (1,2,4,5). In patients with rheumatic heart disease the main lesion usually is mitral valve disease (1,3).

Rheumatic fever affect young people and heart lesions manifest 10-20 years later, often provoked by some stressful situation like infection, anaemia or pregnancy (1). Our patient had been asymptomatic but started having symptoms in third trimester. This trend has been observed by Ngotho (3) and others (5). Ngotho also showed that the patients are usually between 20-24 years (3). Our patient was more or less in the age bracket, 19 years.

Normally the heart of a pregnant woman undergoes three major burdens and if the heart disease is diagnosed its ability to undergo these stages must be critically appraised under the circumstances. During pregnancy period of maximum cardiac stress is between 14-32 weeks by which time cardiac output has increased by 33%, heart beat by 10 per minute, and blood volume by 25% (5). In patients like ours, with mitral stenosis obstruction of blood flow from right ventricle to left ventricle can easily tip the patient over to develop pulmonary oedema and even hypertension.

Our patient had mitral stenosis and presented with symptoms at around the peak time the heart gets the extra burden from pregnancy increase.

Diagnosis is made on strong contributing history, characteristic auscultatory findings. Other supportive investigations like echocardiography, electrocardiography are confirmatory (1,2,4).

Management of cardiac patients with pregnancy revolve around proper antenatal care. General principle of management is dictated by functional capacity of the heart, control of excessive weight gain, abnormal retention of fluid, anaemia, and infection (2,3,4,5,6). All patients with heart lesion must on their first visit have a thorough cardiovascular assessment, assistance must be sought from cardiologist with obstetric commitment (4). Classification on basis of symptoms is very subjective as it tends to give some patients false degree of security, it is known that patients in grade I can progress to grade IV (3,4). Patients like ours in grade II can be seen in clinic weekly (2,3,4). They should be seen by both obstetricians and a cardiologist. Our patient was seen by the attending cardiologist, and recommended that she stays in the wards till delivery. A patient like ours with mitral stenosis at the last few weeks of pregnancy can easily go into -pulmonary oedema due to obstructed flow, so it was imperative that she stays in the hospital where supportive treatment could easily be available.

Patients with grade III and IV are managed as inpatients till delivery in our unit.

Patients admitted should be put on prophylactic digitalis to prevent occurrence of fibrillation, reduce tachycardia which would compromise blood flow to the left ventricle all the more. Both atrial fibrillation and tachycardia can result in pulmonary oedema (1,2,6). Anaemia must be avoided at all costs because the tissues oxygenation is borderline.; infections such as upper respiratory tract infections must be aggressively treated; fluid overload must be checked and these patients are usually on low dose diuretics and salt intake must be controlled.

Our patient remained stable throughout on tablets digoxin 0.25mg daily, lasix 40mg daily and antibiotics given when necessary. She was a primigravida and as such her pelvis was assessed to confirm whether she can be allowed vaginal route for delivery. The findings were compatible with vaginal delivery. This is what is wished (2,3) as strain with cephalopelvic disproportion would tip the patient into pulmonary oedema and possibly cardiac failure.

In labor, patients are propped up in bed or assumes position most comfortable for them. Usually they lie in left lateral position; this minimises compression of inferior vena-cava and hence maternal hypotension and fetal distress (3). The patient is observed quarter hourly during first stage with chest auscultation to the bases, urine output is also to be monitored as this may give indication of early heart failure. Our patient was managed like this.

Systemic antibiotic is given to check against infective endocarditis, morphine is given as an analgesia and also to allay anxiety. This was done in our patient.

In second stage our patient was observed every 10 minutes she was put at the edge of the delivery couch with two assistants supporting the legs making sure they don't rise above the heart. Delivery was shortened by episiotomy and assisted vacuum. Ergometrine was not given in third stage as this would overload the heart.

Post partum close observation is necessary in the labor ward for 24 hours then to post natal ward for the next 14 days (3). This is the period when blood is shunted back into circulation from uterus, the placental bed and also from extravascular compartment (2). Critical check for anaemia, infection and anxiety must be done as these can easily tip the patient into failure. Our patient did well post partum and was discharged home after joint review with the cardiologist.

Maternal mortality has been reported as 0.7-1% (5). Ngotho reported a rate of 3.2% (3). Deaths are usually due to pulmonary oedema and occurs within the first 24 hours (1).

Family planning method should be discussed bearing in mind contraindication of intrauterine contraceptive devices because of infection or combined pill because of thromboembolic episode. Sterilization should be discussed with those whose condition should not allow them to carry another pregnancy or those who have finished their families. Our patient opted for barrier method.

REFERENCES:

1. Abadjem S.
 - Medical problems in pregnancy
 - Obstetrical Practice pg 685, 1980
 - The C/V. Mosby Company; - St. Louis. Toronto. London.
2. Pritchard J.N., McDonald P.C., Gant N.F.
 - Diseases of Heart and great vessels.
 - Williams Obstetrics 17th Edition pg 589, 1985.
 - Appleton - Century - Croft/Norwalk Connecticut.
3. Ngotho D.K.
 - Cardiac Disease in Pregnancy at Kenyatta National Hospital (1970-1974).
 - M.Med Thesis University of Nairobi 1982
4. Dewhurst J.
 - heart Disease in Pregnancy
 - Integrated obstetrics and Gynaecology for Postgraduate students 3rd Edition pg 280-288, 1981.
5. Benson R.L.
 - Medical and Surgical Complication during pregnancy
 - Current Obs.Gyn. Diagnosis and treatment pg 725, 1976
 - Lange Medical Publications
 - Los Altos, California
6. Sugrue D., Blake S., McDonald D.
 - Pregnancy complicated by maternal heart disease at National Maternity Hospital, Dublin Ireland (1973-1978)
 - Am Journ. Obs.Gyn. 138:1, 1981.

CLASS 8: DIABETES MELLITUS IN PREGNANCY, TERM LIVE BABY DELIVERED

Name: H.M.

Age: 30 years

IP No: 542857

Parity: 1+0

LNMP: 14.11.87

EDD: 21.8.88

DDA: 4.2.88

DDD: 16.8.88

PRESENTING COMPLAINTS

The patient complained of vomiting and cough for the past 3 days.

HISTORY OF PRESENTING ILLNESS

The patient was well until 3 days prior to admission when she started having cough and vomiting. The vomiting has been worse in the mornings and cough has been worse at night.

She gave no history of chest pain, no history of chills.

The complaints have been worse over the last 2 days.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 1+0. Her last delivery was in 1977, it was spontaneous vertex delivery and puerperium was uneventful.

She got her monthly period lastly on 14.11.87. She used to get it every 28 days to 29 days and was lasting 3 days. There was no accompanying pain.

She had her menarche at 14 years. She used oral contraceptive from 1979 to 1982 and IUCD from 1986 to 1987.

PRESENT OBSTETRIC HISTORY

She was booked on 4.1.88 at 6 weeks because of diabetes mellitus on insulin.

She had had no problem prior to admission and she was on lente insuline 28 units daily and was free of symptoms. She admitted she had run out of **lente insulin for the previous 3 days.**

She was found to be of blood group O Rhesus negative, her haemoglobin level was 13.4g/dl and her serology was negative.

PAST MEDICAL HISTORY

She was diagnosed as having diabetes in 1983 and was managed and controlled in ward 30. She had since been attending diabetic clinic, upto the time she was booked in our antenatal clinic. She had a good control on lente insulin 28 units daily.

There was no other past medical history contributing.

FAMILY AND SOCIAL HISTORY

She was a married lady working as a clerk to Kenya Film Co-operation. Her husband works as clerk to Kenya's Ministry of Home Affairs. They stay in Ndenderu in Kiambu District. She does not smoke nor drink alcohol.

There was no history of diabetes in her family and no other medical problem of relevance.

ON EXAMINATION

She was in good general condition. She was not pale, nor was she jaundiced. Other general examinations were normal.

Her pulse rate was 80/minute regular, her blood pressure was 130/80mmHg, and her respiratory rate was 20/minute regular. She had a temperature of 37°C.

Central Nervous System)
 Cardiovascular system) Nil of note.

RESPIRATORY SYSTEM

She had inflamed pharynx. Her chest was clear.

ABDOMINAL EXAMINATION

There was no abnormality detected.

VAGINAL EXAMINATION

She had normal external genitalia, there was no discharge neither was there any bleeding. Vaginal wall was smooth; cervix was long, central, soft and closed. Uterus felt bulky. There was no adnexial tenderness nor feeling of pouch of Douglas.

DIAGNOSIS

A diagnosis of parous lady with diabetes mellitus and Rhesus negative blood at 6 weeks pregnancy was made.

MANAGEMENT

She was admitted into our antenatal ward for control of her blood sugar initially on soluble insulin, to find out whether isoimmunization has taken place and to treat her pharyngitis.

A random blood sugar was taken and serials were planned for the next day, blood for indirect Coomb's test was taken.

She was put on amoxil 500mg 8 hourly for 1 week, daily urinalysis and serial blood sugar twice weekly. She was also on the four hourly observation.

Her condition remained stable, her random blood sugar was 4.2mmol/l, her indirect coomb's test was negative.

Her serials throughout her stay in the ward ranged between 3.2 to 7.3mmol/l and this was controlled by soluble insulin three times a day.

Each dose varied between 12 to 18 units, these were of course varied according to serial blood sugar report. The pharyngitis cleared.

On 18.3.88 an ultrasound was taken to check the well being of the fetus. It showed a maturity of 18.5 weeks which more or less corresponded with the maturity by dates. It was a live fetus with placenta fundoposterior, not low lying

On 7.4.88 the patient was done fundoscopy as she was complaining of visual disturbance. It was found to be normal and thereafter her vision also continuously became normal. 2.6.88 her haemoglobin level was 13.2g/dl, BUN was 3.2mmol/l uric acid 106 umol/l. She was put on fetal kick chart.

Her serial indirect Coombs test remained negative. On the 2.6.88 at the end of 37 weeks she had Bishop scoring and she got 6 points.

Amniocentesis was done on 4.8.88 and result came back positive. The patient was prepared for induction of labor and taken to labor ward first stage on 5.8.88.

PROCEDURE

She was put on intravenous drip of 5% dextrose with 4 units of soluble insulin added; syntocinon was also put 2.5 units in 5% dextrose to be titrated against contraction as usual. One hourly blood sugar was to be taken and the level was to influence the dose of insulin.

Vaginal examination was done and cervix was found to be 3 centimetres at 11am, artificial rupture of membranes was done and clear liquor was obtained. There was no cord felt. Lower uterine segment was swept with the fingers.

The patient went into active labour in the next three hours, progressed well and delivered a male baby boy of weight 4.15 kilogrammes of apgar score 6 in one minute 8 at 5 minutes and 10 at 10 minutes. The baby was taken to nursery.

Post delivery observation were blood pressure 140/110mmHg, pulse rate was 92/minute. Intravenous 20 units of hydralazine was given.

Subsequent observation remained normal in labor ward. She was given Anti-D injection.

Her intrapartum blood sugar ranged between 4.6 and 7.8mmol/l. On 7.8.88 she was taken to labor ward to be done serial blood sugar and be converted to three times a day soluble insulin then to once a day lente insulin.

On 16.8.88 she was discharged home on lente insulin 20 units daily. Baby was normal.

She was seen 6 weeks later in good condition, she had no complaints and normal examination findings. She was advised to go to the Family Welfare Clinic for appropriate family planning method, and was also booked in Diabetic clinic.

COMMENT:

This was a patient who had long standing diabetes mellitus in whom control was achieved and delivered live baby at term. Her isoimmunization status was also monitored.

Diabetes mellitus is a disorder of a carbohydrate metabolism characterised by high levels of blood sugar. It can be adult onset type II or juvenile onset type I.

Most workers believe that 5% of the population now have overt diabetes (2). Manyara (1979) found an incidence at Kenyatta National Hospital of 1:343 in 18,000 deliveries. Environmental factors play a lot in its pathogenesis especially in type I.

Pregnancy produces changes in metabolism and affects nearly all aspects of the fuelling of the body; Glucose metabolism is not spared. Some patients are known to have diabetes only during pregnancy i.e. gestational diabetes. Our patient had diabetes before pregnancy and was diagnosed at 25 years, it would be difficult to know whether high blood sugar existed way before the diagnosis.

Diagnosis in our patient was not difficult as already she was on treatment; but history of unexplained fetal death in 3rd trimester, history of large babies, family history of diabetes should keep one alert as to the possibility of diabetes mellitus (1,3,4). Patients who come with overt symptoms are relatively easy to diagnose.

Classification of diabetes mellitus are dependant on age at onset, complications arising from the diabetes and duration of the disease. It is as follows:-

- a. Chemical diabetes before pregnancy and managed by diet.
- b. Maturity onset diabetes (age over 20 years) duration under 10 years. Insulin treatment before pregnancy.
- c. Age of onset 10-19 years, duration 10-20 years, insulin management before pregnancy
- d. Onset before 10 years, duration more than 20 years, or chronic hypertension (not preeclampsia), or background retinopathy (tiny haemorrhages).

- f. Diabetic nephropathy with proteinuria.
- h. Coronary artery disease.
- i. Proliferative retinopathy

This is White classification in which our patient fell in class B. Manyara (1979) (5) found at Kenyatta National Hospital Class A 10.2%, B 67.4%, C 18.4%, D 22% and F 2%. The other classes were not there.

Pregnancy hormones or factors tend to impair insulin action, Most recognised is placental lactogen and to a lesser extent oestrogen, progesterone and placental insulinase. So diabetes in pregnancy is more difficult to control and they invariably require more insulin dose (1,9,10). Our patient was interestingly controlled with ease and there were normal fluctuations of blood sugar level.

Effect of diabetes in pregnancy include hypertension, eclampsia (increased 4 times) difficulty in delivery due to large fetuses, infections especially monilia and urinary tract. Our patient developed upper respiratory tract infection which was vigorously treated. She however had a big baby but delivery was uneventful.

Perinatal mortality are high in diabetes and are due to foetal distress from metabolic causes or difficult birth; respiratory distress and fetal anomalies (3,7). Our patient had no such complication.

Soluble insulin is the treatment of choice in our set up in pregnancy. It is flexible, short acting and can be given in even intravenous route, should urgent action be needed (4,6).

Timing and mode of delivery are important. Diabetic pregnancy are not allowed to go past 37 weeks as chances of intrauterine death are more and once the baby is mature there is nothing gained by keeping fetus in the intrauterine environment. Mode of delivery is decided upon early (3). Our patient had no contraindication to vaginal delivery and thus with adequate pelvis vaginal delivery was advised.

Caesarian section rate varies with different centres Gebbie (1977) reported 55%; Kitzmiller J.L. (1978) reported 69%; Leveno (1979) reported 81%, and Manyara found 30.6% at Kenyatta National Hospital. Manyara reported spontaneous vertex delivery of 44.1% and vaginal delivery after induction of 55.9% were induced (5,7,9,10).

Sudden intrauterine fetal death occur in 5%; ketoacidosis account for 50% of the deaths (1). Perinatal mortality varies from 36/1000 to 192/1000 (5,7,9,10). Congenital anomalies is 6-12% as opposed to 2% in normal population (1,2).

Prevention of mortality and morbidity lie in detection and control of diabetes mellitus.

REFERENCES

1. Benson, R.C.
 - Current Obstetric and Gyn. Diagnosis and Treatment
 - 5th Edition 1984 pg 901-906
 - Lange Medical Publishers
 - Los Altos California

2. Gand, O.P., Soelder, S.S.
 - Genetic acquired and related factors in aetiology of diabetes mellitus.
 - Arch. Intern. Med: 137: 461, 1977

3. Pritchard J.A., McDonald P.C., Gant N.
 - Diabetes Mellitus
 - Williams Obstetrics 17th Edition pg 740-748, 1985
 - Appleton-Century Croft

4. Donald I.
 - Diabetes Mellitus
 - Practical Obstetric Problems pg 181-196 5th Edition 1979
 - Lloyd-Luke (Medical Books) Ltd.

5. Manyera R.V.
 - A preliminary review of Diabetic pregnant mothers with a look at the value of surfactant test in timing of delivery at Kenyatta National Hospital, Nairobi
 - M.Med Thesis 1979, Univerisity of Nairobi.

6. Spinuato J.A., Watson D.L.,
 - Diabetes
 - Obs.Gyn 64: 629/816, 1984.

7. Gabbie S.G.
 - Management and Outcome of Diabetes Mellitus Class B-R
 - Am Jour. Obs.Gyn. 129: 723, 1977.

8. Gabbe S.G.
 - Application of Scientific rationale to the management of pregnant diabetics.
 - Semin. Perinatal 2: 361, 1978.
9. Kitzmiller, J.L.
 - Diabetic pregnancy and perinatal outcome
 - Am. Jn Obs.Gyn. 131: 560, 1978
10. Lovero, K.J.
 - Appraisal of "rigid" blood glucose control during pregnancy in the overt diabetic woman.
 - Am.Jn. Obs.Gyn. 135: 793, 1979.

HYPERTENSIVE DISEASE IN PREGNANCY: MECONIUM STAINED LIQUOR

EMERGENCY CAESARIAN SECTION DONE: LIVE BABY DELIVERED

Name: A.A.

Age: 23 years

IP No: 898721

Parity: 2+0

LNMP: 29.10.87

EDD: 6.8.88

DOA: 23.6.88

DOD: 26.7.88

PRESENTING COMPLAINTS

The patient had no complaints. She just came routinely to our antenatal clinic. She was noted to have high blood pressure and was admitted for management.

HISTORY OF PRESENT ILLNESS

The patient had been noted to have high blood pressure in clinic on previous two occasions of which the second one she was admitted and discharged after two weeks on phenobarbitone and aldomet. She had otherwise had no complaints.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 2+0, her last delivery was in 1987 at 8 months, it was a fresh stillbirth and she had high blood pressure. She was admitted during this time for her blood pressure control and stayed in the ward for 3 days when foetal heart disappeared.

Her first delivery was in 1985 and was normal with normal puerperium.

She had her last monthly periods on 29.10.87 and before this she used to get her monthly periods every 23 days and could last 3 days. There was no accompanying pain.

She had not used any contraceptive method.

PRESENT OBSTETRICS HISTORY

On the day of admission her pregnancy was 33 weeks by dates.

She was booked in our antenatal clinic at 24 weeks on 18.4.88. She attended clinic 6 times. During her attendances she had no complaints, however on 2.6.88 at 30 weeks her blood pressure was found to be 130/90mmHg, a repeat blood pressure reading was the same after rest. A decision was made to admit her into our antenatal ward for blood pressure control and investigations. She stayed in the ward for two weeks during which time her blood pressure settled on tablets aldomet 250mg 8 hourly and phenobarbitone 30mg at night.

Her blood group was B Rhesus D positive, Khan test was negative, she had a haemoglobin level of 12.8g/dl and PCV of 37.1%. She was 5 feet and 6 inches tall.

The patient in her next visit to our antenatal clinic was found to have a blood pressure of 130/90mmHg. Her pregnancy maturity by dates was 39 weeks, fundal height was 32 weeks and ultrasound taken on the same day indicated the biparietal diameter corresponding to 35 weeks.

A decision was made to admit the patient to control her blood pressure and further investigations.

PAST MEDICAL HISTORY

She has had no contributing past medical history

FAMILY AND SOCIAL HISTORY

She was a married lady, a clerk by profession and stays in Donholm in Nairobi City with her husband who is a supervisor in a firm in the city.

She does not drink alcohol nor smoke.

There is no history of hypertension in the family and no other relevant history in the family.

ON EXAMINATION

She was in good general condition, she was not pale, neither was she jaundiced. She had no oedema. Her other general examinations were normal.

Her blood pressure was 130/90mmHg, pulse rate was 80/minute regular and respiratory rate was 22/minute normal. She had a temperature of 36°C.

Central Nervous System)
 Respiratory System) No abnormality detected
 Cardiovascular System)

Except for the high blood pressure the other systems were normal.

ABDOMINAL EXAMINATION

She had a uniformly distended abdomen with uterine size of 32 weeks. The fetus was lying longitudinal and head was presenting 5/5 above the pelvic brim.

Foetal heart was heard and was 142/minute regular.

DIAGNOSIS

A diagnosis of hypertensive disease in pregnancy was made.

PLAN:

The patient was prescribed bed rest and phenobarbitone tablet 30mg 8 hourly.

Venous blood was removed for urea and electrolytes estimation and haemoglobin check. 24 hour urine sample was to be collected for creatinine clearance estimation.

She was to have daily urine analysis for protein and sugar.

She was to plot the foetal kick chart to give us the insight of the fetus well being.

Throughout her stay in the ward the patient did not spill any protein nor sugar in urine. Her blood pressure however fluctuated a lot within the first few days of admission and the highest recorded was 150/100mmHg. She was graduated slowly from phenobarbitone 30mg daily and bedrest only through both the above end tablets aldomet 250mg 8 hourly to aldomet 500mg 8 hourly with bed rest only.

Blood pressure was controlled between 140/90mmHg and 130/80mmHg.

Foetal kick chart remained satisfactory throughout.

On 29.6.88 amniocentesis was done to check on foetal maturity if it would be viable outside the uterine environment. Its surfactant test was negative.

LABORATORY RESULTS

Lab No. 20381

K⁺ - 4.8mmol/l

Na⁺ - 142.0mmol/l

BUN - 3.0mmol/l

Creatinine - 87 μ mol/l

Uric Acid - 163 μ mol/l

Creatinine clearance was 126mls/minute

Her haemoglobin level was 13.2g/dl.

On 18.7.88 maturity of the pregnancy by dates was 37 weeks, a decision to repeat amniocentesis for surfactant test was reached and was effected. It was positive.

The following day she had Bishop Scoring done where her cervix was found to be 1 centimetre long, soft, central and 3 centimetres dilated. The presenting part was however still 5/5 above the pelvic brim.

With the positive surfactant test and favourable Bishop Score a decision was made to prepare the patient for induction of labour in labour ward.

Blood for group and cross match was taken and intravenous line was set. In labour ward artificial rupture of membranes was done and thick meconium staining liquor was obtained. The patient was urgently taken to second stage for oxygen by mask and intravenous 5% dextrose, and to lie in left lateral position. With this regime the foetal heart was also noted to be irregular and was 118/minute.

A diagnosis of hypertensive disease in pregnancy with foetal distress at 37 weeks was made, a decision was reached to take her to theatre for emergency caesarian section.

A female baby was delivered of weight 2350 grams and of apgar score of 9 in 1 minute and 10 at 5 minutes. Placenta weighed 350 grams. Blood loss was 500mls.

The patient made uneventful recovery; her third day post operative haemoglobin level was 11g/dl.

Her blood pressure was stable on tablet aldomet 250mg 8 hourly and hydralazine tablets 50mg 8 hourly. She was discharged from our post natal ward on 26.7.88 to be seen in our post natal clinic after six weeks; she was also booked in medical clinic.

On 2.9.88 she was seen in our post natal clinic. She had earlier attended medical clinic on 30.9.88 where she was put on tablets viskaldix one daily and hydralazine 25mg 8 hourly. She had no obstetric problem and her scar had healed nicely.

She was advised on family planning methods and was encouraged to go on with medical clinic.

COMMENTS

This was a patient who had hypertensive disease in pregnancy in whom conservative management was done and live baby delivered at term.

Hypertensive disease in pregnancy can be defined as a rise of systolic pressure of equal to or more than 140mmHg and diastolic pressure of equal to or more than 90mmHg (1,2,3), or a rise in diastolic blood pressure of equal to or more than 30mmHg, or systolic blood pressure of more than 15mmHg (1).

Hypertensive disease in pregnancy (HDP) occurs in 10-15% of the pregnancies (6,7). The causes are not known but factors that predispose include diabetes mellitus, multiple pregnancy, foetal hydrop, H.Mole, renal disease, history of eclampsia or pre-eclampsia, or previous history of hypertension (2). Age has also been thought to contribute (1). Our patient had positive history of hypertension even outside pregnancy. She had no proteinuria, and no oedema. Elevated blood pressure before 20 weeks gestation is nearly always HDP. A persistent hypertension beyond 6 weeks post partum according to the Committee on Terminology of American Collage of Obstetrics and Gynaecology fits in with the definition of HDP (2,3).

Chronic hypertension predispose to PET and when patient presents after 20 weeks diagnosis can be difficult.

Management of HDP aims at giving a healthy viable baby to a healthy mother. It aims at controlling the disease so that existing lesions don't progress and stops the genesis of new ones. Hypertensive patients should be admitted and renal, hepatic cardiovascular and haematological studies done. It is important to determine whether changes are likely to get worse with continued pregnancy or not (1,2). If these investigations are done and are satisfactory and blood pressure is less than 90mmHg, diastolic the patient can be discharged home to continue with clinic. But if blood pressure is persistently 90mmHg and above then the patient must be admitted and be kept under serial investigation and observation.

Our patient's investigation results were satisfactory, her blood pressure did not settle at below 90mmHg, but foetal well being was ascertained by fetal kick chart which the mother herself was charting.

In the absence of any abnormal observation and blood pressure is kept safely around 90mmHg, pregnancy can be carried till baby is felt capable of survival outside as in our patient. Should the blood pressure be uncontrollable despite rest and medication, then it would constitute an indication for termination no matter what the gestation is. If investigations indicate deteriorating renal, cardiac or hepatic function then termination is also the management. Should the baby's well being in utero be threatened as would be manifest by reduced foetal movement or some irregular pattern in fetal cardiac activity the baby should be brought out of the uterus (1,2,3,4,5).

Drugs we use commonly in our unit is aldomet tablet, hydrallazine, propranolol, phenobarbitone and paracetamol if there is any pain. Bed rest is very valuable as it has been shown to improve the placental blood flow (1).

Complication of HDP include deterioration manifested by cardiac decompensation, cerebrovascular accident, renal failure, hepatic failure and visual disturbance. Subsequent pregnancies are likely to be more complicated with higher blood pressure (4). Abruptio placentae is common 5-10% of the HDP (3).

There is progressive fibrosis of vessels, placental bed affected gives reduced foetal activity. This would result in intrauterine fetal growth retardation and occasional distress like in our patient (3,4). The intrauterine life was perhaps too hypoxic in the case of our patient to be tolerated by the fetus. Emergency abdominal delivery was recommended and the baby scored well.

In general mode of delivery depends on age, parity, gestation previous obstetrics history and state of pelvis and cervix. Caesarian section is recommended for premature babies (4). Our patient did well post operatively and is now attending renal clinic.

1. Aladjem, S.
 - Pre-eclampsia, eclampsia and other hypertensive disorders in pregnancy
 - Obstetrical Practice pg 577-598 1980
 - C.V. Mosby Company
 - St. Louis. LONDON.
2. Benson, R.C.
 - Preclampsia, eclampsia and hypertensive disorders in pregnancy.
 - Current Obs.Gyn. Diagnosis and Treatment pg 631, 1976
 - Lange Medical Publication
 - Los Altos California
3. Pritchard, J.A., McDonald, P.C., Gant, N.E.
 - Hypertensive Disorders in Pregnancy
 - Williams Obstetrics 17th Edition pg 525-528 1985.
 - Appleton-Century-Croft/Norwalk Connecticut
4. Dewhurst, J.
 - Preeclampsia, eclampsia, Hypertension and Chronic renal disease.
 - Intergrated Obs.Gyn. for Postgraduates 3rd Edition pg 274-276, 1981.
 - Blackwell Scientific Publication
 - Oxford. London. Edinburg, Boston. Melbourne.
5. Kenyon, N., Janesen A.A.J.
 - Weight changes during pregnancy and birth weights in Rusinga Island.
 - Journ. of Obs.Gyn. East and Central Africa 2: 20-22, 1983
6. Urassa, E.J.N.
 - Pregnancy Outcome in patients presenting with hypertension in pregnancy
 - Journ. of Obs.Gyn. East and Central Africa, 3:55-58, 1984.
7. Mati, J.K.G.
 - N.B.S.V
 - Journ. of Obs.Gyn. East and Central Africa, 1:134-139, 1981

RHESUS ISUMMUNIZATION, INDUCTION OF LABOUR, LIVE BABY DELIVERED

Name: A.G.
 Age: 31 years
 Parity: 0+1
 IP No. 859083
 LNMP: 18.3.87
 EDD: 25.12.87
 DOA: 1.12.87
 DOD: 7.12.87

PRESENTING COMPLAINTS

The patient had earlier been diagnosed in our antenatal clinic where her planned admission was arranged on the date above.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 0+1, the one abortion was at 2½ months and evacuation of the uterus was done in 1985. She had her menarche at 15 years. She had been getting regular periods every 28 days lasting 3-4 days. She was not aware of her blood group and it was not discovered during her last pregnancy.

PAST MEDICAL HISTORY

Not significant

HISTORY OF PRESENT PREGNANCY

She was booked at our antenatal clinic because she was rhesus negative at 33 weeks. She had had no problem with this pregnancy. Her antenatal results are as follows:-

- Her blood group - A Rh D negative
- Husband's Blood Group - O Rh D positive
- Haemoglobin - 13.4g/dl
- PCV - 42.2%
- Kahn test - negative
- Indirect coombs test at 33 weeks - positive 1:4

- 34 weeks - positive 1:8

FAMILY AND SOCIAL HISTORY

She was a married lady working in Muranga Hospital as a nurse. She was not taking alcohol or smoking. There were no medical problems in the family and no contributory history.

ON EXAMINATION

She was in good general condition. She was not pale, and she had no jaundice. Her other general examinations were normal.

She had a pulse rate of 78/minute regular and good volume, BP of 140/90mmHg, RR 20/minute normal, and she had a body temperature of 36.8°C.

Her respiratory, cardiovascular, central nervous system were normal.

ABDOMINAL EXAMINATION

The abdomen was uniformly distended. She had a uterine size corresponding to 34 weeks, the fetus was lying longitudinally and head was presenting S/S above the pelvic brim. Foetal heart was heard at 140/minute regular and there were no contractions. Vaginal examination was not indicated.

DIAGNOSIS

A diagnosis of Rhesus isoimmunization at 36 weeks was made.

MANAGEMENT

The patient had earlier been admitted into antenatal ward for amniocentesis on 3.11.87. She was observed like other antenatal patients.

The procedure was explained to the patient and after scrubbing and putting on sterile gloves, lower abdomen was cleaned and draped with sterile towels. Using the left hand, fetal head was displaced upwards. Lumber puncture needle was introduced suprapubically through the abdominal wall and advanced till amniotic cavity was reached. The stylet was withdrawn and the needle connected to a syringe 5mls of

amniotic fluid was withdrawn and put in a dark coloured bottle.
After the procedure the foetal heart was auscultated and was found to be normal. Patient now in left lateral position was observed with foetal heart auscultation for the next 2 hours. The foetal heart rate remained stable.

RESULTS:

- Spectrophotometry - Normal curve
- No peak
- Comment - to be delivered at term.

Surfactant test - 1:1 positive.

She was then discharged to continue with clinic and then readmitted as above at 37 completed weeks.

Indirect coombs test was repeated and was found to be rising. Surfactant test was positive. In the light of the above induction of labour was decided on. Bishop score was done and was found to be six, pelvis was adequate (it had earlier been assessed at ANC). She was prepared in the night of 4.12.87 and taken to labour ward on 5.12.87 for induction. The patient gave an informed consent for any other operation the doctor could find necessary, venous blood was taken for group and cross match 2 units.

In labor ward review was done and she was found to have pregnancy which corresponded to 38 weeks, fetus was in longitudinal lie, cephalic presentation, presenting part was 5/5 above the pelvic brim and foetal heart was heard and normal. Cx was 3cm dilated membranes were intact and amniotomy was done as stated on the introduction clear liquor was obtained and no cord was palpated.

She was started on 5 units syntocinon in 500mls of 5% dextrose to start at 10 drops per minute and to escalate by 10 drops every 30 minutes till the patient either gets 3 strong contractions in 10 minutes or drops peak 60 per minute. She was closely observed with partogram.

She picked up contraction and in 8 hours delivered a female baby weighing 3000 grams with apgar score of 9 in 1 minute and 10 in 5 minutes. The 2nd and third stage of labor were uneventful. Her placenta weighed 500grams. After normal immediate post partum observations she was transferred to postnatal ward.

Baby was taken to nursery where cord, blood was removed results of which are as follows:-

- Blood group - Rhesus D positive

- Haemoglobin - 16g/dl.

PCV = 98%

- WBC - $7 \times 10^9/l$

- Total bilirubin - 4 mmol/l

Direct Coombs test - Negative.

The baby was allowed to join the mother. She was seen at our post natal clinic and had no problem.

COMMENT

This was a patient who had Rhesus isoimmunization in whom induction of labour was done at term and live baby delivered.

The discovery of the Rhesus factor by Landsteiner and Wiener (1941) and founding of effective prophylactic protein by Freda, Gorman and Pollack (1963) marked a turning point to the management of spectra of diseases caused by Rhesus factor (1).

Incidence of Rh factor in African general population in Tanzania is 3.5% (2). In Western Kenya the incidence was reported as 2.4% while in Kenyatta National Hospital it is 4.1% (3,4). There seem to be racial preponderance in whites as per the work of Race and Sanger (5).

Our patient was a nurse in one of our District Hospitals and as such she was exposed to the opportunity of knowing her blood group and Rh factor. When we saw her she had known she was Rhesus Negative.

An individual who has had isoimmunization denotes having antibodies against antigens of another individual. In pregnancy fetal red blood cells can pass to maternal circulation and evokes antibody response. Such an occurrence is possible in normal pregnancy, during parturition, in abortion, and also in accidental haemorrhages. The baby obviously needs to be Rhesus positive (1,2,3). Our patient had been sensitised during her abortion.

Antibodies produced are IgM and IgG. First fetomaternal transfusion is typified by production of IgM and subsequent ones by both IgM and IgG. IgM does not cross the placenta but IgG crosses the placenta so first babies are usually spared. Maternal IgG into fetal circulation leads to grades of diseases entities ranging from mild anaemia from red blood cell haemolysis to frank anaemia with congestive heart failure (4,6). Babies are protected from jaundice in utero as bilirubin arising from haemolysis are shunted into the mother's circulation; they develop jaundice shortly after birth (6). Bilirubin also appears in amniotic fluid and is the basis for spectrophotometric estimation and guide to management in isoimmunized individuals.

708

Aim of management is to screen the mothers at the antenatal clinics and know their rhesus factor status. Before 24-26 week of gestation, transfer of maternal antibodies to foetal circulation is less but thereafter chances increase. These patients are therefore followed by serial blood for indirect coombs test four weekly till 32 weeks then two weekly, to term. If antibody titres do not rise or indirect Coomb's test is negative, then the mother is delivered at term so long as surfactant test is positive. Pregnancy should be not allowed to reach 40 weeks as there is increased risk in antibody passage or fetomaternal transfusion (1,4,6).

In severer cases spectrophotometric estimation of level of bilirubin in amniotic fluid is a guide as to when to deliver the patient using Liley's chart. Amniocentesis and spectrophotometry are indicated as long as antibody titers exceed 1:16(1,6). Subsequent results will indicate whether pregnancy is allowed to term like in our patient, induced or pregnancy terminated. Some fetuses can be transfused in utero (1, 2). Induction of labour is as discussed above, however, some patients who have a contraindication to this and those whose babies are too small, less than 34 weeks, caesarian section is to be opted for (6).

Baby cord blood must always be taken in order to know the rhesus factor, haemoglobin level and bilirubin estimation. In our patient the baby did not require any further management.

If patient is not immunised, anti Rhesus D gamma globulin should be given within 72 hours of delivery, to a rhesus positive baby, an abortion, amniocentesis, external cephalic version or even of ectopic gestation (1,4,6,7,8) Our patient was sensitised and as such did not need the anti D.

REFERENCES

1. Pritchard, J.A., McDonald, P.C., Gent N.F.
 - Haemoglobin from Maternal Rh Isoimmunization
 Williams Obstetrics 17th Edition pg 773-776, 1985.
 Appleton-Century-Croft/NewYork
2. Nhololi, M.M., Kiango J.S.
 - The distribution of blood group frequencies in
 Mainland Tanzania Africans.
 - E.A.M.J. 51: 6, 1974
3. Kiango, J.S., John S.F.,
 - Prevalence of Irrigular red blood group antibodies,
 in pregnant African Women in Dar-es-Salaam
 - E.A.M.J. 6(2): 88, 1983.
4. Mulendi, T.N.
 - The effectiveness of Anti-D-Immunoglobulin in prevention
 of Rhesus Iso-immunization in Kenyan Women of African
 origin at Kenyatta National Hospital.
 - M.Med Thesis 1985, University of Nairobi.
5. Race, R.R., Sanger R.,
 - Blood Groups in Man. 6th Edition pg 186, 1976
 - Blackwell Scientific Publication
 - Oxford London.
6. Dewhurst J.
 - Blood Disorders in pregnancy
 - Integrated Obs.Gyn. for Postgraduates, 3rd Edition Pg 291,
 - Blackwell Scientific Publication
 - Oxford, London, Edinburg. Boston Melbourne
7. Benson, R.C.
 - Post partum immunization
 - Current Obs.Gyn. Diagnosis and Treatment
 5th Edition pg 854.
 - Lange Medical Publications. California, U.S.A. 1984
8. Mushbacher, J.; Bove, J.R.
 - Rhesus Immunoprophylaxis, is antepartum therapy desirable
 - New Eng. M.J. 16: 935, 1981.

SEVERE MALARIA IN PREGNANCY, PREMATURE LABOUR, TWIN LIVE

BABIES DELIVERED

Name: E.A.
Age: 20 years
IP No: 884309
Parity: 0+0
LNMF: 8.9.87
EDD: 15.6.88
DGA: 15.3.88 1.50am
DOD: 26.3.88

PRESENTING COMPLAINTS

Lower abdominal pain for 1 day, joint pains for 2 days. Sweating on and off about 2 days, whitish vaginal discharge with pruritus 4 days.

HISTORY OF PRESENTING COMPLAINTS

The patient was well until two days before admission into our labour ward when she started having some vague joint pains. She also noted to have chills and sweat on and off. All these complaints have increased over the last 1 day and have been accompanied by lower abdominal pain. She had been on chloroquin tablet 4 stat, 2 after 6 hours and 2 on the morning without relief.

She had been having pruritis and whitish vaginal discharge for the last 4 days. These problems have also increased in severity.

No history of vomiting, and no history of vaginal bleeding and no dysuria.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 0+0. Her last monthly period was on 8.9.87. She had been having it every 30 days and used to last 2 to 3 days. There was no accompanying abdominal pain. Her menarche was at 13 years. She had not used any method of contraception.

PRESENT OBSTETRIC HISTORY

By dates she was about 28 weeks. She was expected to deliver on 15.6.88. She had attended antenatal clinic in Crescent Medical Centre in Nairobi where she had gone two times. She had had no problem during the pregnancy.

She started having foetal movements at 20 weeks gestation.

PAST MEDICAL HISTORY

None of significance.

FAMILY AND SOCIAL HISTORY

She was a married lady staying with her husband at Kibera Estate in Nairobi. She was in secretarial college in Nairobi, and her husband was an auditor with the Kenya Pipeline Limited.

She does not drink alcohol nor smoke.
There is no relevant history from the family.

ON EXAMINATION.

She was sick looking. She was not pale, nor jaundiced. She had no oedema of the legs. Other general examinations were normal. Her temperature was 38.5°C, her pulse rate was 116/minute regular, her respiratory rate was 24/minute normal and her blood pressure was 120/80mmHg.

- Central Nervous System)
- Cardiovascular System) Were essentially normal
- Respiratory System)

ABDOMINAL EXAMINATION

Her abdomen was uniformly distended. Uterine size was 36 weeks. Many fetal parts felt but head was presenting. Spleen was palpable about 3cm below the subcostal margin just lateral to mid clavicular line left side, liver was not palpable and no tenderness was elicited anywhere.

She was having one to two contractions in ten minutes each lasting about 20 seconds. Foetal heart rate was heard at 136/minute regular; there was also a muffled sound at a different site corresponding to a rate of 142/minute and was also regular.

VAGINAL EXAMINATION

When she had a normal external genitalia, there was no bleeding noted, but there was a whitish thick discharge not foul smelling. Vaginal wall was smooth and cervix was long, central, soft and closed.

She had an adequate pelvis.

DIAGNOSIS

A diagnosis of primigravida with malaria, candidiasis, and premature labour at 28 weeks with twins was made.

PLAN:

- Blood slides had been taken at Casualty and was positive for malaria parasites.
 - Blood was taken for haemogram to include reticulocyte count, and white blood cell differential and total.
 - Mid stream specimen of urine and high vaginal swab were ordered unfortunately there were no containers for both.
 - stool for ova and cyst was also ordered.
 - the patient was taken to acute room in labor ward for closer observation and was put on paracetamol tablet 2 stat ventolol 4mg 8 hourly. She was given chloroquin tablet 2 stat considering that she had gotten the early morning dose. She was also started on pessaries canasten one daily for six days. Urine output was to be closely monitored.
- 15.3.88 - 2pm- patient had temperature of 36.4°C and the temperature came down steadily from the time of admission. However the temperature began rising thereafter and by 5.30pm it was 38.5°C and by 6pm it was 38.7°C. A decision to give aspergic injection 0.5gm stat was reached; at the same time another blood slide for malarial parasite was taken for urgent scrutiny. The patient was shivering at this time, uterine contractions had stopped. Foetal hearts were heard and were normal.

Blood slide result came as trophozoites of plasmodium faciparum seen, heavy parasitaemia.

Diagnosis of chloroquin resistant malaria was made and patient started on intravenous quinine 600mg in 500mls of 5% dextrose to run 8 hourly. This was started at 7.30pm the same day.

Her temperature settled steadily and by 11pm the same day it was 36.4°C. From 5.30am to 6.30am on the following morning 16.3.88 temperature rose again to 38.2°C. Her urine output upto 6am was 1300mls.

A decision was made to continue treatment and to take another sample of blood for blood slide for malaria parasites. This specimen did not seem to have reached the laboratory.

17.3.88 the patient's outlook was better. Her urine output was satisfactory for the previous 24 hours, it was 1800mls against 2600mls input, her temperature of the morning was 37°C and had been below 37.5°C for the previous 18 hours. Repeat blood slide for malaria parasite showed few malaria parasites seen (trophozoite of p. falciparum).

The patient was discharged to antenatal ward for further management. Her urinalysis showed protein which ranged between trace and plus I, urine sugar was nil throughout her stay in the acute room, no bilirubin.

Her haemogram results Lab No. 008870 revealed - Haemoglobin of 10.5g/dl

WBC - total 9.7×10^9 l/l. No differential was given.

MCV - 89.2fb.

- Reticulocytes - were not done.

18.3.88

She had steady improvement, all parameters were normal. Antenatal profile were ordered. Urea and electrolytes were also ordered.

She had uneventful day on 19.3.88.

20.3.88 - She complained of drainage of liquor and was seen in labor ward at 12.30pm where she was noted to be in established labor.

114

Cervical dilatation was 8cm, she was obviously draining, head was felt and there was no cord.

She was put on partogram and observation in first stage. She progressed well and delivered first twin at 2.45am, it was a female of birth weight 1100 grammes, second twin was male and was also spontaneous vertex, his weight was 2000 grammes; it was delivered at 2.50am. Apgar score for the first twin was 8 in 1 minute and 9 in 5 minutes; for the second twin was the same.

Episiotomy was sutured and the rest of the genital was intact.

They had different placentas which were delivered whole with membranes.

Post partum observations were normal and the patient was taken to our post natal ward where she made steady recovery.

Repeat haemoglobin on 23.3.88 and blood slide of the same day were Hb 10.6g/dl, WBC - $11.7 \times 10^9/l$ - normal in distribution, RBC were normocytic normochromic lab number 009324; malarial parasites were not seen - lab number 623.

Urea and electrolytes of 18.3.88

K - 3.0mmol/l

Na - 127mmol/l

BUN - 4.2mmol/l

U.A. - 359 μ mol/l

Creat - 140 μ mol/l

The patient finished her dose of quinine on the 25.3.88. Her observations remained steady. She was still seeing her babies in nursery.

She was discharged to mother's hostels on 26.3.88 in good condition. She was discharged from mother's hostel on 25.4.88 with the babies in good condition. She was put on fansidar tablets 1 weekly for six weeks. She did not come to our postnatal clinic as was arranged.

COMMENT

This was a patient who had severe malarial attack in pregnancy and went on to have premature labor and delivery to twins.

Malaria is caused by sporozoa of four species of plasmodium namely vivax, ovale, malariae and falciparum. Malaria is endemic in coastal regions and lake region falciparum being the commonest type. Prevalence and density of infection are greater in pregnancy due to reduced immunity. Those from endemic areas have some immunity and even then the immunity is reduced with pregnancy (1,2,3). The effect malaria exerts in a population depends on epidemiological pattern. Malaria can be stable where there is constant repeated infection (holoendemic). Here the population has high degree of immunity and epidemics don't occur. In unstable malaria its transmission is intermittent. Communal immunity is low and dramatic epidemics can occur (4). Our patient came from Lake region and is supposed to have high immunity. We can suppose that the pregnancy related depressed immunity was responsible for such a serious infection. Infection is also severer in primigravidas like ours (7).

Reduced immunity in pregnancy has been shown to be responsible for high parasitaemia rates, repeated infection and anaemia invariably results, 10% of pregnant mothers in endemic areas have haemoglobin level of 5g/dl (3). The anaemia is usually megaloblastic due to haemolysis, defective erythropoiesis and hypersplenism 4.3% of total admission into our antenatal wards are due to anaemia whose aetiology is malaria (8).

Malaria in pregnancy becomes important because it is not only a cause of maternal morbidity but also a cause of fetal loss and premature deliveries. There is evidence of accumulation of placental inflammatory masses in the intervillous space, there is also thickening of trophoblastic basement membranes (2,4); These changes affect fetoplacental transfer and likely to cause fetal distress, and intrauterine growth retardation.

The latter could also result from anaemia (2). Our patient delivered twins one of whose weight was half the other. The had different placentas, it is possible that the parasitaemia was more in one placenta than the other though other explanations could also be brought forth..

Malarial parasites rarely pass to foetal side and further, fetal haemoglobin are resistant to malarial attack; maternal IgG which passes across the placenta also protects the baby from attack (4). Other problems with malarial infection include intrauterine fetal death, puerperal fever and psychosis. Kartman (1972) in Tanzania reported an incidence of umbilical cord malarial parasitaemia of 3.8%, placental of 19.7% and maternal blood of 23.2%. He also observed occurrence of congenital malaria to be more in non immune subjects contracting malaria for the first time (5) The babies were not screened in our patient.

Management depends on expeditious diagnosis and commencement of medication at once. Our patient had taken close to full dose before she came to the hospital, but her blood film revealed parasitaemia which subsequently became heavy. The aim is to eradicate the parasite from the system. Chloroquin is the drug of choice and if there is resistance as was in our patient, quinine is given for 10 days. Prophylaxis in pregnancy should be given. In our patient she went into premature labor and delivered live babies. Puerperal pyrexia should still be watched for (4,5,6,7).

REFERENCES

1. Sinei, S.K.A.; Mati J.K.G., Mungei, J. et al
 - prevalence of anaemia in pregnancy and role of anaemia in its aetiology in rural Kenya.
 - Journ. Obs.Gyn. East and Central Africa 3(3): 119, 1983
2. Allen, S.
 Malaria in Pregnancy with foetal complication
 British Journ. Obs.Gyn. 91: 399-403, 1984.
3. Ngwalle, K.E.N.
 - Role of malaria in causation of anaemia in first pregnancy as seen at Mahumbili Medical Centre.
 - Journ. Obs.Gyn. East and Central Africa 4: 13-16, 1985.
4. Lawson J.B., Stewart, D.B.
 - Malaria and Pregnancy
 - Obs.Gyn in the tropics and developing countries
 pg 59-72, 1983.
 - English Language Book Society
5. Kortman H.F.M.
 - Malaria in Pregnancy
 - Drukkerij Elinkwijk Utrecht, 1972.
6. Formulu J.N.
 - A 2 year retrospective survey of anaemia in pregnancy
 - M.Med Thesis 1981 University of Nairobi.
7. Kelsey, A.H.
 - Anaemia, Malaria and Pickle Cell Disease
 - Clinic in Obs. Gyn. 9: 445, 1982.
8. Mati, J.K.G., Hatimy A., Gebbie D.A.M.
 - Importance of anaemia of pregnancy in Nairobi and the role of malaria in the aetiology of megaloblastic anaemia.
 - The Journ. Tropic. Med. Hyg. 74: 1, 1971

118

TRIPLETS: LIVE BABIES DELIVERED BY CAESARIAN SECTION AT TERM

Name: M.W.N.

Age: 25 years

IP No. 878284

Parity: 2+0

LNMP: 4.6.87

EDD: 11.3.89

DOA: 17.2.88

DOD: 24.2.88

PRESENTING COMPLAINTS

Labour pains since 9 am same day.

HISTORY OF PRESENT ILLNESS

The patient was well until 9am the same day when she developed abdominal pain which was intermittent and gradually spread to the whole abdomen. It increased in severity and frequency over the hours.

She gives a history of liquor drainage and no history of vaginal bleeding.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 2+0, her last delivery was 1985. Both were spontaneous vertex delivery and she had normal puerperium. Her last monthly period was 4.6.87 and she had been getting periods after every 30 days and she used to bleed for 3 to 4 days. She had no accompanying pain. She used contraceptive pills between 1983 and 1984. She had not used any method again.

PRESENT OBSTETRIC HISTORY

She was booked at 26 weeks due to multiple pregnancy and attended our antenatal clinic 8 times during which time she had no problem.

Her blood group was A Rhesus D positive, her haemoglobin level was 11.6g/dl and packed cell volume was 33.9%. She had negative serology. She was 5 feet 5 inches tall.

PAST MEDICAL HISTORY

Nothing of significant

FAMILY AND SOCIAL HISTORY

She was a married housewife, she reached form II level of education. Her husband is a police officer and they stay in Kiambu town.

She neither drinks alcohol nor smokes. There is no history of twins in their families.

ON EXAMINATION

She was in good general condition. She was not pale, and had no jaundice. Her other general examinations were normal. Vital signs were RR 22/minute, PR 88/minute regular, Sp 120/80mmHg, and body temperature was 36.2°C.

- Central Nervous System)
- Respiratory System) No abnormality detected.
- Cardiovascular system)

ABDOMINAL EXAMINATION

She had a full abdomen with a uterine size of 38 weeks, lie and presentation were difficult to make out as there were many foetal parts.

Foetal heart was heard at different positions.

VAGINAL EXAMINATION

Was not done.

DIAGNOSIS

A diagnosis of a para 2+0 with triplets at 37 weeks was made.

PLAN:

The plan was to give her bed rest; she was put on Tablet folic acid 5mg daily, and tabs ferrous sulphate 200mg three times a day and observe her vital signs 4 hourly.

The patient's condition remained stable during the day of admission and overnight.

The following day, however, she developed labor pains and was taken to labor ward theatre for delivery.

Her venous blood was taken for crossmatch and intravenous fluids started, informed consent got.

She was taken to theatre and after routine preoperative procedures were done she was put on operating table and caesarian section was done.

The first baby was transverse and was delivered by breech; the second baby was breech and was delivered by breech, and the last was oblique and was delivered by vertex. They were in different sacs but shared one placenta.

The first baby scored 8 in one minute, 4 in 5 minutes and 6 in ten minutes, and weighed 2600 grams; the second baby scored 8 in 1 minute, 9 in 5 minutes and weighed 2200 grams. and the third one scored 8 in 1 minute, 9 in 5 minutes and weighed 2300grams. The placenta weighed 1500grams and was delivered complete with membranes. Estimated blood loss 700mls.

The patient made uneventful recovery. The immediate post partum observation was blood pressure 120/70mmHg, pulse rate 80/minute, respiratory rate was 20/minute and temperature 36°C.

The first baby recovered well and from nursery and joined the mother on the fifth post operative day.

Check haemoglobin on the third post operative day was 10.2g/dl.

She made uneventful recovery and was discharged home on the eighth post operative day 24.2.88.

She was seen after six weeks in our post natal clinic. She had no problem. She was booked in Rahimtulla Wing where BTL was done on 27.6.88.

She recovered well after BTL.

COMMENTS

This was a patient who had triplets diagnosed during antenatal period and successfully managed by bed rest and delivered by caesarian section.

Incidence of triplets in an area that has not been explored because their birth occur rarely. Over a period of 28 years, a total of 75,506 deliveries took place in University Town Hospital and out of these 20 sets were triplets (incidence of 1:1,822) (1). Local data is not available with which to compare. It is higher in blacks than in Caucasians. (8)

Common causes of multiple gestation is fertilization of two ova (dizygotic twins) where the fetuses have separate placentas and amniotic sacs. These types of pregnancies are influenced by race, hereditary, increased maternal age and parity, elevated endogenous folliclestimulating hormone and drugs for ovulation induction (2,3,4). Monozygotic deliveries are not affected by these factors. Our patient had the triplets sharing one placenta but different sacs. Among the aetiological factors for monozygotic fetuses include delayed implantation. There is always one placenta but the sacs can be different. (5) Our patient had three fetuses in different sacs but shared one placenta.

Diagnosis of triplets is not difficult. Clinically there will be discrepancy between uterine size and dates, there will be multiple fetal parts and confirmation by ultrasound, or plain abdominal X-ray in third trimester, the latter is used in most developing countries as ultrasound is not universally available. Our patient's condition was diagnosed by 26/52.

About 5-50% of term multiple deliveries are only diagnosed at labor (6). This is due to the fact that possibility of multiple pregnancy is never kept in mind, but if we keep Hellin's law in mind that twins occur once in 86 births, then this thinking should abound (1).

Management of triplets can be difficult. In our patient the state was discovered early and patient managed with this in mind. She was admitted in the last month of pregnancy for a supervised bed rest.

Mode of delivery was already decided upon, and when patient went into labour, caesarian section was done and three babies with good weights were delivered. Some authors say the average age of delivery in sponataneous ovulation average 34 weeks and that mothers of restricted activity deliver at 34.3 weeks (1). Our patient delivered at 37 weeks.

Complication of triplets seem to be shared by twin pregnancy and include malpresentation, preterm labor, premature rupture of membranes (1,2). Saunders found preterm deliveries were common among patients kept for bed rest than the control group (6). Marivate et al (1982) however thinks that preterm labor can be avoided by use of bed rest; tocolytis and even cervical cerclage (7). In support of Marivate et al, other workers have noted that bed rest delays preterm labor and promote fetal growth (2).

Anticipated problem in multiple pregnancy is uterine atony after third stage. Blood should be made available Our patient had no such complication and the puerperium was uneventful.

REFERENCES

1. Syrop, C.H.; Varner, M.W.
 - Triplet Gestation; Maternal and Neonatal Implication
 - Obs.Gyn. Survey 41(4): 223-226, 1986.
2. Pritchard, J.A., McDonald, P.C., Gant, N.F.
 - Multifetal pregnancy
 - Williams Obstetrics and Gyn. 17th Edition pg 503, 1985
 - Appleton-Century-Crofts/Norwalk Connecticut.
3. Gemzell, C.A.
 - Ovulation Induction
 - Journ. of Endocr. Metabol. 18: 1333, 1958
4. Greenblatt, R.B. Clomphen in Ovulation
 - Fertility Steril. 12: 402, 1961
5. Aladjem, S.
 - Multiple Pregnancy in Obstetrics Practice pg 1980
 - The C.V. Mosby Company. London. St. Louis, Toronto.
6. Saunders, M.L.
 - Preterm Deliveries
 - Lancet 2: 793, 1985.
7. Marivate, M., Normal R.J.
 - Twin
 - Clinic Obs.Gyn. 9(3): 728, 1982.
8. Guttmacher, A.F.
 - Multiple Births
 - Obs.Gyn. 2: 22, 1953

A CASE OF ANTICIPATED P.P.H.: ACTIVE MANAGEMENT THIRD STAGE

Name: T.K.

Age: 30

IF No. 865137

Parity: 7+1

LNMP: 2.3.87

EDD: 9.12.87

DOA: 4.12.87 11.30 am.

PRESENTING COMPLAINTS

The patient presented with history of labor pains since the same day of admission.

She also complained of liquor drainage for 5 hours.

HISTORY OF PRESENTING COMPLAINTS

The patient was well until the morning of 4.12.87 6.00am when she started having intermittent generalised abdominal pain. The pain increased in intensity as well as frequency.

She started draining liquor 5 hours before admission. No history of vaginal bleeding.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 7+1. Her last delivery was 1983. All her deliveries were spontaneous vertex and all lasted about 1 hour. In the last three deliveries she had primary post partum haemorrhage, in the second last pregnancy she had retained placenta which was removed in Busia District Hospital. She was transfused 3 units of blood. In the last pregnancy the loss was such that she was transfused 1 unit of blood.

She had an abortion at 7 months. Evacuation of the uterus was not done. She had her last monthly period on 2.3.87. Her periods used to last 5 to 6 days and she was getting it after every 30 days. There was no pain accompanying the periods.

She had not used any method of contraception.

PRESENT OBSTETRICAL HISTORY

Her last monthly period was 2.3.87 so by dates the pregnancy was 39 weeks. She was booked in our antenatal clinic at 23 weeks and attended five times. Reason for booking was due to previous history of post partum haemorrhage. She had uneventful antenatal period.

Her blood group was O rhesus D positive, her haemoglobin level was 12g/dl, and her serology was negative. She was 5 feet 3 inches tall.

PAST MEDICAL HISTORY

She had no contributory past medical history

FAMILY AND SOCIAL HISTORY

She was a married lady working with Kenya Railways as a messenger. Her husband was a clerk with Kenya Railways. She neither drinks alcohol nor smoke. She had no other family history of relevance.

ON EXAMINATION

She was in good general condition. She was not pale, nor was she jaundiced. Her other general examinations were normal. Her blood pressure was 130/80mmHg, her pulse rate was 84/minute normal, her respiratory rate was 22/minute, and her temperature was 36.6°C.

Central Nervous System)
Respiratory System) Were all normal
Cardiovascular system)

ABDOMINAL EXAMINATION

She had uterine size which was 38 weeks, the foetus was lying longitudinally and presenting by cephalic, Presenting part was 2/5 above the pelvic brim. Uterus was contracting 3 times in 10 minutes each lasting 30 to 40 seconds. Foetal heart was heard and was 144/minute regular.

VAGINAL EXAMINATION:

She had a normal external genitalia. There was no bleeding. Vaginal wall was smooth and normal.

Cervix was 8centimetres dilated with a rather predominant anterior lip. Foetal head was felt and it was in right occipito-anterior. There was no caput and no moulding. The cervix was well applied to the fetal head. At this point the patient was noted to be pushing and she was discouraged from doing so by citing the possible dangers involved.

DIAGNOSIS

A diagnosis of parous patient with previous history of P.F.H. in established labour was made.

PLAN:

An urgent intravenous line was put and her blood taken for group and crossmatch, 2 units. The patient was taken to second stage for closer observation and monitoring of her labor progress, with particular emphasis on not letting her push before full dilatation.

The patient progressed well and at about 1.10pm cervix reached full dilatation; she was given a medidateral episiotomy as the perineum was being distended by the head. She delivered ten minutes later a female baby weighing 3000 grammes with an appgar score of 9 in 1 minute and 10 at 5 minutes. Intramuscular ergometrine was given with the delivery of anterior shoulder of the baby. Signs of placental separation were observed and by controlled cord traction whole placenta and membranes were delivered. A drip of 5% dextrose 500mls with 20 units of syntocinon was commenced at the delivery of the placenta.

The cervix was found to be intact, the vagina was intact. Episiotomy was carefully sutured. No bleeding was observed for the next 2 hours and the patient was taken to first stage for further observation. Her estimated blood loss was 300mls.

Her immediate post partum observation were pulse rate 80/minute, blood pressure was 150/90mmHg, respiratory rate was 20/minute. Her observations after 6 hours were pulse rate 80/minute and blood pressure was 140/80mmHg. She was taken to post natal ward where further observations were continued 4 hourly for the next 24 hours. She was discharged with her baby in good condition.

She did not come to our post natal clinic as was arranged..

COMMENTS

This was a patient who had several history of postpartum haemorrhage a number requiring blood transfusion.

Post partum haemorrhage is bleeding after delivery of the baby of an amount of blood exceeding 500mls. It can be primary when it occurs within the first 24 hours or secondary when it occurs later (1,2). Our patient gave history of primary post partum haemorrhage in her previous deliveries which had necessitated her transfusion while in hospital.

Causes of post partum haemorrhage are various, the commonest being poor uterine contraction due to retained product of conception (POC). Others are uterine atony due to exhaustion or precipitate labor, unrecognised tear at cervix, vagina, or perineum, or even a neglected episiotomy, grandmultiparity, induced labor, multiple pregnancy, polyhydramnios, fibromyomas are all associated with uterine atony and hence post partum haemorrhage (PPH) (1,2,3).

PPH tends to recur especially in parous ladies. Our patient had no history of any particular management done in the previous episodes, but what came to light is that her labor usually takes short time, i.e. precipitate labor, she was also para 7+0, clinical findings were such that the cervix was rather protruberant on its anterior aspect which could denote split cervix in earlier deliveries and hence less resistance to labor and short duration.

In anticipated PPH like in our patient, management revolves around active management of 3rd stage. This involve presence of grouped and crossmatched blood, intravenous line, and being ready with syntocinon to be given intravenous or added into the drip (3,4,5). Patient needs to be reassured and gently discouraged from bearing down before full cervical dilatation (1). This was achieved in our patient. Third stage is important as this is when retained placenta, retained POCs occur.; also at this stage tears and improperty sutured episiotomy can cause bleeding.

Our patient's third stage of labour was particularly observed and intramuscular ergometrin given at the birth of anterior shoulder of the baby; placenta was delivered whole with membranes and drip of syntocinon started. Inspection of the birth canal did not reveal any tear and episiotomy was carefully sutured.

Possibility of retaining undiagnosed second twin with the injection of ergometrine exist as also that of causing hour-glass constriction on the placenta by the cervical internal os. Our patient did not lose much blood, 300mls. Her observation were normal and was discharged with her baby in good state.

Obstetric haemorrhages are responsible for 10-20% of maternal deaths of which PPH is the biggest contributor; cause of death is usually haemorrhagic shock (5).

Should bleeding continue despite every effort then hypogastric artery should be ligated, or hysterectomy done. Use of prostaglandin F2 alpha given transabdominally into the myometrium should also be considered in case of intractable bleeding.

REFERENCES

1. Donald, I.
 - Post partum haemorrhage
 - In practical Obstetric problems 5th Edition pg 248, 1979.
 - Llyod-Luke (medical Books) Ltd. London
2. Pritchard, J.A., McDonald P.C., Sant N.F.
 - In Williams Obstetrics 17th Edition pg 707, 1985
 - Appleton-Century-Croft/New York
3. Myerscough, P.R.
 - In Munro-herr's Operative Obstetrics 9th Edit. pg 785, 1974
 - Bailliere Tindal, Norwich
4. Pritchard J.A., McDonald P.C., Gant F.N.
 - In Williams Obstetrics 17th Edition pg 687, 1985
 - Appleton-Century-Croft/New York
5. Menon, M.K.K., Devi F.K., Bhasker, R.K.
 - In postgraduate Obs.Gyn. 3rd Edition pg 196, 1986.
 - Orient Longman Ltd. 160 Anna Salai, Madrass 600002
6. Aladhem S.
 - P.P.H.
 - In Obstetrical Practice , Pg 469-471, 1980
 - The C.V. Mosby Company - London. Toronto, St. Louis

LONG COMMENTARY

IN

OBSTETRICS

THE SIGNIFICANCE OF PLACENTAL WEIGHT ON TERM

DELIVERIES AT PUMWANI MATERNITY HOSPITAL, NAIROBI, KENYA.

SUMMARY

This study was done at Pumwani Maternity Hospital in the capital city of Nairobi, Kenya. The study spanned a period of March and April 1989. During the period, a total of 361 deliveries giving 361 babies and 361 placentas were analysed.

Results showed that the majority of mothers delivering at the hospital were of age group 20-29 years (64%). It was also noted that there was no mother of age 40 years or over and that the youngest mother during the period was 15 years old.

Those mothers who had delivered for the first or second time (para 1-2) were the majority, 42.9% followed by primigravidas 34.3%. 3.3% were those who had had more than 5 deliveries.

36.6% of the total number of babies delivered were between 2.5kg-3kg; 40.1% were between 3kg-3.5kg; 2.2% were over 4kg and 1.4% 2kg and below.

Placental weights had a peak at between 500gm-600gms (42.3%); 81.6% of the placentas weighed between 400gm-700gm. Placental weights in relation to apgar score were analysed; in all categories of placental weights, except those placentas weighing 300gm or less, more than 70% of the babies had apgar score of 8 and above. Best score was recorded in category of placental weights 600gm-700gm.

Placental weights were then compared to weight of babies. In category of placental weights of between 600gms-700gms and category of placental weight of over 700gms, there were no babies below 2.5kg. In category of placental weights 500gms-600gms babies weighing less than 2.5kg were 1.9% of the total. This percentage increased to 10.7% and 20% for placental weight categories 400gms-500gms, and 500gms-600gms respectively.

Cord insertion to the chorionic plate were analysed in relation to placental weight and baby's weight. 50.5% of placentas with central cord insertion weighed over 600gms. This percentage dropped to 28%, 20.6% and 0% in eccentric, marginal and valemantous cord insertions respectively.

Weights of babies above 3kg were found amongst the central insertion to be 66% of the total, and 52%, 52.6% and 14.3% amongst the eccentric, marginal and valemmentous cord insertions respectively.

51.8% of cord insertion were eccentric and 1.9% were valemmentous, the rest being central and marginal.

Umbilical cord vessels were inspected in all cases and one cord was found to have 4 vessels. Transection was done most of its length to near the chorionic plate and the 4 vessels persisted. The rest of the umbilical cords had 3 vessels. Retroplacental clot was observed in one placenta and infarcts in 34.3% of all placentas. 4% of these infarcted placentas were of pre-eclamptic patients.

93.6% of our patients had diastolic blood pressure of below 90mmHg. The rest had obvious pre-eclampsia with blood pressure ranging between 90-110mmHg.

INTRODUCTION AND REVIEW OF LITERATURE

Interest on placenta dates back to the 14th century with Realdus Columbus first describing it as a 'circular cake' in 1559 (9). A lot of painstaking work has gone on and the much we know of the placenta we owe to early workers who include Arantius (1564), Harvey (1651), Malpighi (1660) and Mossman (1937) (9,10).

Mossman (1937) first described placenta as that portion of the foetal membranes that is in apposition with or fused to the uterine mucosa, and as we know any intimate opposition or fusion of fetal organ to maternal physiological exchange is called placenta (10).

In man, the placental trophoblast invade the maternal decidua, maternal blood coming into direct contact with fetal trophoblast; it is therefore described as a discoid, deciduate haemochorial chorioallantoic placenta all layers being fetal origin (11).

Size and composition of placenta alters as gestation changes. For the fetus to be of normal health in utero, it is necessary that the placenta be healthy to carry out its functions.

A normal placenta at term is discoid in shape and measures about 15-20cm in diameter, 2-3cm thick and about 500mg in weight (2,9). The fetal side is covered by transparent amnion beneath which fetal vessels course. Cross section show from fetal side amnion, chorion, chorionic villi, intervillous space, then the deciduate plate and myometrium on the maternal side. On maternal side groupings 1-3 villi form cotyledons which number about 30 and are easily seen on maternal side as elevations (10,29).

Umbilical cord attaches eccentrically to the chorionic plate in 48.5%-80% of cases (2). It is 1-2.5cm in diameter, and 55cm long (11,12). It is covered by amnion inner matrix being filled with Wharton's jelly. It usually has two arteries and one vein, the right umbilical vein having disappeared early in fetal development (9,10,12).

Functions of placenta include respiratory, nutrition, hormone production, barrier functions, excretion among others. Although foetal growth depends on genetic potential and availability of nutrients a host of factors can interfere with this supply of nutrients that the genetic potential be secondary (10, 11) Physiological adaptation needs placental hormones and this needs properly nourished placenta getting enough nutrients and enough blood flow. A host of factors have been known to affect this delicate balance some of which include socioeconomic status, ethnic group, maternal hypertension, infections, blood groups and other immunological factors (9, 23, 24, 28)...

The main factor that has been observed by many workers to influence placental weight, and fetal outcome is adequate uteroplacental bloodflow (22, 27, 32).

Minute marginal subchorionic foci of infarcts are said to be normal and are present in all placentas, they only become significant if they are abundant as these may cause fetal death at most (9). Other workers also argue that placental calcification is a normal process and is a normal event in 3rd trimesters, and that infarcts caused by fibrin deposition are normal except in widespread cases (18). It has been shown that placenta from mothers with pre-eclampsia are smaller with total cells of even less than 50% normal, and that they are invariably associated with intrauterine growth retardation (32).

The maternal blood volume seem to, once again be very important in placental growth and fetal maturation. Myron (1970) states that route for food to the fetus is very complex. It begins with adequate maternal blood flow. This flow becomes important if its composition and amount is such that it meets the fetal needs. Placental transport is important because a placenta that is diseased will not be able to convey the substances that reach it to the fetus. Foetal growth will therefore depend on rate of perfusion of the placenta and the ability of the placenta to transport (21, 32). Winick (1967) reported a case of severely emaciated mother who carried pregnancy to term. It was found that the placenta had less than 50% of expected number of cells and she gave birth to a 2.5kg baby (23).

This really shows how placenta has high functional reserve. The same peculiar nature of placenta has been sighted by other workers (28). More important is the neurological development that follow from so affected fetusses. Maternal undernutrition, maternal vascular disease will impede placental cell division and thus curtail brain cell division (24). Follow up of these cases of obvious intrauterine growth retardation over a time of intellectual growth would be useful so as to guard against such situations.

Immunology of placenta is one of a complex of events and a success story itself. It seems to be dependent on absence of transplantation antigen from syntitotrophoblast. Immune attack on the placenta is not a clear pathological entity but may occur with placental villitis and phemphigoid gestations. These especially villitis can in 5-10% of cases be associated with intrauterine growth retardation (26). Initial trigger for cause is thought to be infective in nature especially with treponemas and cytomegalovirus.

Placental size bears no universal relation with fetal. It is known that placenta undergoes a series of progressive changes that relate to gestational age and fetal maturity. It has a huge functional reserve as has been witnessed with placentas of high altitude, erythroblastosis and anaemia. But its growth in terms of cell division steps at 34-36 weeks but protein increase go on to term. Other workers have also noted that placental growth decline towards term (22,27,28).

As concerns prolonged pregnancy one would therefore expect that fetus would be distressed. This has been shown to be true and not only might the fetus not grow but will also lose weight (11). Also blamed for intrauterine growth retardation is retroplacental haemorrhage, circumvaliate placenta, marginal insertion of umbilical cord and especially valemmentous has been shown to be frequently associated with intrauterine growth retardation (11,13,14,15). Capacity and reserve of aging placenta are reduced after term; the reduction continues upto a point at which optimal functions can not really be sustained and fetus is bound to succumb.

This end point can at present be monitored by hormonal estimation especially oestrial (15). Bakkehteig (1984) found ultrasound useful in monitoring the well being of intrauterine fetal retardation. The workers claim that foetal movement, fetal heart rate, fetal heart activity when monitored once or twice weekly (18). In practice it is known that fetal demise takes place often suddenly in utero and that no amount of monitoring will predict with precision when this would be.

One finds a growth retarded fetus in a patient who has no predisposing factor. Normotensive patients have been shown to have intrauterine growth retardation with placentas that are even 45% smaller than normal; Some of these include reduced total cells by 51% and surface area for placental gas exchange equal to $\frac{1}{2}$ the normal size (21,22). Some of these findings have been attributed to poor placental site.

With all variables excluded gravidity and maternal age do not seem to have any effect on fetal weight (16).

Concerning different umbilical cord insertion, Agboola (1982) concluded that it is the anastomosis of umbilical vessels within the chorionic plate that is responsible for any deliterous effect which may have been observed by earlier workers (2).

With all these observations narrated, this study was designed to find out some of these facts as they manifest locally and to come out with some findings, which would be useful in Obstetrics and perinatal care.

OBJECTIVES OF THE STUDY

A. SHORT TERM

- 1. To find out the effect of placental weight on fetal outcome
- 2. To identify some of the factors influencing placental weight.

B. LONG TERM

- 3. To utilise these findings for a better preconception, antenatal and perinatal care.

MATERIALS AND METHODS

A. STUDY AREA

This study was carried out at Pumwani Maternity Hospital. This is the only City Commission Health Institution which handles full fledged maternity functions. It carries out antenatal services and also receives patients from its many health centres running antenatal care. It has few wards in which some complicated cases such as pre-eclampsia and anaemia in pregnancy are admitted. The hospital is headed by the Medical Superintendent who is a qualified Obstetrician Gynaecologist. She has an assistance of other qualified personnel. She is answerable to the Medical Officer of Health who is based in City Hall.

B. STUDY DESIGN AND SAMPLING

Only mothers who had full information of facts needed for the purpose of the study were included. The patients had to be clinic attenders either at Pumwani Maternity Hospital or at any of their Health Centres. This was insisted on because I was keen in knowing how the pregnancy had progressed during the antenatal period noting any deviation from the expected pattern in relation to last normal monthly period. Special attention was paid to blood pressure pattern and where available proteinuria and glycosuria. Mothers whose monthly periods were questionable were excluded.

Another criterion for inclusion was gestation period of between 37 completed weeks and 41 completed weeks. A total of 400 deliveries were considered enough for stratification into items under scrutiny.

C. STUDY INSTRUMENT

Mothers were included immediately as they approach second stage of labour. Appropriate parts of the questionnaires were filled after interviewing the mother and checking the antenatal record. The babies were scored as soon as they were delivered and were subsequently weighed. These were entered in appropriate part of the questionnaire.

141

As soon as placentas were delivered, they were taken for inspection which included umbilical cord vessels, insertion of the cord into the chorionic plate and checking for retroplacental clots. The placentas were then washed, cord cut about 3-4cm from the chorionic plate redundant membranes, trimmed off and infarcts checked for. The placenta was then put carefully in a polythene bag and weighed. The same scale was used throughout for the babies and the placentas. These findings were also entered in the relevant portions of the questionnaires. The investigator with his assistant handled the study through to its completion.

D. PERIOD OF STUDY

This was estimated to be at least 20 days. Because of the time period within which the results were needed and pecuniary constraints more hours were put into the data collection than had been envisaged. Exclusion criteria above also made getting the targetted number in time difficult. More time put in data collection close to this target was realised.

E. DATA ANALYSIS AND PRESENTATION

The information was tallied manually with the aid of four assistants; they were categorised into subjects under study and were analysed by the investigator and presented in form of graphs, tables and short comments. Detailed discussion finally followed.

F. MEDICOLEGAL CONSIDERATIONS

This was a non-invasive study in which facts needed were usual things done antenatally and postnatally. No inconvenience to the mothers were caused.

G. TYPE OF STUDY

This was a prospective type of descriptive survey.

H. CONSTRAINTS

- i. Prolonged formality of getting permission from City Hall before starting the research was real and felt.
- ii. The hospital has many sectors which are operational on 24 hour basis. As such midwives work in shift and it is during the changeovers that we manage to lose some placentas of mothers whose antenatal records had been entered in our questionnaires. These were delivered and discarded in the sluice thereby making some questionnaires useless. Ordinarily these placentas were supposed to be kept by the bed-side of the delivered mother and be collected by the investigator for further examination and record. Such collections were carried out usually within 5 minutes and at most 15 minutes.
- iii. This was not a sponsored project and as such financial constraint was felt by the investigator.

HOW THE CONSTRAINTS WERE OVERCOME

- i. Although the formality through which permission is granted is long and takes time, this was anticipated and as such the urgency of the study was stressed to the Medical Officer of Health who was considerate enough as to push through the permitting letter in good time.
- ii. The inconvenience of losing some of the placentas before recording was compensated for by the more amount of time that was put in the data collection and fortunately, by the good number of deliveries taking place at the hospital. The midwives needed reminding every now and again.
- iii. The devotion of the assistant and understanding of the staff at the hospital enabled the investigator to complete the data collection in time and hence cut down on extra expense.

RESULTS

A total of 389 mothers were interviewed and relevant portions of questionnaires filled. Out of these 28 questionnaires were found to be unacceptable for inclusion in the study. Some of the reasons were that the questionnaires were wrongly labelled or that an item was either omitted or wrongly placed. As a result 361 questionnaires after thorough scrutiny, passed for the purpose of the study and are analysed and presented here.



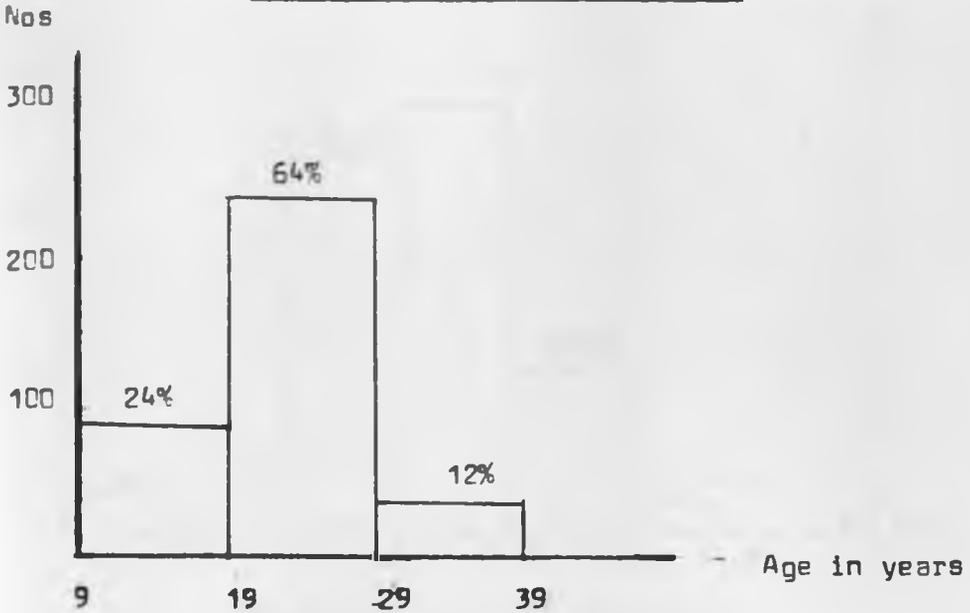
FIG. 1. 1952

The following table shows the distribution of the sample in different age groups. The sample was divided into four age groups: 0-10 years, 11-20 years, 21-30 years, and 31-40 years. The number of mothers in each age group is as follows: 0-10 years: 120, 11-20 years: 150, 21-30 years: 80, and 31-40 years: 30.

The following table shows the distribution of the sample in different educational levels. The sample was divided into three educational levels: Primary school, Secondary school, and Tertiary school. The number of mothers in each educational level is as follows: Primary school: 180, Secondary school: 120, and Tertiary school: 60.

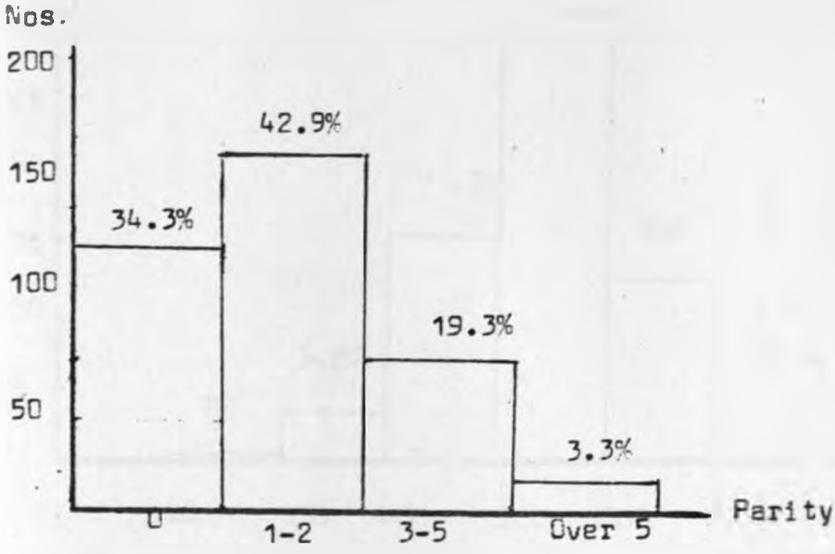
1.

DISTRIBUTION ACCORDING TO AGE



DISTRIBUTION BY PARITY

2.

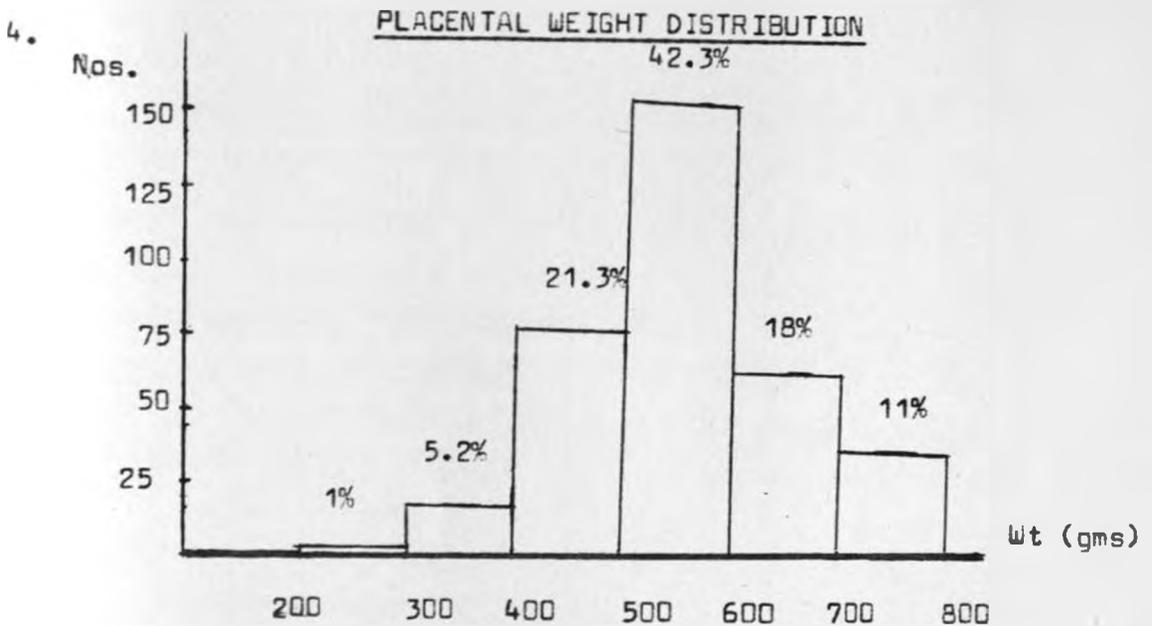
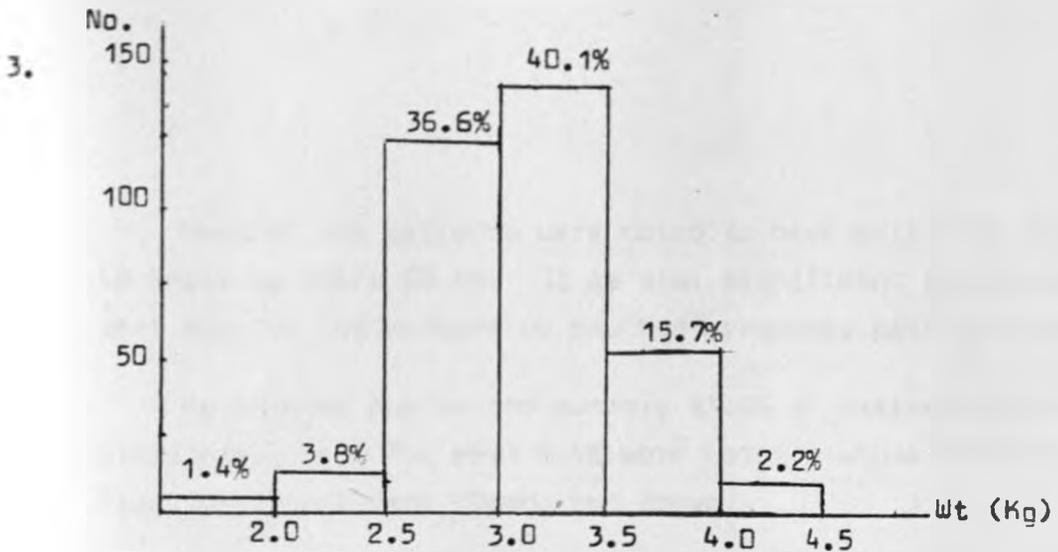


Tables 1 and 2

These show that most of our patients were of younger age group in whom complications have been documented to be less. 24% were teenagers with the youngest being 15 years. Most patients were in age group 19-29 years where 64% were. It is worthy of note that there were very few deliveries after 29 years of age and none after 39 years. The oldest mother was 38 years.

There was a real fall of number of mothers by parity from peak 42.9% amongst para 1-2 to 3.3% among para 6 and over. Primigravidas formed 34.3%. With most deliveries occurring between 19-29 years and most of these women having 1-2 children it would indicate that generally most women deliver when they are young and there seem also to be tendency to finish family early.

BIRTHWEIGHT DISTRIBUTION



Tables 3 and 4

277 babies (76.7%) weighed between 2.5-3.5kg. Only 4.2% weighed less than 2.5kg. It is also noteworthy that only 15.7% of babies weighed between 3.5-4kg. Between 2.5-4kg were 92.4%.

Placental weight varied alot with peak at between 500-600gms (42.3%). Only 6.2% of the placenta weighed were below 400gms and only 11% were above 700mg. So between 400-700gm had 81.6% of the whole total.

Most of the patients were noted to have delivered at Over 40 weeks by dates 68.5%. It is also significant to realise that none of the mothers we saw had pregnancy past 42 weeks.

As pointed out in the summary 93.6% of patients had normal blood pressure. The rest 6.4% were mothers whose diastolic Blood pressures were 90mmHg and above.

TABLE 5: PLACENTAL WEIGHT VERSUS FETAL WEIGHT

WTS IN GMS	0.0	0.0	10.0	43.3	33.3	13.4	100
≥ 700	0.0	0.0	27.2	45.5	27.3	0.0	100
600	0.0	1.9	48.1	33.3	16.7	1.9	100
500	0.0	10.7	14.7	66.3	8.0	0.0	100
400	0.0	20	30	40	10	0.0	100
≤ 300	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	≤ 2	2.5	3	3.5	≥ 4		WTS IN KG

The above table compares placental weight with fetal weight. Percentage of fetuses weighing less than 2.5kg were analysed per category of placental weights. For placental weights of more than 700gms and the category of placental weights of 600gms-700gms there were no babies recorded. For placental weights categories 500gms-600gms, 400gms-500gms, and 300gms-400gms percentages of babies recorded were 1.9%, 10.7% and 20% respectively.

Babies weighing between 3kg-4kg in placental weight category 700gms and above accounted for 76.6%, for category 600gm-700gms they accounted for 72.8%, but accounted for 50%, 74.3% and 50% for placental weights category 500gm-600gm, 400-500gms, and 300gm-400gm respectively.

Babies of more than 4kg were 13.4% of placental weight category over 700gms and 1.9% of placental weight category 500gms-600gms.

This table shows that placental weight has some influence on foetal weight. Lower placental weights are accompanied with lower fetal weights, and higher placental weights are accompanied by higher fetal weight as exemplified by fetal weights below 2.5kg, and placental weights of above 700gms. For placental weights between 400gm-700gm or fetal weights between 3kg-4kg there does not seem to be a consistent relation between the weights.

TABLE 6: PLACENTAL WEIGHT VERSUS APGAR SCOREPLACENTAL WT
IN GMS

%

700	0.0	0.0	0.0	10	3.3	43.4	33.3	01.0	100
600	0.0	0.0	0.0	2	1	72.7	24.3	0.0	100
500	0.0	0.0	1.0	2	11.1	55.5	29.6	1.9	100
400	0.0	1.8	3	9.5	14.3	53.4	19.0	0.0	100
300	0.0	0	0.0	10	10	37	43	0.0	100
	0.0	0.0	8.2	5	21.1	33.4	33.3	0.0	100
	3	4	5	6	7	8	9	10	APGAR SCORE

In this table it has been shown that apgar score was generally good in all categories of placental weight. Over 70% of all babies in all categories scored 8 and above. This score was best between placental weights of 600gms-700gm where 97% of babies scored 8 and above.

When further checked for those babies who scored 7 and below it was observed that 33% of the babies had placental weights of 300gm and below, 20% had placental weights of between 400gm-500gms and 3% had placental weights between 600gms-700gms. It is therefore obvious that apgar score becomes better as placental weight increases and seem to have a peak of between placental weight 600gm-700gms. Also noted was that in apgar score of 7 and below the number of babies increases as placental weight decreases. Peak was noted at placental weight of 300gms and below, and it was least in placental weight of category 600gm-700gms. This placental weight category (600gm-700gm) is also the category where the apgar score was best.

TABLE 7: FREQUENCY OF CORD INSERTION

	Nos.	%	1	2	3	4
Eccentric	187	51.8	62.5	62.2	48.5	64
Central	134	37.1	26.5	22.8	46.5	25
Marginal	33	9.1	9.2	14.9	4.1	10
Valementous	7	1.9	1.8	--	0.0	10
TOTAL	361	100				

Table: 7 shows percentage distribution of cord insertion to chorionic plate. It has been compared to other work done by other researchers.

Series named are as follows:

- 1- Agboola (1976) (2)
- 2 - Dorste (1971) (5)
- 3 - Purola (1968) (4)
- 4 - Krone (1965) (3)

Reference Numbers.

Our findings of distribution seem comparable with that of others. In other series and ours eccentric insertion is the commonest 51.8%, and valementous is the least common in our series like in other series.

TABLE 8: PLACENTAL WEIGHT VERSUS CORD INSERTION

Placental Wt

GMS.

≥ 700	20	29.0	5.3	0.0
	8	21.5	15.3	0.0
600				
500	48	30.8	57.9	28.6
400	20	13.2	21.1	42.8
300	4	5.7	0.0	28.6
≤ 300	0.0	0.0	0.0	0.0
%	100	100	100	100
	1	2	3	4

CORD INSERTION

KEYS:

1. Eccentric
2. Central
3. Marginal
4. Valemmentous

This table brings out clearly what effect there is of cord insertion to the chorionic place on placental weight. Considering placental weights of less than 500gms, valemmentous insertion topped the list with 71.4% of its placentas being in this category. This percentage progressively went down with the least being in central insertion.

For placental weights of more than 600gms, central insertion had the highest percentage 50.5%, followed by eccentric (28%), marginal (20.6%) and valemmentous had none.

From this study it is obvious that cord insertion has an influence on placental weights. Low weight abound in valemmentous while heavier placentas are found in central insertion predominantly.

TABLE 9: CORD INSERTION VERSUS FETAL WEIGHT

Insertions

%

Valementous	0.0	28.6	57.1	14.3	0.0	0.0	100
Marginal	0.0	0.0	47.4	36.8	15.8	0.0	100
Central	0.0	1.9	32.0	33.9	26.4	5.7	100
Eccentric	0.0	6.0	42	40	8	4	100
	≤ 2	2.5	3	3.5	≥ 4		WTS. IN KG

After noting the obvious influence of cord insertion on placental weights, a step was taken further to see whether the cord insertion could affect fetal weights.

Babies who weighed less than 2.5kg were considered. 28.6% of those who had valementous cord insertion were in this category, none in marginal, 6% in eccentric and 1.9% in central insertion. In babies who weighed over 3kg, central insertion had 66%, eccentric 52%, marginal 52.6% and valementous insertion 14.3%.

These findings corrolate well with findings in table 8. It can be argued that type of cord insertion onto the chorionic plate has a direct effect on both placental and fetal weights.

TABLE 10: MATERNAL AGE VERSUS PLACENTAL WEIGHT

Placental Wt.	19	20-29	30-39	40+	TOTAL
800					
700	5	44	14	0	63
600	18	38	8	0	64
500	37	85	16	0	138
400	26	53	3	0	82
300	1	5	1	0	7
200	0	7	0	0	7
	0	7	0	0	0
TOTAL	87	232	42	0	361

TABLE 10:

This table shows distribution of placental weight versus maternal age. In teenagers the majority of placentas weighed between 400-700gms, in age group 20-29 years, majority of placentas weighed between 400 to over 700 grams while in age group 30-39 years majority of placentas weighed between 500 to over 700 grams.

So there seem to be some increase of placental weight with maternal age.

TABLE 11: MATERNAL AGE (YRS) VERSUS FETAL WEIGHT (KGS)

FETAL WT (KG)	≤ 19	20-29	30-39	≥ 40	MATERNAL AGE (YRS)
≥ 4	0	7	5	0	12
3.5	8	43	10	0	12
3.0	30	91	16	0	137
2.5	45	81	8	0	134
≤ 2.0	0	9	3	0	12
	4	0	0	0	4
TOTAL	87	232	42	0	361

In the teenage group 86.2% of them had fetal weights of between 2.5-3.5kg, while in age group 30-39 years peak is at between 3-4kg, 38%, while 26% were between 2 and 3kg and 11.9% above 4kg. Age group 20-29 years shows a very marked peak between 2.5-4kg (92.6%). It can also be concluded that teenagers tend to have comparatively lower birth weight than in older patients especially after 30 years.

TABLE-12: PARITY VERSUS PLACENTAL WEIGHT

Placental wt. gms	Parity				TOTAL
	0	1-2	3-5	≥ 6	
100-200	0	1	0	0	1
201-300	1	3	0	0	4
301-400	1	2	2	0	4
401-500	38	33	9	3	83
501-600	45	60	24	6	135
601-700	23	29	11	0	63
≥ 701	16	28	24	3	71
TOTAL	124	155	70	12	361

This table shows that majority (85.4%) primigravidas had placental weights between 400-700 gms; para 1+2 had weights more or less spread broadly but mostly at between 500-600 grams; para 3 to 5 had most weights between 500-700 grams and those parity equal to or more than 6 had it peak at 500-600grams.

This shows that parous ladies have placental weights usually higher than primigravidas on average.

TABLE 13: PARITY VERSUS FETAL WEIGHT

FETAL WT (kg)	0	1-2	3-5	≥6	TOTAL	
4+	2	3	5	0	11	
4.0	16	26	17	6	65	
3.5	39	65	24	4	132	
3.0	60	55	22	2	139	
2.5	6	6	2	0	14	
2.0	1	1	0	0	2	
TOTAL	124	155	70	12	361	

This table shows that 79% of primigravidas had fetal weights between 2.5-3.5kg; in the same weight bracket para 1-2 were 77% and para 3-5, 65%. 83% of those who were para 6 or more had their babies weighing between 3-4kg. It shows that upto para 2 the difference in weight distribution does not exist then after that there seem to be increase in weight favouring more parous ladies.

A total of 23 pre-eclampsia patients delivered during the study period. 20 had blood pressure of 90-100mmHg and 3 had blood pressure of over 100mmHg. 21 of the patients had fetal weights between 3-3.5kg. Placental weight also ranged between 450 and 600gms. Of the 2 remaining patients one had widespread placental infarction of weight 300gms and fetal weight 2.3kg. The other was fetus of weight 2.2kg with a placenta of weight 400gms.

This shows how pre-eclampsia can interfere with placental and fetal weights and well being.

DISCUSSION

Physiological adaptation of the mother during pregnancy has been shown to be important for normal fetal growth in utero. This adaptation needs normal placenta producing normal pregnancy hormones in normal amounts. Some factors have been shown to affect this relationship and these reflect in poor fetal growth and poor fetal outcome. Placental pathologies have also been noted (9,10,11,23,24,28).

This study found some interesting relation between fetal and placental weight, and has also shown some factors that has influence on fetal and placental weights.

A total of 361 cases were discussed, 64% of the mothers were in age group 20-29 years. Teenagers formed 24% and age group 30-39 years were 12% of the total. The youngest mother in this series was 15 years, and the oldest was 38 years.

Mothers who had delivered 1-2 times were the majority, 42.9%. Those who were pregnant for the first time formed 34.3%. The percentage decreased to 3.3% for those who had delivered over 5 times (those who were having their 6th pregnancies or more). The mother of the highest parity was para 8 gravida 9. These findings showed that the mothers seen during the study period were young and of low parity. 88% of the mothers were below 30 years of age; and 77.3% of the mothers had had 0-2 deliveries. This could be inferred as a tendency to finish family early and also to have small family size.

Maternal age has been shown to have effect on fetal growth and that optimum performance has been noted to be around 20-30 years of age; above 35 years there is usually an element of growth retardation (1,33). Obstetric performance in primigravidas have been noted to be poorer with more perinatal deaths than other parity, and that after parity 4 the performance becomes poorer again (33). In Nairobi Birth Survey increase of risk factor in para 4 and above was not noted (34).

Birth weight of between 2.5kg-3.5kg accounted for the majority 76.7%. In our series low birth weight (birth weight below 2.5kg) accounted for 5.2%. This category accounted for 7.5% in Nairobi Birth Survey (34).

Placental weights showed a peak of between 500gm-600gms, 42.3%. Between 400gm-700gm percentage rose to 81.6%.

This study has shown that between placental weights of 400gm-700gm influence of placental weights on fetal weights is not obvious and that 50-76% of birth weights were recorded for different placental weight category between 400gm-700gm. It was however found that for extremes of placental weights in this study there was obvious correlation with foetal weights. Birth weights of over 4kg were almost exclusively found in category of placental weights of over 700gms. This percentage was only 1.9% for category of placental weight 500gm-600gms; no birth weights were recorded in other placental weight category. For birth weights of below 2.5kg the highest percentage, 20%, was found in category of placental weight 300g-400gms; 400gm-500gm accounted for 10.7% and 500gm-600gms for 1.9%.

For cases of low birth weights a number of possible explanation have been advanced including low supply of nutrients to the placenta placenta's inability to incooperate the nutrients and deliver them to the fetus. Pathological causes have also been advanced like preeclampsia, anaemia, chronic renal diseases, maternal smoking habits, malnutrition and others (1,24). In this study, antenatal complications were recorded and were all preeclampsia of which total was 23 out of which 21 had normal placental weights and normal birth weight with normal apgar score. Causes that could be considered here include early placental senescence, some cases of vamentous cord insertion, placental pathology like poor vascular anastomosis, unfavourable sites of implantation and the mothers socio-economic background (1,5,11,19). Weiz (1958) showed that placentas of normotensive mothers giving birth to fetuses of low birth weight were 45% smaller than normal, have total cells reduced by 51% and have a surface area for placental exchange equal to $\frac{1}{2}$ the normal area (20). Any of these factors would obviously impair uteroplacental blood flow and compromised fetal growth. Some of the reasons for such an occurrence have been mentioned above. Without any maternal complication fetal well being will depend on uteroplacental circulation. This will in turn depend on the ability of the placenta to make good the nutrients availed to it. Myron (1970) confirmed this in his study on fetal malnutrition (21). Given normal placenta and normal uteroplacental blood flow with normal nutrients, low birth weight can result most likely from diseased or abnormal fetus. But a finding of low placental weight and low birth weight in a situation of normal uteroplacental blood flow one would be tempted to incriminate the placenta as a cause.

157

Immune attack on the placenta is usually not a clear pathological entity but has been shown to occur with villitis. This may trigger some amount of immune attack on the placenta, attack being directed to the placental chorionic villi in 5-10% of cases and may cause intrauterine growth retardation and hence low birth weight (26). Such instances could obviously result in reduced placental weights and effect on the fetus are obvious.

Foetal outcome at an instant is recognised by apgar scoring, and other than the weight which is not included in the scoring system it forms an immediate reflection of the quality of antenatal and intrapartum well being of the fetus. With this in mind a look was taken in this respect and two categories of scoring grades were considered in relation to placental weight. The categories were apgar score of 7 and below; and apgar scores of 8 and above. This study shows that over 70% of all babies of placental weights 300gm to over 700gms score 8 and above. This percentage just fell short of 70% (66.7%) in placental weight category below 300gms. This shows that majority of fetuses had good apgar score irrespective of the placental weights in this study. The best apgar scores were recorded between placental weight 500gms-700gm; the percentage ranged between 87% for placental weight category 500gms-600gm, and 97% for placental weights category 600gm-700gms.

Of the babies who scored 7 and below, higher percentage 33.3% were from placental weights category of below 300gms. Others showed a steady fall in percentage the least, 3%, was in placental weight category 600gm-700gm.

It could be concluded that placental weights of 300gms and above are associated with fetuses whose apgar score at birth are good, and that below this placental weight the apgar score becomes precarious.

Apgar score reflect usually the intrauterine well being of the fetus during labour until delivery or existence of the fetus in utero before commencement of labour and thereafter influenced labour. In labor the most important influence on fetal well being is good uteroplacental blood flow.

If this is compromised as might occur in aging placenta; placenta with borderline reserve, arising from chronic infarct, uterine endarteritis; or in prolonged second stage of labour, then the fetus will be delivered with poor apgar score (11,15,34). It therefore means that with normal uteroplacental blood flow, placenta of normal integrity and normal fetus apgar score at birth should be good. Delay in second stage of labor for 30 minutes has been shown to compromise fetal well being and increase perinatal mortality by 1.8 times; this becomes 7.3 times if delay is 45-59 minutes (34). In labor of normal duration therefore and assuming normal fetus then it is the functional reserve of the placenta that becomes important. It is known that placental growth slows as term approaches and that at 34-36 weeks placental cell division stops though weight and protein increases to term. Blood supply to the placenta which at peak is in excess of 50% of the maternal cardiac output also becomes less (21,27). If other factors encroach on this delicate balance like infarction of placental parenchyma or thrombosis of maternal uteroplacental vessels, then the babies fate in utero even before labor hangs on a balance. Infarcts as such signify severely restricted maternal blood flow to placenta and is a hallmark of markedly abnormal maternal vasculature (25,27). Small placentas with small fetuses therefore would denote some embarrassed relation between maternal placental blood supply and placental fetal blood supply as in our cases cited above. In a situation of good maternal record antenatally and normal fetus except for weight then the small placenta must be the cause of intrauterine growth retardation.

Distribution of cord insertion onto the placental chorionic plate was looked into in this study. Eccentric insertion were 51.8% of the total followed by central insertion 37.1%, marginal 9.1% and least number was valemmentous 1.9%. These were compared with other work that have been done elsewhere and results were comparable.

The cord insertions were then compared in relation to placental weights. 71.4% of all valemmentous insertions had placental weights of less than 500gms. This was the highest percentage amongst the four types of placental insertions, the least was recorded in central insertion which in the same placental weight category accounted for 18.9% of the total central insertions.

Central insertion 50.5%, followed by eccentric 28%, marginal 20.6%, and none for valemmentous were the percentages of the total per each type of insertion for those placentas weighing equal to or above 600gms.

It could be concluded that central insertions are generally characterised by heavier placentas, and that valemmentous by lightest placentas. Other types of insertions fall in between.

Valemmentous insertion type of umbilical cord has been known to be associated with intrauterine growth retardation and has been considered by others as pathological (7,11,29). Marginal placenta has also been noted to be associated with intrauterine growth retardation (11). This being the case it is not surprising in our study that these two type of umbilical cord insertions are accompanied by small placentas. It would seem from this study that central insertion is the ideal form of umbilical cord insertion onto the chorionic plate; it has bigger placentas. It so happens that it is not the commonest type of cord insertion but this could be due to influence of intrauterine environment where placental growth might be affected in any direction by the prevailing circumstances inside the uterus for example low lying placenta over poorly vascularised lower segment, growth will be assymetrial towards the upper segment, growth over scar tissue. It can be envisaged that placenta with umbilical cord placed centrally stands a better chance of getting blood and nutrient supply equally from all sides and therefore should supply it with maximum to the fetus who should also have maximum growth and good weight. This also explains why the valemmentous type of insertion has the lightest placenta, and why other insertions have placental weights in between central and valemmentous.

With the above postulations in mind effect of cord insertion on fetal weight was looked into. It was found that in 66% of central cord insertions fetal weights were 3kg and above; eccentric insertion of the cord total fetal weight of 3kg and above were 52% for each and only 14.3% for valemmentous insertion. Looked at the other way round for babies weighing less than 2.5kg, 28.6% of valemmentous insertions fell in this group while in central insertion only 1.9% of the total were in this group. Again other cord insertions were in between valemmentous and central.

It can be concluded that type of cord insertion onto the chorionic plate has an influence on the placental weight as well as fetal weight. Central insertion being more favourable, while vamentous insertion the least favourable. Findings on this subject of type of cord insertion and its influence on birth weight have been described by others (6,8). Agboola (1982) in his study of Nigerian population found that cord insertion does not have any deliterous effect on the fetus rather it is the vascular anastomotic pattern that is significant (2). While this study agrees with the above the effect on placental and fetal weight were noted to be obvious.

Having noted clearly that umbilical cord insertion onto the chorionic plate has an effect on placental weight, this study looked into other parameters in an effort to find out possible factors that could influence placental weight. Effect of maternal age on placental weight was next looked into. This study showed that teenagers had placental weight in category 400gm to 700gm accounting for 72%, while 30-39 years old mothers placental weight category 500gms-700gms accounted for 90.4%. Maternal ages between 20-29 years had placental weights evenly spread between 400gms-over 700gms.

There seem to be increase in placental weight with increase of maternal age. As most of the mothers in this study had delivered by 30 years, this finding would indicate the easy adaptability of uterus and its vessels to the stress of expanding uterine content. This therefore would easily accomodate the expanding placenta and possibly the fetus.

When maternal age and fetal weights were next studied it was found that it follows the trend as the placenta's above. 86.2% of teenagers had fetal weights between 2.5-3.5kg, while in age group 20-29 years 92.7% had fetal weight of between 2.5kg to 4kg; and age group 30-39 years had fetal weights spread over weight categories 2.5kg - over 4kg. It would be concluded that the same age influence on the placenta also affect fetal weight. So teenagers have lower birth weight compared to older mothers especially after 30years.

Effect of parity on placental weight was also studied. It was found that para 3-5 had heavier placentas than primigravidas generally. Again para 1-2 had placental weight evenly spread to encompass both primigravidas and para 3-5. Effect of parity on fetal weight was then studied. It was found that this followed more or less the age pattern above. 79% of primigravidas had fetal weight of between 2.5-3.5kg, in the same weight bracket para 1-2 were 77% and para 3-5 65%. Although majority of fetal weight were between 2.5-3.5kg by proportion there were more primigravidas as compared to other parity where weights were more spread and showed encroachment on the 4kg weight category. Those who are of parity equal to or more than 6 have obviously heavier babies, than by proportion than other parities.

23 preeclamptic mothers were delivered during this study period. 21 of the mothers had fetal weight of between 3-3.5kg and placental weights of between 450gms-600gms. Of the two mothers remaining one had widespread placental infarction with weight of 300gms and fetal weight 2.3g. The other had placental weight of 400gms with foetal weight of 2.2kg. Observations made for these pre-eclampsia lends weight to the fact that placenta has huge functional reserve and that even with destruction of sizable portion it will still be the uteroplacental blood flow that will determine placental and fetal well being. In the two cases mentioned it seems as if the placental function had been compromised thereby compromising fetal well being. This observation is in keeping with that made by others regarding effect of pre-eclampsia on placenta and hence fetus. Intrauterine growth retardation and occasionally intrauterine fetal death are common with pre-eclampsia (18,27,28,30).

Infarcts occur in at least half of all the placenta (9). It is the quantity of the infarct and the reserve function that count (11,15,27). We had 34.3% of placentas with infarcts. Our finding was that other than the two cases who were also pre-eclamptics the other patients delivered normal weight infants and normal weight placentas.

In conclusion this study has found that placental weight affect fetal weight; lower placental weight, give lower fetal weight and higher placental weight give higher fetal weight. Best apgar score were noted in placental category 600gm-700gm, and worst apgar score was noted in placental weight of below 300gms.

Central cord insertion had the best placental weights and fetal weights; vamentous had the least fetal and placental weights.

Maternal age has a bearing in placental weights. After 30 years placental weights on average are heavier than teenagers.

Parity after 3 is accompanied by rise in placental weights on average which are higher than others.

Maternal age affect fetal weight. Teenagers have lower birth weight than those of 30 years and above.

Parity especially after para 2 has a favourable influence on fetal weight.

Placenta has high functional reserve and small placenta does not necessarily mean small baby. Rather it is the efficiency of residual function in the presence of normal uteroplacental blood flow that is important.

RECOMMENDATION

This study has given us some light as to the relation of placental and fetal weight and factors operational which influence the relation.

There is a need to study more pre-eclamptics to show for sure the effect on fetal and placental weights.

Grand multiparas need to be studied so that we can know when the edge of parity and/or age stops.

Ultrastructure of placentas obviously affected need to be done so as to rule out vascular cause.

Use of Vacuum extraction need reappraisal as often times it was used when it should not be used either due to poor indication or too early application.

The midwives should learn to score the babies within the first minute, and then fifth and tenth minutes. This was an area which had a lot of inertia and made the investigator to discard a few questionnaires because of suspected wrong information. On the whole, good.

REFERENCES

1. Browne, J.C.,
 - Duration of Pregnancy and Birth Weight
 - Brownes Antenatal care 7th Edition pg 84-85 1978
 - Churchill-Livingston, Edinburg, New York, London
2. Agboola, A.
 - The significance of distribution of Umbilical cord insertion into the chorionic plate.
 - Journ. Obs/Gyn. E.C.A. 1: 145, 1982.
3. Krone, H.A., Jopp, H, Schellerer, W.
 - The importance attached to different types of umbilical cord insertion.
 - Z. Geburtsh Gynale, 163: 205, 1965
4. Porula, E.
 - Length and Insertion of Umbilical cord
 - Ann. Chir. Gynaec. Feun. 57: 621, 168
5. Dorste, P.
 - The incidence and statistical relationship between umbilical cord insertion and placental weight
 - Zentralbl, Gynaek. 93: 1705, 1971.
6. Knaus, H.H.
 - The weight of placenta and its Forensic Significance
 - Arch. Gynach. 198: 73, 1983.
7. Morice, I.W.
 - Velementous insertion of the cord in early pregnancy
 - Am. Journ. Obs.Gyn. 93: 276, 1965
8. Aberle, S.B.O.; Morse A.H., Thompson, W.R., Pitney E.H.
 - Relationship of weight of placenta cord and membrane weight to weight of infant in normal full term and in premature deliveries.
 - Am. Journ. Obs.Gyn. 20: 397, 1930.
9. Pritchard, J.A.; McDonald, P.C., Gant, N.F.
 - Diseases and abnormality of placenta and fetal membranes
 - Williams Obstetrics 17th Edition pg 443 and 457, 1985
 - Appleton-Century-Croft/California
10. Trudal R., Scoff, J.S.
 - Placental Cacification: A study of 3025 singleton and multiple pregnancy
 - Brit. Journ. Obs.Gyn. 72: 356, 1965

11. Pritchard, J.A.; McDonald P.C., Gant, N.F.
 - Preterm and Postterm pregnancies and fetal growth retardation.
 - Williams Obstetrics 17th Edition pg 758, 1985.
 - Appleton-Century-Croft, California
12. Phillip, A.G.S.
 - Fetal growth retardation: Femur Fontanalle and Followup
 - Paediatric: 62: 446, 1978.
13. Aldjem, S.
 - Placental and Fetal membrane Pathology
 - Obstetrical Practice pg 515-530, 1980
 - C.V. Mosby Company, Ltd. London.
14. Benson, R.C.
 - Placenta and Fetus
 - Current Obs.Gyn. Diagnosis and Treatment
Pg. 497-505, 1976 Edition.
 - Lange Medical Publishers, London
15. Benson R.C.
 - Placental Dysfunction
 - Current Obs.Gyn Diagnosis and Treatment
Pg 489 1976 Edition
 - Lange Medical Publishers, London
16. Patricia H.S., Mark A.K., Barry J.G.
 - Birth Weight among women of different ethnic groups
 - Journ. Amer. Med. Ass. 255: 48, 1986
17. Hendricks C.H.
 - Delivery Patterns, reproductive efficiency preterm rates and
birthweights in Cleveland and differing socioeconomic
and ethnic groups.
 - Am. Journ. Obs/Gyn. 97: 608, 1967
18. Bakkenteig, L.S.,
 - Ultrasound for Intrauterine growth retardation
 - Lancet 2: 2071, 1984.
19. Phillip K., Skodler W.D., Peteisky N.
 - Uteroplacental blood flow, measurement using radioisotope
in small placentas.
 - Obs.Gyn. Survey 41(10): 622, 1986.
20. Weiz E.B. Jr.
 - Disappearance of radioactive sodium from uterine muscle
in normal and abnormal pregnancy.

- Am. Journ. Obs/Gyn 76: 340, 1958
- 21. Myron, W.
 - Fetal Malnutrition
 - Clinic Obs.Gyn 13(3): 526, 1970
- 22. Winick, M.
 - Quantitative Cellular Changes during growth of organs
 - Pediatrics 10: 255, 1967
- 23. Winick, M., Noble, A.
 - Cellular response during malnutrition of various ages
 - J. Nutrition 91: 179, 1967
- 24. Winick, N.
 - Nucleic acid and protein content of placenta and fetal brain.
 - Am. Journ. Obs. Gyn. 40: 601, 1970
- 25. Brinkman, C.R.
 - Umbilical blood flow and fetal oxygen consumption
 - clinic Obs.Gyn. 13(3): 565, 1970
- 26. Redman, C.W.G.
 - Immunology of Placenta
 - Clinic. Obs.Gyn. 13:3, 487, 1986
- 27. Fox H.
 - Pathology of Placenta
 - Clinic Obs.Gyn. 13: 3, 501, 1986
- 28. Kazzi, G.M., Gross, L.T., Rossem, G.M.
 - The relationship of placental grade, fetal lung maturity and neonatal outcome in normal and complicated pregnancy
 - Amer. J. Obs.Gyn. 148, 54, 1984.
- 29. Dewhurst, J.
 - Fertilization, implantation and placental function
 - Integrated Obs Gyn for Postgraduates 3rd Edition pg 84-85, 1981.
- 30. Bodis, J., Zambo, K., Nemessanyi, Z.
 - Determination of intervillous perfussion index in pregnancies with intrauterine growth retardation
 - Obs.Gyn. 41(1): 26, 1986.
- 31. Hunyer, S.N.
 - Vascular Volume and Cardiac response to normal and hypertensive pregnancies.
 - Obs.Gyn Survey 41(5) 279, 1986

32. Erskine R.L.A.; Ritchie J.W.K.
 - Umbilical artery blood flow characteristics in normal and growth retarded fetuses.
 - British Journ. Obs.Gyn 92: 605, 1985.
33. Chamberlain, G., Phillip, E., Hawlett, B., Masters, K.
 - British Births 1970, Vol. 2
 - William Heineman Medical Books Ltd., London 1978
34. Mati, J.K.G., Aggarwal, V.P., Lucas, S., Sanghvi H.C.G., Corkhills,
 - Early Perinatal Mortality Rate
 - NBS IV
 - Journ. Obs. Gyn. E.C.A. 2(4): 130, 1983.

INCOMPLETE ABORTION: EVACUATION OF UTERUS DONE UNDER SEDATION

Name: B.K.

Age: 22 years

Parity: 0+0

IP No.: 913047

LNMP: 6.6.88

DOA: 14.8.88

DDO: 15.8.88

PRESENTING COMPLAINTS

The patient presented with lower abdominal pain and vaginal bleeding for a duration of six days.

HISTORY OF PRESENTING ILLNESS

The patient was well until six days earlier when she developed lower abdominal pain which was intermittent in nature but increased in intensity and frequency, then she later noticed vaginal bleeding. Prior to admission she had heavy vaginal bleeding with clots.

She gave no history of fever, no history of trauma, nor a history of dysuria. There was no history of interference either.

PAST OBSTETRICAL AND GYNAECOLOGICAL HISTORY

She was para 0+0. Her last normal monthly period was 6.6.88. She used to get the periods every 28 days and were lasting 2-3 days. There were no accompanying pains, no history of discharges in between the periods.

She had her menarche at 14 years, and she had not used any contraceptives.

PAST MEDICAL HISTORY

None of significance.

171

HISTORY OF PRESENT PREGNANCY

By dates her pregnancy was 9 weeks old. She had not attended any antenatal clinic and she had had no problem during the 9 weeks.

FAMILY AND SOCIAL HISTORY

She was a married lady who was working in a restaurant in Nairobi as a Secretary. She reached form 4 level of education Her husband was a sales representative with Marsalls (K) Ltd.

She does not drink nor smoke. No history of any medical problem in her home.

ON EXAMINATION

She was in good general condition. She was not pale and not jaundiced. Her other general examination was normal.

Her body temperature was 36°C, pulse rate was 88/min blood pressure was 110/60mmHg and respiratory rate of 20/minute

Central Nervous System)
Respiratory System) Were essentially normal
Cardiovascular System)

ABDOMINAL EXAMINATION

Abdomen was not distended, she had mild tenderness lower abdomen but there were no masses felt.

VAGINAL EXAMINATION

She had a normal external genitalia, there was slight vaginal bleeding. Cervix was 2 centimetres long and 3 centimetres dilated with products of conception felt. Uterus was bulky and was mildly tender. Adnexia were normal. There were some clots and products of conception at the posterior fornix otherwise pouch of Douglas was empty.

DIAGNOSIS

A diagnosis of incomplete abortion was made.

MANAGEMENT

Venous blood from the patient was taken for group and cross match, informed consent was obtained and patient prepared for evacuation of the uterus under sedation in main theatre.

In theatre she was placed on operation table in supine position intravenous pethidine 100mg and valium 10mg were given. She was then placed in lithotomy position vulvovaginal toilet was done and catheterised, clear urine obtained. Examination under sedation revealed same findings.

Auvarud speculum was introduced into the vagina and anterior lip of cervix held by sponge holding forcep. Ovim forcep was used to remove products of conception from uterine cavity; this was followed by sharp curette until gritty feel was heard round the entire uterine wall. Ergometrine 0.5mg was given; bleeding was controlled. Vulvovaginal toilet done and patient wheeled back to the wards. She was put on tetracycline 500mg 6 hourly and paracetamol tablets 2 8 hourly for five days.

Her check haemoglobin level was 14g/dl, PCV 40% She was discharged the following day in good state.

COMMENT

This was a patient who presented to us with 9 weeks amenorrhoea, lower abdominal pain and vaginal bleeding in whom diagnosis of incomplete abortion was made and evacuation of the uterus done.

Abortion as defined by W.H.O. is the expulsion of the the products of conception or termination of pregnancy in the first 20 weeks of gestation or of a fetus weighing less than 500gm (1,8).

Abortion can be classified by sequence of events as threatened, inevitable, incomplete, complete or missed; or by other attendant factors like non-septic, septic, spontaneous, induced, isolated or habitual (2,3).

Our patient had incomplete non-septic abortion and this was her first pregnancy. Incomplete abortion would denote a clinical situation whereby part of the products of conception are still in the uterine cavity and part of it already out of the cervical canal.

50-60% of all the abortions in first trimester are due to chromosomal and fetal abnormality, this percentage drops to 5% in late abortions (2,5). AOB blood group incompatibility between husband and wife have also been noted to contribute to abortions. 45% of abortions have been seen in AOB incompatibility as opposed to 30% in control group (5,6). Other causes of abortions include placental abnormality, endometrial infection, utero-cervical malformation, inadequate corpus luteum function, and immunology (7). Others include debilitating and/or febrile maternal illnesses, trauma, interferences.

The incidence of abortion is difficult to arrive at as some of the abortions are carried out in private clinics and some patients also conceal the event. Aggarwal (1) found that 60% of total gynaecological admissions are abortions, other workers have reported between 25-30% (7). He further found that upto 62.3% of the abortions had been induced or were likely to have been induced (1), and patients that could voluntarily offer history of interference range between 10-33.6%. (1,4).

Most of the cases where interference was suspected were young, unemployed unmarried girls.

Our patient had an amenorrhoea of about 9 weeks she was 22 years old and she had been in marriage for only six months, she was employed and was very happy in the marriage. There was no evidence of interference either on history or on examination. An obvious cause could also not be attributable. It is known that about 12% of all pregnancies end up as abortions (7), a number of whose cause might not be identified.

The hallmark of diagnosis in abortion rests history. There will be history of amenorrhea usually 8-20 weeks, intermittent lower abdominal pain, vaginal bleeding with or without clots, with or without expulsion of products of conception. Pelvic examination will confirm some of the above history. Uterus will usually be smaller than the period of amenorrhea, cervix will or will not be open with or without products of conception. Evidence of interference may be elicited. General examination might reveal variable degree of anaemia, shock or sepsis (2,5). Our patient was quite alert with normal vital signs and no evidence of anaemia as was later confirmed with a haemoglobin level of 14g/dl. She had some lower abdominal tenderness, and had clot at the introitus. Her cervix was 2cm dilated and had products of conception. Adnexiae and pouch of Douglas were normal. Uterus was only mildly tender and was bulky. These findings were in keeping with incomplete abortion.

Management of incomplete abortion depends on clinical findings at the time of admission, but of grave importance is evacuating the uterus as undue delay in doing this will predispose to further bleeding and chances of sepsis. Resuscitation in case of anaemia is necessary, where there is sepsis, urgent specimen should be taken for culture and sensitivity and broad spectrum antibiotic started at once. Our patient had non-septic incomplete abortion with no other complication needing resuscitatory measures.

In our unit evacuations are done under valium and pethidine IV. The patient was prepared as mentioned and evacuation proceeded uneventfully. It is important to ensure that evacuation is complete so as to avoid further bleeding and chances of sepsis. Occasionally there is bleeding after evacuation in which case an intramuscular ergometrine should be given or intravenous syntocinon. (2,3).

Complications of abortion include excessive bleeding, shock and death.

Infection might give rise to septicaemia and give endotoxic shock. With good antibiotics infections usually is brought under control, but endosalpingitis, pelvic adhesion and other resolved inflammatory process make septic abortion a high ranking cause of infertility and ectopic pregnancies. In the interfered group cervical incompetence might result which will perpetuate abortion and preterm deliveries. Like caesarian section scar repeated abortions can predispose to placental previa (1,3,7,8).

Our patient had no complication. She was discharged the following day and has been seen later in good health.

REFERENCES

1. Aggarwal, V.P., Mati, J.K.G.
 - Epidemiology of Induced Abortions in Nairobi
 - Journal of Obst.Gynae E.C.A. 1:54, 1982.
2. Dewhurst J.
 - Abortion
 - Integrated Obstetrics and Gynaecology for Postgraduates
 - 3rd Edition pg 203, 1981
 - Blackwell Scientific Publications
 - Oxford, London. Edinberg. Boston, Melbourne
3. Jeffcoate, N.
 - Abortion
 - Principles of Gynaecology 4th Edition pg 187 1975
 - Butterworths London.
4. Aggarwal, V.P., Mati, J.K.G.
 - Abortions at K.N.H. Review
 - East African Medical Journal 57: 138, 1980
5. Jones H.W., Jones G.S.
 - Infertility, recurrent and Spontaneous abortions
 - Novak's Textbook of Gynaecology pg 694, 1982.
 - William and Wilkins, Baltimore.
6. Lawson J.B., Stewart D.B.
 - Underfertility and overfertility
 - Obstetrics and Gynaecology in the tropics and developing countries pg 582-583, 1983.
 - The English Language Book Society and Edward Arnold (Publishers) Ltd.
7. Raphael, B., Durfee M.V.
 - Spontaneous Abortions
 - Current Obst.Gynae Diagnosis and Treatment
 - 5th Edition Pg 710, 1984
 - L.M.P. California, U.S.A.
8. Pritchard, J.N., McDonald P.C., Gant N.F.
 - Abortion
 - Williams Obstetrics 17th Edition pg 477, 1985
 - Appleton-Century-Croft
9. W.H.O. Scientific Group
 - Induced Abortion, Technical report series 623, ppg 22 1978.

ECTOPIC PREGNANCY

Name: C.C.

Age: 24 years

Parity: 1+1

IP No: 913054

LNMP: 16.5.88

DOA: 14.8.88

DOD: 22.8.88

PRESENTING COMPLAINTS

The patient presented to us with history of severe abdominal pain of sudden onset followed by vaginal bleeding. Both complaints had been there for one day.

HISTORY OF PRESENT ILLNESS

The pain was of sudden onset and was more on the left lower abdomen initially. The pain was later on all parts of the lower abdomen. About 8 hours later she noticed vaginal bleeding.

There was no history of fall or trauma and no history of other illnesses prior to onset of this complaint. She had had no such problems before.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 1+1, her last delivery was in 1973 and she had an uneventful puerperium. Her abortion was in 1986 at one and a half months and uterus was evacuated in theatre. The abortion was spontaneous.

Her last normal monthly period was 16.5.88. Before that she had been having regular periods every 28 days lasting 2-3 days. She had no history of abdominal pain during her periods and no history of vaginal discharge. Her menarche was at 13 years and she had not used contraceptives before.

PAST MEDICAL HISTORY

Not contributory

FAMILY AND SOCIAL HISTORY

She was a married businesswoman staying with her husband at Shauri Moyo Estate in Nairobi. The husband work in Industrial area with Mecol (K) Limited. She does not drink alcohol or smoke.

ON EXAMINATION

She was sick looking and was obviously in pain. She was moderately pale but **not jaundiced**. Other general examination were normal.

Her respiratory rate was 22/minute regular; pulse rate was 100/minute regular, good volume; blood pressure was 100/70mmHg and temperature was 36.5°C.

- Central Nervous System)
- Cardiovascular system) Were Normal
- Respiratory system)

ABDOMINAL EXAMINATION

She had a full abdomen which was very tender especially the lower part. No proper palpation was possible.

VAGINAL EXAMINATION

She had a normal external genitalia, there was no blood coming through the introitus. Cervix was long, central, and tender on excitation. Uterine size was not possible to gauge due to tenderness. Adnexiae were both tender, but more marked on the left side. Adnexial masses were difficult to rule out on account of the tenderness.

A decision to do paracentesis was reached and it yielded non-clotting blood.

DIAGNOSIS

A diagnosis of ruptured ectopic pregnancy was made.

MANAGEMENT

Urgent blood was taken for group and cross match, two units, intravenous line was set with normal saline. Close observation of vital signs were ordered. After obtaining informed consent, the patient was urgently prepared for emergency laparotomy as stated in the introduction.

The patient was on the operation table in one hour. Pre-operative procedures in theatre were done as mentioned in the introduction and her abdomen opened in layers. Peritoneum was held on either side by two pairs of long artery forcep and a small incision made with curved pair of scissors. Haemoperitoneum was identified. A quick suction of blood and removal of clot just enough to make identification of site of rupture was done. The following were the findings:-

- Ruptured left ampullary tubal pregnancy involving the broad ligament; bleeders clamped.
- Haemoperitoneum of about 1200mls
- Fetus with intact cord and part of placenta was found in the peritoneal cavity.
- Foetal sac and part of placental tissue were found at the site of the rupture.
- left ovary was normal.
- Right ovary and tube were normal.

After the removal of haemoperitoneum, fetus, placenta and membranes partial left. Salpingectomy was done and haemostasis achieved. Abdomen was closed in layers and anaesthesia reversed.

She was put on the usual post operative management as per introduction and also on intravenous crystapen 2 mega units 6 hourly. She was also transfused two units of compatible blood. The patient made steady recovery. Her postoperative check haemoglobin was 9.4g/dl. She was discharged in good health on 22.8.88 to be seen in our gynaecology clinic in 6 weeks. She attended as was appointed and she had fully recovered.

COMMENT

This was a patient who had ruptured left ampullary tubal pregnancy for which left partial salpingectomy was done.

Ectopic pregnancy result from implantation at sites other than the uterine cavity commonest site being the tubes (3,5,10). Site of ectopic is tubal in 95% of cases majority being on the right side; ampulla is affected in 65% of cases, isthmus 25%, and interstitial 42%. (3). Our patient had ampullary pregnancy.

Ectopic gestation can occur at any time from menarche to menopause but age group 20-29 years seem to be more at risk (1,3).

Incidence varies from region to region being as low as 1:300 normal deliveries in United Kingdom to as high as 1:28 normal deliveries in Jamaica (11). Mwathe (7) reported an incidence at Kenyatta National Hospital at 4 cases per week, while Sinei et al (1) found admission of 2 per week.

Aetiology is not known but factors that would affect the transport of fertilized ovum would contribute to the genesis of ectopic pregnancy. These would include adherent luminal folds as would be consequent on inflammation, spasm, inadequate peristalsis. Excessive length and tortuosity of the tube; developmental defects like accessory ostia, diverticulum; previous surgery and extrinsic compression (1,2,3,6). Other causes postulated include menstrual reflex with delayed fertilization of ovum with menstrual bleeding at the time of implantation, external migration, ectopic endometrial tissue in the tube or fertilised extruded ovum (3,4).

Ectopic pregnancy seem to be more frequent in infertile women, women within low socio-economic group and women who have had pelvic inflammatory disease or tubal surgery (1,3). Sinei et al (1) observed low parity in his series of 2 or less to account for 68.6%; 63.2% between age group 20-29 years, and evidence of previous infection in 42.1%. Sebela (2,4) in his histological evaluation of fallopian tubes of ectopics found 69% had salpingitis.

Our patient was in the age group, was of low parity, and of low socio economic bracket.

There seem to be more increase of incidence with IUCD users (1,5), but if infection sets in then chances are that tubes will be affected. The incidence is 8 times more in women undergoing investigation for infertility, and those who have been operated for ectopic have 1-2:20 chance of getting another ectopic (4,5). Generally incidence seem to be on the upward trend and could be contributed to by increased sexual freedom and high prevalence of sexually transmitted diseases, use of effective antibiotic which however leave the tubes already damaged but good enough for passage of fertilised ovum to some extent, use of fertility drugs, better and early diagnosis and increased tubal operation especially the coagulation technique for tubal ligation (1,4,8). Our patient had not used any contraceptive method and had no tubal operation and had no history suggestive of past infection.

No clear cut signs or symptoms that would be listed as diagnostic of ectopic pregnancy. However symptoms that are more frequently found are abdominal pain 75-100% (1,3,7), amenorrhoea, 75-76.2% (3,7), vaginal bleeding 67.2-80% (1,3) and abdominal mass 49.8% (7). Our patient presented with abdominal pain, 12 weeks amenorrhoea, vaginal bleeding and adnexial masses was difficult to elicit due to gross tenderness.

Pregnancy test is not useful as it will only be positive in 40-50% of cases (3). Paracentesis is useful in rupture of ectopic as was in our patient and is positive in over 85% cases (3). Ultrasound can be used but has error upto 10% (3,4).

Abdominal pain is due to amnio-chorion sac rupture with local bleeding, pulsion and traction. Uterine bleeding is usually due to failure of pregnancy to survive. followed by endometrial involution.

Rupture is spontaneous in most cases but occasionally accelerated by trauma of vigorous bimanual palpation or coitus. Isthmal pregnancy tends to rupture early 6-8 weeks, ampullary 8-12 weeks and interstitial 4 months (3). Our patient had ampullary pregnancy and was by dates 12 weeks. She presented to us with ruptured ectopic pregnancy. Lack of resistance or response of tissues into which the

COMMENT

This was a patient who had ruptured left ampullary tubal pregnancy for which left partial salphingectomy was done.

Ectopic pregnancy result from implantation at sites other than the uterine cavity commonest site being the tubes (3,5,10). Site of ectopic is tubal in 95% of cases majority being on the right side; ampulla is affected in 65% of cases, isthmus 25%, and ~~interstitial~~ 42%. (3). Our patient had ampullary pregnancy.

Ectopic gestation can occur at any time from menarche to menopause but age group 20-29 years seem to be more at risk (1,3).

Incidence varies from region to region being as low as 1:300 normal deliveries in United Kingdom to as high as 1:28 normal deliveries in Jamaica (11). Mwahe (7) reported an incidence at Kenyatta National Hospital at 4 cases per week, while Sinei et al (1) found admission of 2 per week.

Aetiology is not known but factors that would affect the transport of fertilized ovum would contribute to the genesis of ectopic pregnancy. These would include adherent luminal folds as would be consequent on inflammation, spasm, inadequate **peristalsis**. Excessive length and tortuosity of the tube; developmental defects like accessory ostia, diverticulum; previous surgery and **extrinsic** adhesion (1,2,3,6). Other causes postulated include menstrual reflex with delayed fertilization of ovum with menstrual bleeding at the time of implantation, external migration, ectopic endometrial tissue in the tube or fertilised extruded ovum (3,4).

Ectopic pregnancy seem to be more frequent in infertile women, women within low socio-economic group and women who have had pelvic inflammatory disease or tubal surgery (1,3). Sinei et al (1) observed low parity in his series of 2 or less to account for 68.6%; 63.2% between age group 20-29 years, and evidence of previous infection in 42.1%. Webala (2,) in his histological evaluation of fallopian tubes of ectopics found 69% had salphingitis.

Our patient was in the age group, was of low Parity, and of low socio economic bracket.

There seem to be more increase of incidence with IUCD users (1,5), but if infection sets in then chances are that tubes will be affected. The incidence is 8 times more in women undergoing investigation for infertility, and those who have been operated for ectopic have 1-2:20 chance of getting another ectopic (4,5). Generally incidence seem to be on the upward trend and could be contributed to by increased sexual freedom and high prevalence of sexually transmitted diseases, use of effective antibiotic which however leave the tubes already damaged but good enough for passage of fertilised ovum to some extent, use of fertility drugs, better and early diagnosis and increased tubal operation especially the coagulation technique for tubal ligation (1,4,8). Our patient had not used any contraceptive method and had no tubal operation and had no history suggestive of past infection.

No clear cut signs or symptoms that would be listed as diagnostic of ectopic pregnancy. However symptoms that are more frequently found are abdominal pain 75-100% (1,3,7), amenorrhoea, 75-76.2% (3,7), vaginal bleeding 67.2-80% (1,3) and abdominal mass 49.8% (7).

Our patient presented with abdominal pain, 12 weeks amenorrhoea, vaginal bleeding and adnexial masses was difficult to elicit due to gross tenderness.

Pregnancy test is not useful as it will only be positive in 40-50% of cases (3). Paracentesis is useful in rupture of ectopic as was in our patient and is positive in over 85% cases (3). Ultrasound can be used but has error upto 10% (3,4).

Abdominal pain is due to amnio-chorion sac rupture with local bleeding, pulsion and traction. Uterine bleeding is usually due to failure of pregnancy to survive followed by endometrial involution.

Rupture is spontaneous in most cases but occasionally accelerated by trauma of vigorous bimanual palpation or coitus. Isthmal pregnancy tends to rupture early 6-8 weeks, ampullary 8-12 weeks and interstitial 4 months (3). Our patient had ampullary pregnancy and was by dates 12 weeks she presented to us with ruptured ectopic pregnancy. Lack of resistance or response of tissues into which the

abnormal implantation takes place, minimal or no decidual reaction without defence against perming trophoblast and **thinness** of the distended wall predispose to easy rupture.

Management of tubal pregnancy is immediate surgery. In most cases in our unit surgery is even undertaken while blood is still being looked for as this will ensure no further bleeding. Operation ranges from milking of the products of conception, partial or total salphingectomy to wedge resection and reconstruction of the uterus (3,4). Our patient had partial salphingectomy done. She did well post operatively and was discharged.

Maternal mortality associated with ectopic pregnancy is high and ranges between 9-9.2% in U.K. and U.S.A (5).

In this patient everything was done and in just under one hour the patient was on operation table. Delay such as recorded by Mwathe (7) of between 0-28 days can cost the patient her life. These often occur with symptoms which are not clear cut or which have stronger shades of other clinical entities, like threatened abortion, or dysfunctional uterine bleeding.

Obstetric performance of patients operated for ectopic is not clear but she has chance of 10% developing another ectopic and 50% chance of getting normal intrauterine pregnancy (4).

REFERENCES

1. Sinei S.K., Okumu, S.
Ectopic Pregnancy at KNH, Nairobi, Kenya
Journal of Obs.Gyn. East Central Africa 6(1): 9
Vol. 6 No. 1, Pg 9.
2. Webala, G.S.R.
Tubal Pregnancy at Kenyatta National Hospital; The role
of PID in it aetiology
M.Med Thesis 1979, University of Nairobi
3. Benson R.C., Complications of Pregnancy
Current Obs/Gyn. Diagnosis and Treatment 1976
Chap. 32 pg 559-603
Lange Medical Publications, Los Altos, California
4. Pritchard A.J., McDonald P.S., Gant F.N.
Ectopic Pregnancy
Williams Obstetrics 17th Edition 1985, pg 423
Appleton-Century-Croft/Norwalk, Connecticut
5. Dewhurst J.
Ectopic Pregnancy
Intergrated Obs/Gyn. for Postgrad. 3rd Edition 1981 pg 222-9
Blackwell Scientific Publications
Oxford London. Edinburg, Boston, Melbourne
6. Lawson J.B., Stewart D.B.
Ectopic Pregnancy
Obs/Gyn in the tropics and Developing countries
1983 Edition pg 371
The English Language Book Society and Edward Arnold
(Publishers) Ltd.
7. Mwathe E.G.
Pattern of Ectopic Pregnancy at K.N.H.
M.Med Thesis 1984, University of Nairobi.
8. Ory M.W.
Ectopic Pregnancy and IUCD, New Perspectives
Obs/Gyn. S 57: 137, 1981.
9. Makokha E.A.
Maternal Mortality at Kenyatta National Hospital
E.A.M.J. 57(7) 451, 1986.

10. Jeffcoate N.

- Ectopic Pregnancy
 - Principles of Gynaecology
 - 4th Edition pg 207, 1975.
- Butterworths, London

11. Weston L., Bengtssen L.O.M., Maron P.H.

- Incidence trend and risk of Ectopic Pregnancy in a population of women.
- B.M.J. 11:15, 1981

HYDATIDIFORM MOLE: SUCTION CURRATAGE DONE

Name: F.M.

Age: 30 years

IP No.: 907805

Parity: 4+0

LMP: 26.3.88

DOA: 20.7.88

DOD: 10.8.88

PRESENTING COMPLAINTS

The patient presented with amenorrhea for 16 weeks, abdominal pain for 1 month and vaginal bleeding for 4 days.

HISTORY OF PRESENT ILLNESS

The patient had been well prior to the above complaint. She started feeling lower abdominal pain which initially was insidious in onset but has increased steadily in intensity over the last one month.

Her monthly periods which had been normal earlier suddenly disappeared for the last 16/52. She had felt no foetal movement.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 4+0 her last delivery was 1983 and it was normal.

Before the period of amenorrhea she had been having regular menses and normal flow. Her last monthly period was on 26.3.88. She gets after 28 days and used to last 3 to 4 days.

She got her first periods at 15 years.

She used injectable contraceptive, Depo provera, from the time of the last delivery upto 1985. She did not use any method of contraception after that.

PAST MEDICAL HISTORY

None of significance.

FAMILY AND SOCIAL HISTORY

She was a married lady being housewife and staying with her husband in Kinango. She does not drink alcohol nor smoke.

Her husband works in medical store of Kinango.

There is no contributing history.

ON EXAMINATION

She was in good general condition. She was not pale, and had no jaundice. Her other general examination was normal. Her pulse rate was 82/min; blood pressure was 130/90_{mm}Hg respiratory rate was 20/min, and her temperature was 36.7°C.

Central Nervous System)

Respiratory System) No abnormality detected

Cardiovascular System)

ABDOMINAL EXAMINATION

Abdomen was not distended and had no scars. There was some fullness in the lower abdomen.

There was pelvic mass about 16 weeks size of pregnant uterus; it was firm, non-tender and mobile.

There was also small immobile masses at the iliac fossa both left and right.

VAGINAL EXAMINATION

She had normal external genitalia, there was no vaginal bleeding nor was there discharge seen. Vaginal wall was normal.

Her cervix was about 2cm long, firm, central and closed. Uterus was about 16 weeks size, firm and mobile.

There were adnexial masses bilateral each measuring about 7x7cm. There was no tenderness.

Puch of Douglus was free

No blood on examining finger.

DIAGNOSIS

A diagnosis of hydatidiform mole was made.

PLAN:

- Her venous blood was taken for haemogram, urea and electrolytes, group and x match.
- she was given urine bottle to pass urine in the morning for pregnancy test.

LABORATORY RESULTS

20.7.88 - Hb - 11.8g/dl
 - WBC - $10 \times 10^9 / l$
 PCV - 34.8%
 Na⁺ - 130mmol/l
 K⁺ - 4.2 mmol/l; BUN 3.8mmol/l

Her blood group was O Rh-D positive

21.7.88 - pregnancy test was positive.

She had ultrasound done on 19.7.88 and report was as follows:-

- Uterus was bulky showing infiltration by hydatidiform mole.
- Bilateral ovarian cyst measuring 9.5 x 7.4cm and 8.7 x 6.6cm

With these results the patient was prepared for suction Curratage on 28.7.88. 3 units of compatible blood was available.

Preoperative preparations were done on the night of 27.7.88 and the patient was premedicated 30 minutes before theatre.

After the usual preoperative procedures the patient was anaesthetised, a drip of 5% dextrose 500mls with 40 units syntocinon was put up.

The patient was put in lithotomy position and vulvo-vaginal toilet done and then draped. Examination under anaesthesia was done.

The findings were as follows:-

- Normal external genitalia, normal vagina.
- cervix was soft and os closed
- Uterus was about 18 weeks.
- She had bilateral adnexial masses
- Vesicles and pure juice on examining finger.

The cervix was dilated to hegar size 10 and suction curratage done under syntocinon drip. Grapelike clusture of vesicles were removed. Uterus was well contracted. Estimated blood loss was 2000mls. Specimen was taken for histology. The patient was transfused 2 units of compatible blood, check haemoglobin on the third post operative day was 11.4g/dl.

She was discharged on tetracycline capsules 500mg 6 hourly for one week, tablet flagyl 200mg 8 hourly for one week and tablets ergometrine 0.5mg twice a day. She was to come for sharp curratage on 9.8.88.

On the 9.8.88 after being starved overnight the patient was prepared for theatre in the morning. Her venous blood was taken for haemogram and urea and electrolytes.

The patient premedicated and then taken to theatre. After prepering and anaesthetising the patient uterus was emptied by sharp curratage. A lot of tissue was removed and sent for histology.

Anaesthesia was reversed and patient taken back to the ward.

LABORATORY RESULTS

- No 2314 of 28.7.88
- Bulky currating, some vesicular with clear fluid.
- Hydrophobic degeneration in vesicles with epithelial proliferation inkeeping with diagnosis of H. mole.
- No evidence of malignancy.

- No. 2363 of 9.8.88
- Multinucleated giant cells suggestive of trophoblastic cell or myometrial reaction to pregnancy.
- 9.8.88
 - Hb - 12.5g/dl
 - WBC - 15×10^9 /dl
 - PCV - 38%
 - Na⁺ - 135 mmol/l
 - K⁺ - 3.9mmol/l
- Pregnancy tests in dilution
 - 12.8.88 - negative
 - 18.8.88 - negative.

The patient was discharged on 18.8.88 to be seen in our clinic on 14.9.88.

She was to be followed up in our clinic over the years by pregnancy tests.

She had agreed with the husband to have tubal ligation done, and they have filled sterilization form.

She was to be seen in our clinic 3 monthly for 1 year, then six monthly for another year.

COMMENT

This was a patient who had gestational trophoblastic disease. This disorder include hydatidiform mole, invasive mole, and choriocarcinoma. The benign form which our patient had could still progress to malignant choriocarcinoma.

Hydatidiform mole is characterised by replacement of normal placental architecture by grape like vesicles. These vesicles are individual villi that have undergone hydrophic changes and show microscopically detectable loss of foetal vasculature.

The highest incidence has been reported in Taiwan 1:82 deliveries (1); in U.S.A. it is 1:2000 pregnancies (2). Incidence in Kenya is not known, but Armon (3) reports 1:1200 in Tanzania.

Common presenting symptoms include vaginal bleeding 77.4%, nausea vomiting and lower abdominal pains (4). Socioeconomic factors tend to play some part and the disease is common in developing countries. Majority of patients are 20-40 years, the disease being common in first pregnancies, first matings, the very beginning and very end of reproductive life (5). Our patient was 30 years old, she was para 4 and we have no reason to assume that she had fresh mating. Other findings include uterine size larger than dates 63%, it is smaller in 11% of cases where the mole is either dead or partially aborted (5). Our patient's uterine size corresponded with dates.

It may coexist with fetus, may set early onset of preeclampsia or hyperthyroidism (6). Our patient had none of these.

Molar pregnancies at Kenyatta National Hospital are usually induced with syntocinon in an escalating fashion, followed by suction curratage, and two weeks later sharp curratage done. Our patient had dilatation and suction curratage followed by sharp curratage 2 weeks later. The aim of sharp curratage is to remove any molar tissue remaining. 12% of these patients still go ahead and develop choriocarcinoma (4).

During the two year follow up patients are not allowed to get pregnant and contraceptive advice is given. Our patient opted for surgical sterilization. 24.6% of patients put on oral contraception will require chemotherapy as compared to 8.8% of patients using other methods (7). Patients are followed up by monitoring H.C.G. levels. In our patient pregnancy test was performed in dilution and in all cases was negative. Levels can be detected by pregnancy test if HCG levels exceed 750 IU/24 hours. If pregnancy tests in followup are negative levels are measured of beta-HCG as this is more sensitive. Levels of L.H. can be measured until it reverts to normal then a more expensive beta HCG can be done (8).

If negative pregnancy test reverts to positive, or levels of HCG are rising above 20,000 IU/L after 4 weeks or detected 4 weeks after evacuation then chemotherapy should be started.

Our patient's pregnancy test remained negative during the follow up period.

Anticipated problems include haemorrhage, sepsis, uterine perforation. Our patient did not have any of these.

REFERENCES

1. Jeffcoate T.N.A.
- Principles of Gynaecology 4th Edition pg 220, 1975.
- Butterworths, London
2. Danforth D.N.
- Obs.Gyn 3rd Edition pg 724, 1977
- Harper and Row Publishers
3. Armon P.J., Kajembe A.H.
- Choriocarcinoma in Tanzania, Medical Presentation
- E.A.M.J. 55: 43, 1978
4. Makokha E.A.
- Choriocarcinoma at Kenyatta National Hospital
- Presentation at KOGS Annual Scientific Congress
Nairobi 21: 2-24 - 1979
5. Ayengade G.
- Gestational Trophoblastic disease in Nigeria;
A 10 year review.
- E.A.M.J. 56: 278, 1979
6. Ratnum S.S., Lacheran A.
- Disease of Trophoblast
- Clinical Obs.Gyn. 9:539, 1982.
7. Stone, M., Bagshawe K.D.
- An analysis of influence of maternal age, gestational
age, contraceptive method and mode of primary treatment
of patient with hydatidiform mole on the incidence of
subsequent chemotherapy
- Br. Jn. Obs.Gyn 86: 782, 1974.
8. Kigundu S.C.B., Fongoh F.B., Makokha A.E., Mati J.K.G.
Bansal B.
- The use of L.H. and B-HCG radioimmunoassay in diagnosis
and treatment of choriocarcinoma at K.N.H.
- Journal of Obs.Gyn. East and Central Africa 1:148, 1982.

PELVIC ABSCESS

Name: Y.A.

Age: 23 years

IP No.: 913176

Parity: 3+0

LNMP: 10.8.88

DOA: 17.8.88

DOD: 29.8.88

PRESENTING COMPLAINTS

The patient presented with history of sudden onset of lower abdominal pain, and foul smelling vaginal discharge.

HISTORY OF PRESENT ILLNESS

The patient was well until 7 days prior to admission when she started having her monthly period and pains which increased in intensity especially after the monthly period. It was accompanied by foul smelling yellowish discharge per vaginam.

PAST MEDICAL HISTORY

She had some inguinal abscess which was drained here in April 1988.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 3+0, her last delivery was in 1984. Her last monthly period was 10.8.88. She was getting her menses for 2 days and used to come every 30 days. She had been having moderate abdominal pain with every monthly period.

She had her menarche at 15 years and she used oral contraceptive from September 1986 to May 1988.

FAMILY AND SOCIAL HISTORY

She married but got divorced in 1986 and works as a housemaid in Nairobi City. She stays in Nairobi's Buru Buru Estate.

She doesn't drink alcohol nor smokes. No history of chronic illness in the family.

ON EXAMINATION

General condition was fair. She was not pale and had no jaundice. Other general examinations were normal.

Bp 110/80mmHg, PR 84/min normal, temperature 37.8°C
RR 20/minute normal.

Central Nervous system)

R_espiratory system) Nothing of significance

Cardiovascular system)

ABDOMEN

Full abdomen, mild tenderness, subumbilical especially at the iliac fossa. No obvious masses.

VAGINAL EXAMINATION

Normal external genitalia. She was not bleeding but there was obvious discharge coming out of vagina, foul smelling.

Uterus was normal size and anteverted. Adnexiae had mild tenderness but no obvious masses. Pouch of Douglas had obvious fulness; rather firm, culdocentesis attempted but nothing came out.

DIAGNOSIS

- Acute pelvic Inflammatory disease
- R/O pus collection

PLAN:

The patient was planned for high vaginal swab.

- was put on capsules ampicillin 500mg 6 hourly
- Tablets flagyl 400mg 8 hourly
- Tablets panadol 2 8 hourly.
- Booked for u/s to rule out pus collection.
- blood for haemogram was taken also U/E
- 4 hourly observation.

LABORATORY RESULT

19.8.88 - Hb - 11.8g/d
 WBC - $33.2 \times 10^9/l$, 92% polymorphs
 MCV - 86.1 fl.
 BUN - 4.2 mmol/l; Na⁺ -; K⁺ 3.9mmol/l

19.8.88

U/S - Uterus normal size

- ~~ill~~ defined midline mass extending to pouch of Douglas.
- no adnexial masses

Conclusion: Pelvic abscess

High vaginal swab specimen - Gram positive cocci
 Not cultured as there were no culture medium.

The patient was reviewed with above results and a decision to take the patient for urgent laparotomy was reached.

While in the ward, the patient's general condition remained the same. Except for temperature which initially rose to 38°C. Other vital signs were stable.

The patient had the usual preoperative preparations the night before operation. Her blood group was A positive and two units were made ready.

On the morning of 22.8.88 the patient was premedicated and taken to theatre where pre-operative procedures were done. At operation the following were found

- blocked fallopian tubes bilaterally
- Adhesions involving intestines and fundus of uterus.
- ovaries buried in adhesion.
- Foul smelling pus 500mls was evacuated from pouch of Douglas

No specimen taken for above reason.

DONE:

- Adhesions were released
- pus sucked out and abdominal cavity irrigated with rifocin solution.
- drain was put at the pouch of Douglas to the surface at the side.
- Abdomen closed in the usual way.

Anaesthesia was reversed and patient taken back to the ward.

She was put on ~~crystapen~~ intravenous 2 mega units 6 hourly; intramuscular gentamycin 80mg 8 hourly, and intravenous flagyl 500mg 8 hourly. Other post operative procedures were also observed.

The patient improved steadily. Her check haemoglobin the third post operative day was 10.1g/dl. Drain was shortened first post operative day, removed the following day.

She recovered well and was discharged home on the 29.8.88 to be seen in our clinic in six weeks time.

She did not come.

COMMENT

This was a patient who came with complaints and subsequently clinical signs elicited in keeping with pelvic abscess and in whom laparotomy was done, recovered well and discharged home.

This is one of the commonest sequale of acute pelvic inflammatory disease and is responsible for high morbidity ~~as~~ in sexually active women. Pelvic inflammation accounts for upto 40% of admissions into acute gynaecological ward in Kenyatta National Hospital. (1).

Aetiology is varied but ascending route seem to be more easier, this follows infection of endocervix, urethra, Bartholin glands and rectum. 43% of cases seen at Kenyatta National Hospital are due to Naisseria gonorrhoea. Infection can also be introduced following insertion of IUCD 44%; it can also follow normal parturition, abortion or other operative vaginal manipulations. Such infections may follow lymphatic system. The pus that forms may collect in the tube, spill over into the peritoneal cavity where collection of pus will get surrounded by omentum and gut to form abscesses. This gives generalised inflammation of the abdomen. It can even lead to shock depending on the severity of the infecting organism. Long term result include menorrhagia, congestive dysmenorrhoea, dyspareunia, ectopic pregnancy and even infertility (2,3,4,5,6,7). Our patient had no obvious cause for the abscess formation, but it is known that infection from sexual promiscuity is very common especially among the unmarried young ladies like our patient. Further more illegal abortions going on in the backstreet is a cause of pelvic inflammation and abscess formation. Such history is usually difficult to be offered. Our patient came with abdominal pain fever and foul smelling vaginal discharge.

Other organisms responsible for pelvic infections include *E. coli*, streptococcus, staphylococcus and actinomycetes (7,8,9). We did not do culture though it had been intended due to lack of culture media, gram stain however showed gram positive cocci.

Once diagnosis of pelvic abscess has been made drainage must be done as any delay will lead to generalised peritonitis and possible shock. Supportive therapy is important; antibiotics analgesics/antipyretic, intravenous fluid and if indicated intravenous alimentation. Surgical procedure is governed by the parity of the patient and her desire to have more children (4). Our patient was a divorcee but had 3 children living. It was not easy to rule out possibility of her being married again and the likelihood of wanting another baby. The tubes were conserved for a possible later operation should such a need arise.

Pelvic inflammatory disease with its sequale is a grave problem that calls for aggressive management and early diagnosis; but perhaps the most important is health education on sexual behaviour.

199

REFERENCES

1. Khehar, B.S.
 - Pelvic Inflammatory disease, a review of current practice.
 - E.A.M.J. 57: 72, 1980.
2. Carty M.J., Nzioki, J.M., Verhagen, A.R.
 - The role of *Neisseria gonorrhoea* in Acute Inflammatory Disease in Nairobi.
 - E.A.M.J. 49: 376, 1972.
3. Brown, I.
 - The management of Pelvic Abscess
 - Progress in Obs.Gyn. 2(1): 274, 1982.
4. Golde, S.H., Israel, R.; Ledger, W.G.
 - Unilateral tuboovarian abscess: a distinct entity
 - Amer; Journ. Obs.Gyn. 127: 807, 1979
5. Bartlett, J.G.
 - Anaerobic infection of the pelvis
 - Clinical Obs.Gyn. 22: 351, 1979
6. Fomulu, J.N.
 - Bacteriological Sensitivity pattern in septic abortion Post abortal sepsis and pelvic abscesses at Kenyatta National Hospital
 - M.Med Thesis 1981, University of Nairobi.
7. Burkman, J.R.
 - The women Health study: Association between intrauterine contraceptive devices and pelvic inflammatory disease.
 - Obs.Gyn. 57: 269, 1981.
8. Soderberg, G.; Lindgren, S.,
 - Influence of IUCD on the course of salpingitis
 - Contraception 24: 127, 1981.
9. Rubenstein, P.R., Mishell D.R., Ledger, W.J.
 - Colpotomy drainage of Pelvic Abscesses.
 - Obs.Gyn. 48: 142, 1976

RIGHT BARTHOLIN'S ABSCESS, MARSHUPLIALIZATION DONE

Name: M.N.

Age: 18 years

Parity: 2+0

IP No. 913399

LNMP: 9.8.88

DOA: 20.8.88

DDD: 21.8.88

PRESENTING COMPLAINTS

The patient presented with painful vulval swelling on the right side for 2 days.

HISTORY OF PRESENT ILLNESS

The patient was well until 2 days prior to admission when she started having vulval swelling which was progressive

in size and pain during the two days. She gives no such complaints before. There was no history of trauma and no history of recent discharge per vaginum in recent past.

PAST MEDICAL HISTORY

This was not contributory

OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 2+0. The last delivery was in 1986 and was uneventful. Her last normal period was on 9.8.88, it usually come every 28 days and lasts 5-6 days. There is no accompanying pain and no intermenstrual discharge. Her menarche was at 15 years. She was not using any contraception.

FAMILY AND SOCIAL HISTORY

She was not married and stays with her sister in Eastleigh. She sells second hand clothes. She doesn't smoke nor drink alcohol.

There was no family history that was contributory.

ON EXAMINATION

She was in good general condition, she was not pale, and was not jaundiced. Her body temperature was 37°C. Her pulse rate was 80/minute, Blood pressure was 110/70mmHg She had a respiratory rate of 20/min regular.

RESPIRATORY SYSTEM)

Cardiovascular system) Were essentially normal

Abdominal Examination)

VAGINAL EXAMINATION

She had a normal external genitalia except for the right vulva which was swollen. On inspection there was a foul smelling bloody discharge from the sinus from the swelling. Other vaginal examinations were normal; and pelvic findings were normal.

DIAGNOSIS

Burst right sided Bartholin's abscess.

MANAGEMENT

The patient was informed of her condition and consent for operation and administration of anaesthesia was got. The patient was prepared for marsupialization. Venous blood was taken for full haemogram and intravenous line was started. The patient was taken to theatre and marsupialization was done as follows:-

Patient was put on operation table, anaesthesia was administered and patient was positioned in lithotomy. Vulval and vaginal toilet was done. Examination confirmed the earlier findings. A longitudinal incision was made at the macocutaneous junction just outside the hymenal ring; this exactly passed through the opening of the rupture.

The thick bloody foul smelling discharge was evacuated from a big cavity of capacity about 120mls. Finger was introduced to break up the loculi. Currate was then used to remove the necrotic tissue. The cavity was cleaned with antiseptic solution and the cut edges were everted and stitched to the normal vulval skin using chromic catgut number 2/0 Haemaostasis was achieved and a **sufratulle** gauze was used to pack the cavity, and was to be removed in 24 hours.

Anaesthesia was reversed and patient taken to the ward.

She was prescribed oral ampicillin 500mg 6 hourly salt bath to the perineum three times a day. She had normal post operative period. Unfortunately her haemogram request came back with the comment that the specimen was clotted.

The patient was seen at our gynaecology clinic and had fully recovered.

COMMENT

This was a patient who had Bartholin abscess for which marsupialization was done.

Bartholin glands are two in number and are situated on each side of the introitus inferiolateral to the bulbocavernosus muscle at 5 and 7 O'clock; they secrete alkaline solution during excitement phase of coitus and normally not palpable (1,5). Admission due to Bartholin abscess forms 1.7% of all admissions at Kenyatta National Hospital acute gynaecology, 59% are associated with pregnancy (1).

Bartholin's abscess can occur anytime from menarche to menopause and parity doesn't seem to have any influence (1,3).

Genesis of Bartholin's abscess is infective, the gland being infected as such or infection of pre existing cyst (4). This is followed by obstruction; obstruction with secondary infection can also result from trauma of parturition or episiotomy (3). Our patient was 18 years old para 2+0 with last delivery being in 1986. It was not obvious what could have been the cause of the lesion; perhaps trauma from previous birth or perhaps just primary infection.

A wide range of organisms have been isolated from the lesion of which Neisseria gonorrhoea is the commonest (3,5,6). Organisms mostly isolated include staphylococcus, E.coli and streptococcus. Others include facultative rods, proteus mirabilis and other gram negative rods; in 3.5-11.8% no organism is isolated (5). Our patient had already had a burst abscess and contaminants from vaginal flora would have made usefulness of culture futile.

Presentation is painful swelling of the vulva associated with difficulty in walking or sitting (1,4). Other abscesses may rupture spontaneously, may regress or progress (3,5,6). Mumia (1981) found that 82.7% of the patients were aged between 12-29 years while 53.3% were married. Our patient was single and fall in the age bracket above.

The present technique was originally described by Jackobs (1950) and has since undergone modification; the aim of which is to re-establish the patency of the duct (7), the technique marsupialization is preferred to excision of the swelling as the latter might lead to dry perineum, recurrence, haemorrhage, haematoma formation and scar formation with dyspareunia(7).

Excision, however, is done as an elective procedure in recurrent abscess after an initial marsupialization has been done. Our patient was managed by marsupialization. With this procedure patency is maintained as there is construction of a new mucocutaneous junction between the wall of the cyst and skin of the labia (2,7). 3% of patients so treated have recurrence (1). Our patient had had no recurrence so far.

This method is simple as patient can have post-operative care at home (7). Our patient was put on antibiotics which has been shown to hasten recovery of inflammation (7) and cavity packed with surfratulle to prevent adhesion (1).

REFERENCES

1. Mumia J.A.
Bartholin's Abscess at K.N.H.
M.Med Thesis 1980
University of Nairobi
2. Pritchard, J.A., McDonald P.C., Grant N.
Bartholin's Glands Abscess
Williams Obstetrics 17th Edition 1985 pg 491
Appleton Century Craft/Norwalk Connecticut
3. Dewhurst J.
Bartholin's Cyst and Abscess
Integrated Obs.Gyn. for Postgraduates
3rd Edition 1981 pg 663-687
Blackwell Scientific publications, London
4. Jeffcoate N.
Tumors of Bartholin Glands pg 307, 379
Principle of Gynaecology 4th Edition 1975.
Butterworths London
5. Olipherit M., Gail V.A.
Management of Bartholin Duct Cyst and abscess.
Obstetrics and Gynaecology 16: 476-478.
6. Lee Y., Rankia J., Alpert S., Daly A.K.
- Microbiological Investigation of Bartholin Gland Abscess
and Cyst.
- American Journal of Obs/Gyn 129: 150-153, 1979
7. Jakobson P.
- Mersupialization of Vulvovaginal Bartholin Cyst.
- American Journal of Obs/Gyn. 79: 73, 1960.

PRIMARY INFERTILITY, BILATERAL SALPHINGOSTOMY DONE

Name: M.W.

Age: 28 years

Parity: 0+0

IP No. 839422

LNMP 13.2.89

DOA: 9.2.89

DDO: 7.3.89

PRESENTING COMPLAINTS

The patient first presented in our gynaecological clinic with complaints of inability to conceive for 6 years of marriage.

HISTORY OF PRESENT ILLNESS

The patient was married in 1981 and has since lived happily with the husband without any marital problems. They have, however, failed to achieve pregnancy despite successful coital behaviour.

PAST MEDICAL HISTORY

The patient has not had any major illness and denies any history of vaginal discharge or any related history.

The husband also had had no relevant medical problem like any painful testis in youth or any urethral discharge in adulthood.

PRESENT GYNAECOLOGICAL HISTORY

She was para 0+0, her last monthly period was 13.2.89 it used to come every 28-29 days and used to last 5 days. There was no accompanying pain and no history of intramenstrual discharge. She had her menarche at 14 years and had not used any contraceptive.

207

FAMILY AND SOCIAL HISTORY

She was a married housewife staying with her husband at Kiambu. Her husband is a farmer. No relevant history in the family.

ON EXAMINATION

She was in good general condition. She had no palor nor did she have jaundice. Her other general examinations were normal.

Her pulse rate was 80/minute, blood pressure of 110/90mmHg, respiratory rate of 20/minute regular and body temperature of 36.9°C. She had female configuration with female hair distribution

Central Nervous system)
Cardiovascular system) Were essentially normal
Respiratory system)

Her breasts were well developed with well developed nipple. They were not active.

ABDOMINAL EXAMINATION

The abdomen was scophoid and was symmetrical in shape. There was laparoscopy scar just below the umbilicus. Otherwise there were no masses and no tenderness anywhere.

VAGINAL EXAMINATION

She had a normal external genitalia, there was no discharge or bleeding per vaginum.

Speculum exam done earlier showed a healthy cervix and pap smear was taken. Vaginal wall looked normal.

Digital examination revealed normal vaginal wall, cervix that was long, firm, closed and central. Uterus was normal size and anteverted. Adnexize and pouch of Douglas were normal. There was no discharge on examining finger.

DIAGNOSIS

A diagnosis of primary infertility was made.

MANAGEMENT

Investigations done while she was in the gynaecology clinic include the following:-

Pap smear - class II (Trichomoniasis)

Seminalysis - Normal findings

HSG - Normal uterine size and configuration. Both tubes demonstrated with bilateral hydrosalpinx, no free peritoneal spill.

Dye laparoscopy: adhesions with burrying of the fimbrial end. No free spill of dye but distension of distal portion of tubes noted.

She was admitted in the ward as stated above for tubal operation and preoperative investigations were:

haemogram - Hb 14.3g/dl

- pcv - 34%

- Adequate platelets

HIV screen - negative.

BUN - 3.9mmol/l

K+ - 4mmol/l

Na+ - 134 mmol/l

The patient was planned for and operated on the 27.2.89.

The usual preoperative procedures were done and at operation the following were found.

Uterus was normal in size and was anteverted. The tubes were burried in adhesions and held posteriorly in the pouch of Douglas. Ovaries were equally burried.

DONE:

Release of adhesion was affected using cutting diathermy. Tubes were freed and ovaries were visible. The tubes were then opened using the cutting diathermy blade; fine adhesions holding the fimbria were released. The fimbria were everted using nylon number 6/0 and stitched to the serosa.

During the procedure operation site of tube was irrigated with Hartman solution continuously.

Haemostasis was achieved, then abdomen was rinsed with Hartmans solution a bit of it was left in the peritoneal cavity. Abdomen was then closed in layers as described in the introduction.

Post operative management was as described in the introduction. Her third post operative day check hb was 11.8g/dl. She was discharged on the seventh post operative day having had an uneventful post operative period. She was to be seen in our Gynaecological clinic in 6 weeks.

COMMENT

This was a patient who had been married for 6 years without conceiving, all investigations were done and tubal surgery was done.

Infertility is the inability to conceive despite the ability of successful coitus and cohabitation; it may be primary, like in our patient, where there had not been any pregnancy, or secondary like when pregnancy had been experienced (1). World Health Organisation recommends 2 years as long enough and investigations to go on for infertility (2). 80% of couples achieve pregnancy in 1 year and 90% achieve in 18 months (1). So 1 year may be considered justified for investigation to go on.

Incidence of infertility is not known in Africa, but it has been estimated that upto 1/3 of women in major East African towns become sterile by the age 30 (3).

Our patient had been married for six years, had all along had successful coitus but had not been successful.

Infertility can be due to male factors or due to female factors. Our investigation revealed that our patient had blocked tubes. This is the commonest cause of infertility in most developing countries of Africa (1,3,5,6). The condition usually follows pelvic infections, such infection must have taken place as was evidenced by adhesions found during laparotomy. Gonococcal infection could be silent only to manifest with infertility or ectopic pregnancy. This organism is responsible for 75% of patients with pelvic abscess that we see in our set up (7). It is thus possible that our patient could have had it earlier though this was denied.

Our patient had been having normal periods for normal duration, she had no problems during her periods and had no discharge per vaginum.

She had some coarse adhesion and flimsy ones. Release of the adhesion was not difficult. Our patient could have some hope of getting pregnant. Mati et al and Waghmarae et al (5,8) found most patients to be unfit for tubal surgery at laparoscopy. They showed bilateral tubal occlusion of 62% to 73.1% with only 12-30% of affected patients suitable for surgery.

Technique used here were as set up by Rosenberg and Board (9). These include careful handling of tissue with fine atraumatic instrument, perfect haemostasis, use of fine non-reactive suture and continued irrigation of operation site with a balanced salt solution. These are aimed at preventing adhesion formation post operatively. Responsible for adhesion formation include haemorrhage, infection, denuded surface, ischaemia, foreign body reaction and trauma. Prophylactic antibiotics is particularly important in these patients as it ensures reduced chances of adhesion. Other measures to reduce adhesion include leaving some solutions into the peritoneal cavity as was left in our patient; others are systemic steroids to lessen body reaction. Rosenberg and Board (9) support the use especially of dextran - 70 as it exerts osmotic pressure, creates ascitis and floats the tissues thereby lessening chances of contact and adhesion.

Our patient is still being followed up. Salpingostomy has been claimed to have succes rate of 10-15% and an overall success rate of 25% for tubal surgeries (10). An unwanted effect of tubal operation is ectopic pregnancy. Mattingly quotes a tubal pregnancy rate of 8% (11).

REFERENCES

1. Nasah B.T.
 - Infertility. *Reproduction in Africa*
 - Mati J.K.G., Ladipo R.A. (editors)
 - The JEPIEGO pg 105-130, 1984.
2. W.H.O. Technical report series 582, 1975, Geneva.
3. Chatfield W.H., Suter P.C.N.
 - Investigation and management of infertility in East Africa
 - A prospective study of 200 cases.
 - E.A.M.J. 42: 212, 1970
4. Bennet F.J.
 - The social determinants of Gonorrhoea in E.African Town
 - E.A.M.J. 35: 332, 1962.
5. Mati, J.K.G., Anderson G.
 - Second look of problems of primary infertility in Kenya.
 - E.A.M.J. 50: 94, 1978
6. Gebbie, D.M.M.
 - Obs.Gyn. in health and disease in Kenya pg 494, 1974.
 - East African Literature Bureau, Nairobi.
7. Carty M.J., Nzioki J.M., Verhagen A.R.
 - The role of gonococcus acute inflammatory disease in Nairobi.
 - E.A.M.J. 49: 376, 1972.
8. Nighmaroe D., Ansari, A.
 - Analysis of a series of laparoscopy proceedings performed in Nairobi
 - E.A.M.J. 53: 149, 1976.

9. Rosenberg S.M., Board J.A.
 - A high molecular weight dextran in human infertility surgery.
 - Am. Jn. Obs. Gyn. 148: 380, 1984.

10. Jeffcoate N.
 - Sterility and subfertility
 - Principles of Gynaecology 9th Edition 1975, pg 583,607
 - Butterworths and Company Ltd.
 - London-Boston

11. Mattingly R.F.
 - Surgical Conditions of the fallopian tube
 - Te Linde's operative Gynaecology 5th Edition, 1977
pg 325-326.

LAPAROSCOPIC TUBAL LIGATION

Name: J.W.

Age; 27 years

IF No: 588403

Parity: 3+0

LNMP: 10.8.87

DOA: 27.6.88

DOD: 27.6.88

PRESENTING COMPLAINTS

The patient came to our Rahimtulla Wing to have bilateral tubal ligation done.

HISTORY OF PRESENT ILLNESS

She was seen in Rahimtulla Wing on 16.6.88 where she presented with a history of having high blood pressure during previous pregnancies. She said she had had convulsion the last delivery. She came with surgical sterilization form already filled by herself and her husband and signed.

PAST OBSTETRIC AND GYNAECCOLOGICAL HISTORY

She was para 3+0, last delivery was in 1988 May.

She has had elevated blood pressure during her three pregnancies, the last of which she had convulsions.

Her last monthly period was on 10.8.87 and has not gotten any menses since her last delivery.

PAST MEDICAL HISTORY

Patient has been followed in medical clinic due to her elevated blood pressure. Control has been good with aldomet tablet 250mg 8 hourly.

She has not had any other medical problem.

FAMILY AND SOCIAL HISTORY

The patient is married and stays with her husband at Ruaraka in Nairobi. She works with the High Court of Kenya as a secretary. She doesn't drink alcohol or smoke.

She has no contributory history in her family.

ON EXAMINATION

She was found to be in good general condition. She was not pale, nor was she jaundiced. Other general examinations were normal. Her blood pressure was 135/85mmHg, her pulse rate was 80/min, temperature 36°C and respiratory rate was 20/min.

Central Nervous System)
Respiratory System) Were normal
Cardiovascular system)
Abdomen)

PELVIC EXAMINATION

She had normal external genitalia. She was not bleeding from the vagina nor was she having any discharge.

She had normal vaginal wall; her cervix was parous, firm, central and had a closed os.

Her uterus was normal size and anteverted. It was mobile. Both adnexiae had no masses and no tenderness. Pouch of Douglas was free.

DIAGNOSIS

A diagnosis of multiparity with well controlled hypertension was made.

PLAN:

The patient was booked for a bilateral tubal ligation on 27.6.88

She was supposed not to eat anything as from midnight of 26.6.88; she was also supposed to shave her hair from the level of the umbilicus upto perineum. She was to report to Rahimtulla Wing at 7am on 27.6.88 accompanied by an adult as such patients get discharged same day **after** waking up, from sedation and might need to be assisted home.

The patient reported as was arranged, she was reviewed and was found to have normal vital signs and her general condition was satisfactory. She obeyed all the instructions above.

PROCEDURE:

The patient was premedicated with intramuscular atropine 0.6mg 30 minutes before theatre. She was then taken to theatre after informed consent had been signed. While on operation table the patient was sedated with 10mg diazepam and 100mg pethidine both intravenous.

She was then put in lithotomy position, vulvo-vaginal toilet was done and patient catheterised. Sterile towel was placed beneath the buttocks of the patient and other two to cover the legs. At the same time abdomen was cleaned and draped.

Pelvic examination was done again and findings were as before.

Anterior lip of cervix was held by tenaculum and a Cohen's cervical cannula introduced into the cervical canal and held in position by the forceps.

Infraumbilical area was infiltrated by 15mls of 2% lignocain. Vera's needle was then used to puncture the skin at the anaesthetised site and to reach the peritoneal cavity. Carbondioxide supply was turned on and through special connection to the Vera's needle pneumoperitoneum of about 2 litres was achieved.

The needle is now withdrawn and small incision made at the same site through the skin only. A trocar and cannula then introduced at 45° pointing to the pelvis; with both sides of abdominal wall lifted gentle force is used until there is sudden feeling of giving way. The trocar is now withdrawn and bubble of gas trying to escape from peritoneal cavity will be seen at the end of the cannula. The cannula can now be pushed further inside the peritoneum cavity.

The scope having been loaded with double Falop rings is now pushed inside the cannular and clear vision of abdominal cavity obtained by moving the scope up and down.

With the assistant moving the Cohen's cannula upwards and downward, to the right and to the left clear vision of the tubes was attained. Each tube was held by hook pushed from the scope; as the tube was drawn inside the scope a ring was released. The same was repeated for the other side by adjusting the lock of the scope.

The scope was withdrawn and gas was turned to let off the pneumoperitoneum; trocar was now pushed inside the cannula and both were withdrawn and the incision closed by absorbable vicryl suture.

The wound was dressed and patient taken back to the ward, where she was alert after three hours. She was then discharged on tablets paracetamol 2 8 hourly for 5 days and ampicillin capsules 500mg 6 hourly.

She was reviewed at the 7th post operative day and was found to have healed well. She was then discharged from Rahimtulla Wing.

COMMENT

This was a patient who had had three deliveries and had decided with her spouse to have a surgical sterilisation as the lady had been having problems of high blood pressure during pregnancy, and also because they thought the number of children they had was enough .

Sterilization is used to destroy the precreative function of the patient. This is a permanent method whereby the tubes are permanently closed and no fertilization can take place.

Prevalence of surgical sterilization is not easy to quote, but Makokha (1984) reported 329 operations in a year at Kenyatta National Hospital (1). It forms 3rd commonly used contraceptive method after the pills and intrauterine contraceptive device according to Kenya contraceptive survey procedure of 1984.

Sterilization was used for patients who could not be allowed to carry pregnancy due to medical conditions and also those who satisfied rule of 120 (age X parity = 120) (2,3). Sterilisation is now widely used for a normal cases and with the advent of laparoscope the procedure has become easier simpler and quicker. Other methods of tubal sterilization include Pomeroy, Irving, Madlener, and Uchida. Pomeroy method is used mostly in our hospital, it has the advantage of ease, speed and less trauma to tissue, it has low complication and low failure rate (4,5). We used laparoscopic method in our patient, although she had medical problem, the couple had also decided on the family size they needed. Women now come for sterilization for various reasons commonest is completed families, but some come for socioeconomic reasons especially single ladies (4,5).

We used Falop ring to occlude the tubal lumen. We do it under valium and pethidine and patients are usually ready to go home same day. Through laparoscope it can be accomplished by electrocoagulation, or Hulka silastic clips (6).

Gynaecological complication should be carefully ruled out as ignoring or oversight might lead to failure of method or unnecessary two operations. About 16-20% of patients develop menstrual disorder which is postulated to be due to improved uterotubal circulation (4,5,6). Psychiatric disturbance, disturbed sex, are some of the listed complications. Hydrosalpinx occur in 5%. Failure of operation occur in 0.71% (2,4,6). Failure rate with falop ring is 3.3% with electrocoagulation 1.9%, with rocket clip 5.9% (8). Failures could be due to ring insertion (7).

luteal phase pregnancy 23% of total incidence of 2.3/1000 (9). Other complications include unintended laparotomy arising from perforated uterus (10,11).

Ectopic pregnancies with uncorrected incidence of 0.64% (12).

Our patient did well and though we don't continue seeing her it is assumed she has not gotten pregnant.

1. Makokha A.E.
 - Surgical Contraceptive in Kenya, An overview;
Proceedings of first National Conference on Reproductive health pg 63, 1984.
2. Shepherd, M.K.
 - Female Contraceptives
 - Obs.Gyn. 29: 739, 1974.
3. Rabol, M., Stocklund, K.
 - Sterilization of women through minilaps
 - Danish Medical Bulletin 25: 177, 1978
4. Dewhurst, J.
 - Sterilization
 - In, Intergrated Obs.Gyn for Postgraduates
3rd Edition, 1981.
 - Blackwell Scientific Publication. Oxford. London
Edinburg, Boston, Melbourne
5. Jeffcoate, N.
 - Sterilization procedure, Contraception
 - In principles of Gynaecology 4th Edition
 - Butterworths, London, 1975
6. Mattingly, R.F.
 - Fertility Control
 - Te Linde's operative Gynaecology 5th Edition pg 336 1977
 - J.B. Lippicott Company, Philadelphia.
7. Chi, I., Mumford S.D., Lanfe, L.E.
 - Technical failure in tubal ring sterilization
Incidence, perceived reasons outcome and risk factors.
 - Am. J. Obs. Gyn. 138: 307, 1980.
8. Hulka J.F., Omran J.K.
 - Laparoscopic Sterilization with spring loaded clips
Instrumentation development and current clinical experience
 - Am. Journ. Obs.Gyn. 135: 1016, 1979

9. Chi, I., Potts, M.; Wilkins, L.
 - Rare events associated with tubal sterilization
An International experience.
 - Family Health International, Research Triangle Park
North Carolina.
10. Chi, I., Feldblum P.,
 - Uterine Perforation during sterilization **laparoscopy**
and minilap.
 - Am. J. Obs. Gyn. 139: 735, 1981.
11. Chi, I; Feldblum P.
 - Laparoscopic Sterilization requiring laparotomy
 - American Journ. Obs.Gyn. 142: 712, 1982.

TRANSLOCATED IUCD: REMOVAL AT LAPARATOMY

Name: J.W.

Age: 27 years

Parity: 3+0

IP No. 918583

LNMP: 1986

DOA: 14.9.88

DOD: 5.10.88

PRESENTING COMPLAINTS

The patient was admitted through casualty with complaints of not feeling the threads of her intrauterine contraceptive device.

HISTORY OF PRESENTING COMPLAINTS

The patient had the IUCD inserted in January 1988 and has since been feeling the threads. She noted that she was not feeling the threads for the last one month.

She has not had monthly periods since her delivery in August 1987. She has had no irregular bleeding, and has had no episode of any abdominal pain.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 3+0, her last delivery was in 1987. All deliveries have been spontaneous vertex and all are alive and well.

Her last monthly period was sometimes in 1986. She used to have it regularly after 30 days and used to last 3 to 4 days. There was no accompanying pain and no inmenstrual discharge. She had not used any other method of contraception.

PAST MEDICAL HISTORY

There was nothing worthy of note.

FAMILY AND SOCIAL HISTORY

She was a married housewife staying with her family at Limuru. The husband works with Bata Shoe Company at Limuru.

She does not drink alcohol nor smoke cigarettes and no contributing family history.

ON EXAMINATION

She was in good general condition. She was not pale, nor jaundiced. Her other general examinations were normal.

Her blood pressure was 110/70mmHg, pulse rate of 78/minute and respiratory rate of 20/minute normal. She had a temperature of 36.2°C.

Central Nervous System)
 Respiratory System) No abnormality detected
 Cardiovascular system)

ABDOMINAL EXAMINATION

Nothing noteworthy

PELVIC EXAMINATION

She had a normal external genitalia. She had no vaginal bleeding nor discharge. She had a cervix which was long, firm, central and closed. IUCD thread was not felt.

Uterus was normal size and antverted. Pouch of Douglas had some vague mass which was hard in part and cystic especially right side. Left adnexia was normal. No tenderness was elicited on examination.

DIAGNOSIS

A diagnosis of translocated IUCD was made.

PLAN

An urgent ultrasound was ordered to locate the device and this was done on 15.9.88 No, 45842/88 and showed

- Normal uterus in size and shape
- IUCD seen at fundus
- No adnexial mass seen

Conclusion: IUCD intrauterine

The patient was then taken for removal of IUCD in theatre under anaesthesia. She was prepared the usual way.

Examination done in lithotomy position under anaesthesia using uterine sound and artery forcep did not reveal the presence of IUCD in the uterus. A decision was then made to take the patient to Rahimtulla Wing for laparoscopic removal. The patient was taken to clinic number 66 where tracer coil was put to outline the uterus. A pelvic X-ray was then done on 26.9.88 number 50194/88. Only AP view was taken and the two coils, one Lippes loop and Copper T coil were seen to overlap each other.

Laparoscopy was then planned for the next day.

The patient was prepared and taken to theatre and findings were as follows:-

- A bulge in pouch of Douglas with adhesion around it. There appears to be IUCD which has partly gone through uterine wall.
- A right adnexial haemorrhagic mass about 6cm diameter involving right tube/broad ligament noted.
 - Retrieval of IUCD difficult.

A decision was to take the patient back to ward 6 for urgent laparotomy which was done the same day 27.9.88.

The patient had earlier been prepared for the above operation. In theatre patient was prepared and abdomen opened through subumbilical midline incision.

The following were the findings:-

- cystic mass about 6cm x 6cm at the right parametrium
- Normal size uterus, normal tubes and ovaries.
- IUCD outside the uterus with its tail embedded between posterior uterine wall of uterus and small gut. No perforation of gut wall.

DISE:

- The IUCD was retrieved Lippes Loop with ease
 - The broad ligament was incised and haematoma was evacuated
- No fresh bleeding noted. Abdomen was cleaned with rifocin solution.

Abdomen was then closed in layers.

The patient had uneventful immediate post operative period. She was seen in our clinic 4 weeks later and only had slight **itchiness on the scar.**

COMMENT

This was a patient who had presented to us with complaints consistent with translocated IUCD and in whom laparotomy was done to remove the device.

IUCD is usually inserted during menstrual period, post abortal or post partum (1,2). Uterine wall **after abortion** of parturition is soft and thin and more likely to perforate than when the device is inserted during the monthly period (3)

Incidence of uterine perforation ranges from 0.05-13 /1000 insertions (3,4,5,6,7). Incidence tend to be related to the type of the device used, experience of the operator, position of the uterus, time relation to delivery or abortion (3,5,7). Lippes Loop seem to have the highest incidence of perforation (7).

McKenna et al (1982) found that 87% of their patients had the device post abortal or post delivery (7). Our patient had lippes loop, it was inserted after delivery.

Perforation can also occur as a result of disproportion between the device and the big uterine cavity following an abortion or parturition (10). Perforation mostly occur at the time of insertion (4,5,8). It has been shown that a device which is not completely out of the uterine wall may become expelled out into the abdomen by uterine contractions (8). Our patient had been feeling the threads for about 8 months. It would **mean** that the device got expelled much later.

Site of perforation is usually the fundus but it may perforate any site. It might lodge into the bladder anteriorly, pouch of **Douglas** and rectum posteriorly or laterally into the **broad** ligaments. At the time of operation site of perforation is usually healed if the perforation is complete and may not be discernable (8).

Patients usually present with complaints of inability to feel the threads of the device, they may have some abdominal discomfort, dysuria and pyuria if the device is in the bladder. The intestines may strangulate and the patient present with intestinal obstruction. Examination may not reveal much even in the abdomen; thread will not be seen on speculum examination, if the device is in the Douglas pouch it might be felt on digital examination (3,4,8,9). The situation can be confused with fracture of the device with loss of polarity, withdrawal of thread into uterine cavity following enlargement due to pregnancy or other lesion (1).

History of type of device, time of insertion, last period and its character and any other bleeding is noted. Examination of abdomen for any tenderness, vaginal exam will confirm or not presence of any adnexial mass, mass of pouch of Douglas or presence of thread. Uterine size will also be noted (5,9).

The device can be retrieved by gentle dilatation and curettage. In our patient this was done after the ultrasound suggested IUCD seen at fundus. Tracer coil is usually useful in actual location of the uterine cavity and its relation to the original coil. In our patient there was overlap of both in the X-ray film and it was not useful (3,4,7). Treatment depends on location of the IUCD but options left are colpotomy laparotomy and laparoscopy (4,7,9). In our patient we had to resort to laparotomy for although the device was seen by laparoscope, it was not easy to retrieve it with the scope. Our patient recovered well post operatively.

REFERENCES

1. Jeffcoate, N.
 - Contraception
 - Principles of Gynaecology 4th Edition
 - Butterworths, London 1975
2. Jones H.W., Jones G.S.
 - Family Planning
 - Novak's textbook of Gynaecology 10th Edition
 - The Williams and Wilkin's Company - Baltimore 1981
3. Siegler A.M., Gentile G.P.
 - The misplaced or missing IUCD
 - Obs/Gyn. Survey 32: 627, 1977
4. Mishel D.R.
 - Intrauterine Contraceptive Device
 - Clin. in Obs/Gyn. 11: 679, 1984
5. Gorsline J.C.
 - Management of missing IUCD, repr of a case
 - Am. Journ. Obs/Gyn. 153: 228, 1985
6. Osborne, J.L.: Bennet, M.J.
 - Removal of IUCD
 - Br. Journ. Obs/Gyn. 85: 868, 1978
7. McKenna, P.J., Mylotte, M.J.
 - Laparoscopic removal of translocated IUCD
 - Br. Journ Obs/Gyn. 89: 163, 1982
8. Modley J.T.
 - Usual Displacement of an IUCD, Case Report
 - S.A. Med. Journ. 66: 110, 1984
9. Okunna, E.M., Equwatu, V.E.
 - Abnormal Location of Missing Copper T IUCD
 - E.A.M.J. 61: 645, 1984
10. Gunaratne M.
 - Accomodation Defects of the IUCD
 - E.A.M.J. 57: 105, 1980.

VESICO-VAGINAL FISTULA, SUCCESSFUL ABDOMINAL REPAIR

Name: A.N.

Age: 27 years

Parity: 4+0

IP No.: 818620

LNMP: 29.10.87

DOA: 15.10.87

DGD:

PRESENTING COMPLAINTS

The patient presented with urinary leakage since her last delivery 8 months before.

HISTORY OF PRESENT ILLNESS

The patient had an uneventful antenatal period and went to a maternity hospital to deliver when she went into spontaneous labor. A vacuum extraction was attempted without success when the patient was noted to have delay in 2nd stage. Caesaria section was then done and fresh stillbirth was delivered of weight 3.3kg. The patient noted dribbling of urine while still in the hospital for which she was reviewed and transferred to our hospital. She had no other problem.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

She was para 4+0, her last delivery was in 1987; her last normal monthly period was 29.10.87 while she was still in the ward. She had been getting her periods every 30 days lasting 4-5 days. There was no accompanying pain

She had her menarche at 15 years and was not on any contraceptives.

PAST MEDICAL HISTORY

Not of significance.

FAMILY AND SOCIAL HISTORY

She was a married housewife staying with her husband in Nairobi. The husband works with Central Medical Stores as a clerk. She does not smoke nor drink. There was no other contributing family history.

ON EXAMINATION

She was in good general condition, she was not pale and had no jaundice. Other general examinations were normal.

Her blood pressure was 120/70mmHg, pulse rate was 78/minute normal, respiratory rate was 18/min. Her body temperature was 36.4°C.

Central Nervous System)
Respiratory System) Were essentially normal
Cardiovascular system)

ABDOMINAL EXAMINATION

She had a subumbilical midline scar, she had no masses and no tenderness on the abdominal palpation.

VAGINAL EXAMINATION

She had minimal excoriation of the vulva. Urine was draining freely from the introitus and not through the urethral opening. On Speculum examination no obvious site of lesion noted. Digital examination was done and ex felt parous with an os that was admitting tip of finger. There was no defect felt by the examining finger. Uterus felt normal size, anteverted; adnexiae and pouch of Douglas were normal.

DIAGNOSIS

A diagnosis of vesico-vaginal fistula was made.

MANAGEMENT

The patient was planned for examination under anaesthesia and repair at the same time. Baseline investigations were done and results were as follows:-

Hb levels - 14g/dl, white blood cell counts - $8.4 \times 10^9/l$, PCV 41.8%; BUN 3.9mmol/l, K^+ - 3.6mmol/l, Na^+ 130mmol/l; urine for culture and sensitivity revealed no growth.

The patient was planned for operation on 23.10.87. On the night before operation the usual preoperative procedures were made. Blood specimen was taken for group and cross match 2 units. The patient was taken to theatre on the morning of 23.10.87.

The patient was wheeled to theatre and put on operation table then put under anaesthesia. The patient was put in lithotomy position, vulval-vaginal toilet was done. Nelaton's catheter was then passed into the urethra and bladder. Sim's speculum was used by the surgeon for good visibility of the vault. Methylene blue was poured gently into a funnel attached to the Nelaton's catheter. An obvious leakage was noted just at the anterior fornix. The Nelaton's catheter was secured by stitch. Transabdominal route was decided on. The patient was cleaned and draped; a surgeon and two assistants performed the surgery.

PROCEDURE

The scar tissue was excised and abdomen opened through some adhesions. Uterus, tubes, and ovaries were identified and were normal. Bladder was identified and opened through a vertical incision about 4cm. Fistula was identified superior to uterine orifices. Circumferential excision was made around the fistula and uterine wall and vaginal wall visualised. After mobilising the tissues around, the defect was closed in two layers of interrupted sutures using

extrachromic catgut number 2/0. The vertical incision made through the bladder was similarly closed, saved only for a space for which DePezzer catheter was inserted into bladder and where the catheter will be retrieved.

Abdomen was closed in layers and urine bags were attached to the Nelaton's and De Pezzer catheter. Anaesthesia was reversed and patient taken back to the ward.

The patient was put on usual post operative regime antibiotic being changed to septrin tablets 2 twice a day when the patient was on oral. Thereafter the antibiotics were chosen depending on the organism growth on urine specimen which was taken every third day. She was not transfused as she did not loose much blood. Her 3rd post operative haemoglobin level was 12.2g/dl.

De Pezzer's catheter was removed on the 10th day post operative, urethral catheter on the 14th post operative day. Her suprapubic area where the catheter was removed was raw, but with daily dressing it completely healed.

The patient was advised on frequent **micturation** and physiotherapists were at hand to help her train her bladder function. She was discharged home fully continent. She has been seen in our clinic twice without complaints.

COMMENT

This was a patient who developed vesicovaginal fistula following obstructed labor and was successfully repaired through a abdominal route.

Vesicovaginal fistula is one of the most distressing conditions to the patient and a serious obstetrical and gynaecological condition in the practice. The condition is characterised by abnormal passage of urine from bladder lumen into the vaginal canal.

This is a common gynaecological problem in developing countries mostly attributable to obstructed labor. (1,3,4). Gunaratne and Mati in 1982 (3) found that 87.1% of all urinary fistulas at Kenyatta National Hospital were due to obstructed labor; Grwenyo in 1984 (4) found that 92.2% were due to obstructed labor. This indicates that majority of urinary fistulas are due to obstetric courses.

As pregnancy advances bladder becomes an abdominal organ, and in labor the close proximity between the lower ends of urethra and bladder to the uterus and vagina render these sites subject of compression between the presenting part and pubic bone. In prolonged labor and prolonged compression as in obstructed labor, the intervening tissues are devitalised and ischaemic necrosis and sloughing off of the tissues ensue. Usually between 3-10 days later. Our patient had obstructed labor in whom vacuum extraction failed and the surgeon had to resort to caesarian section.

The commonest site of vesicovaginal fistula is juxtacervical (3,4). Other sites include vaginal wall, cervix and trigone (1).

Our patient developed leakage within 7 days of the delivery and was found to have an anterior fistula next to the cervix. Although urinary fistula is common in young ladies of 18-24 years, age group and in their first or second pregnancy, our patient was 27 years and had three previous deliveries normally.

Other obstetric causes include **craniotomy** where the perforator penetrates the bladder or specule of bone tears the bladder; symphysiotomy which may result from bladder neck injury; ruptured uterus following previous caesarian section, and in caesarian section where there may be accidental incision into the bladder or bladder could be torn during reflection or suture could be passed through the bladder during closure of the uterus. (1). Non-obstetrical procedures include hysterectomy, colporrhaphy, Manchester repair, hysterotomy, radiation necrosis, erosion from carcinoma of the cervix, tuberculosis of the bladder or cervix, lymphogranuloma venereum, schistosomiasis and syphilis (1,5). But perhaps contributing immensely to the genesis of the urinary fistulas in developing countries is lack of education, lack of exposure to modern antenatal care, lack of antenatal facilities and adherence to traditional beliefs (3). Our patient was staying in Nairobi City and when labor pains started she went to a maternity hospital, it could be concluded that it is the unjudicious approach of the hospital staff, or lack of trained personnel capable of monitoring and detecting difficult labor, or lack of equipment to effect decision which resulted in such a misery.

There is usually history of prolonged labor either at home or in some remote health facility followed by delivery of dead fetus either vaginally or by some assistance like, vacuum, forcep, **craniotomy** or caesarian section. The patient may develop sepsis, in 3 to 10 days develop urinary leakage per vaginum.

On examination there might be excoriation at the vulva with or without smell of urine, there may be obvious leakage through the vaginal opening. Digital examination which must be done first before speculum to rule out stenosis, may reveal obvious defect on vaginal wall or cervix; speculum examination may reveal site of defect as demonstrated by leakage of urine on cough impulse. Definite diagnosis is usually arrived at by using methylene blue dye preferable with patient under anaesthesia (1,5).

Our patient had some typical history and some typical findings both on inspection and during examination under anaesthesia.

Preparation of the patient with urinary fistula is very important prior to surgery. Supportive treatment like proper nutrition, correction of anaemia, clearing any infection and managing vulval dermatitis incident on excoriation by urine are important. The patient should be allowed a period of at least three months before repair is attempted. This period will allow the tissues to recover completely, vascularity to be reestablished and the defect to demarcate properly (1).

Our patient had no infection, was in perfect nutritional state, was not anaemic, and had only minimal excoriation at the vulva. By the time she was admitted, a period of 8 months had elapsed.

Before operation investigations are done like intravenous pyelogram to determine integrity of other urinary system organ, urea and electrolytes, haemogram, urine for culture and sensitivity. All being well like it was with our patient, the patient is prepared the usual way for operation. Some surgeons admit the patient for examination under anaesthesia first then plan for the operation later. In this patient, all preparation was made and examination under anaesthesia then repair were done in one sitting. Reason for examination under anaesthesia is to identify site, size, number of fistulas and to assess the amount of loose tissue around it and finally to recommend position best for the repair. Methods of repair include peritoneal transversical, extraperitoneal, transabdominal, transplantation of ureters, saucarisation or flap splitting technique or vaginal route (1,5). Our patient was found with fistula which was decided to be repaired abdominally.

Success of repair depends on good exposure adequate mobilization of fistula, and tension along the suture line should be avoided, prevention of dead spaces, collection of blood at site of operation and prevention of infection, good nursing care is also paramount (1).

Continuous bladder drainage must be stressed as any pressure build up will cause tension at the site of repair which might subsequently give way. Antibiotics are changed according to sensitivity of the infecting organism. As soon as the urethral catheter is out bladder exercises should start without delay. Our patient was continent at the time of discharge and subsequently during follow up in our clinic.

Vesicovaginal fistulas are preventable. Detection of cases of cephalopelvic disproportion early antenatally, is the most important aspect of prevention. During labor, however, difficult cases should be detected early and caesarian sections done. At the end of any difficult vaginal delivery speculum examination should be performed to see any defect in anterior vaginal wall and repair the defect immediately (1). Bladder should be rested on any obstructed labor by indwelling catheter, check any sepsis and control by systemic antibiotics, there may be need for gentle irrigation of vagina by antiseptic.

Success rate vary with different types of fistula but ranges between 60.5%-85.7; (3,4).

Complications of vesico-vaginal fistula include social and marital disharmony consequent upon amenorrhoea, infertility, divorce is not uncommon (3).

After surgery chances of incontinence following interference with urethral length occur in 5-6% in successful fistulas repair (6).

REFERENCES

1. Lawson J.G., Stewart D.D.
 - Injuries of Urinary tract
 - Obstetric and Gynaecology in the Tropics and Developing countries 1983.
 - English Language Book Society and Edward Arnold (Publishers) Ltd.
2. Dewhurst J.
 - General Surgical Procedures, Urinary tract injuries
 - Integrated Obstetrics and Gynaecology for Postgraduates
3. Gunaratne M., Mati J.K.G.
 - Acquired fistulas of female Genital tract; A comprehensive 5 year review.
 - Journal of Obstetrics and Gynaecology for East and Central Africa 1:11, 1982.
4. Orwenyo E.A.
 - Review of Vesico-Vaginal and recto-vaginal fistulas at Kenyatta National Hospital 1972-1982.
 - M.Med Thesis 1982, University of Nairobi.
5. Mattingly R.F., Thompson J.D.
 - Vesico-vaginal fistulas
 - Te Linder Operative Gynaecology 5th Edition pg 573
 - J.B. Lippincot Company, Philadelphia, Toronto, U.S.A. 1977
6. Mati J.K.G.
 - Vesico-Vaginal Fistula
 - Reproductive Health in Africa; Edited by Mati and Ladipo pg 181
 - Chicago, 1984

UTERINE FIBROID

Name: M.N.

Age: 48 years

IP No.: 772104

Parity: 1+1

LNMP: 15.6.87

DDA: 3.7.87

DDO: 31.8.87

PRESENTING COMPLAINTS

The patient presented with lower abdominal pain and swelling for a period of 4 years. Pain increases during menses.

HISTORY OF PRESENT ILLNESS

Abdominal swelling has been gradual but progressive over the 4 years.

Abdominal pain has also been increasing over the four years. It is more especially during monthly periods which is also prolonged in duration.

PAST OBSTETRICS AND GYNAECOLOGICAL HISTORY

The patient was para 1+1; last delivery was 1957. It was spontaneous vertex delivery and was at term. Her last monthly period was 15.6.87. Her periods have been heavy of late and lasting longer durations than before. It has also been more painful and irregularly irregular. It used to take 3 to 5 days but now for the last four months it has been taking 7-10 days.

No history of vaginal discharge in between the menses. No history of use of contraceptives. Her menarche was at 15 years, she had an operation for ectopic pregnancy in 1966.

PAST MEDICAL HISTORY

Nil of note.

FAMILY AND SOCIAL HISTORY

She was separated from her husband in 1979. She lives in Mathare Estate in Nairobi City and operates a water kiosk. No other contributory history

ON EXAMINATION

She was in good general condition, she was not pale, not jaundiced. Other general examinations were normal.

Her blood pressure was 130/80mmHg, pulse rate 82/minute respiratory rate was 18/minute and temperature of 36.2^oC.

Central Nervous System)
 Cardiovascular System) Nothing abnormal detected
 Respiratory System)

ABDOMEN

She had a laparotomy scar midline subumbilical

Abdomen was rather distended subumbilically, there was a mass about 20 weeks size of a pregnant uterus, it was firm, non-tender, mobile and central. It seemed to be arising from the pelvis.

No other masses felt; there was no spleen nor liver palpable.

VAGINAL EXAMINATION

She had normal external genitalia. There was no bleeding nor discharge noted.

Cervix was short, central and closed. It was smooth. Adnexae and pouch of Douglas were normal. The mass felt uterine.

There was some blood on examining finger.

DIAGNOSIS

Uterine fibroid with secondary infertility.

PLH:

18.8.86 - pap smear - Done at our clinic and was found to be class II.

24.2.87 - U/S - Features suggestive of uterine fibroid.

3.7.87 - Hb - 15.3g/dl

PCV - 42.6%

WBC - $5.6 \times 10^9/l$

Na+ - 132 mmol/l

K+ - 4.4 mmol/l

BUA 2.7 mmol/l

10.7.88 Hb - 14.7g/dl

WBC - $6.3 \times 10^9/l$

The patient was planned for total abdominal hysterectomy and on the night on 13.7.88 was starved, her venous blood was taken for group and cross match.

She was premedicated on the morning of 14.7.88 and taken to theatre. 3 units of compatible blood was available.

After the usual pre-operative procedures the patient was anaesthetised, cleaned, draped and then opened up. At operation the following were found:-

- multiple uterine fibroid
- large intestine adherent to uterus
- both tubes and ovaries were grossly normal.

DCNL:

- Adhesion was freed
- Total abdominal hysterectomy was done
- Specimen was sent for histology

Abdomen was closed in the usual way and anaesthesia reversed. Patient was taken back to the ward.

The patient made steady recovery and her third post operative check haemoglobin level was 13.3g/dl.

She was in the ward under the usual post operative regime and was discharged the seventh day in satisfactory condition.

She was seen in our clinic on the 7.10.87 and had completely recovered.

HISTOLOGY REPORT

4. Simple leiomyoma

COMMENT

This was a patient who presented to us with symptoms attributable to uterine fibroid in whom total abdominal hysterectomy was done.

Uterine fibroids are tumors of smooth muscles of the body commonly arising from uterus. It is the commonest tumor of the female genital tract being three times more common in blacks than in whites. Its aetiology is not known but has been found in association with infertility, pelvic inflammatory diseases, oestrogen human growth hormone and prolactin (1,2,3,4,5). 20% of women have it by the age of 35 years (2,3). It commonly presents at age group 35-45 years. (1,2,3).

Commonest presenting complaints include infertility 76-85% (2,5), abdominal pain especially during menses 30% (5); abnormal uterine bleeding 25% (2) and symptoms due to weight of fibroid and its pressure (1).

Our patient was 48 years old, was infertile and had abdominal pain and menorrhagia. Clinically she was found to have abdominal mass which was in keeping with the diagnosis of uterine fibroid.

Whether infertility occurs first or its coexistence with uterine fibroid a coincidence is not fully explained. We however, know that submucous fibroids could result in infertility by being an unfavourable site for implantation; intramural fibroids causes infertility by increased vascularity endometrial hyperplasia, venous congestion of myometrium and endometrium and increased endometrial bleeding space (2,3)

Infertility on the other hand could be as a result of pelvic inflammatory disease which causes general adhesion and periovarian fibrosis with hyperoestrinism, endometrium will also be abnormal (1).

As size of fibroid increases pain which is otherwise a late symptom becomes manifest. It is due to degenerative changes, red degeneration is commoner with high progesterone as in pregnancy. Other causes of pain include twisting of the fibroid often pedunculated, infected fibroid, effort of myometrium to expel myomas; backpain could be due to mass impacted in the pelvis with pressure to the nerves (2). Could also be due to vascular stasis made worse by pelvic inflammatory disease. (1).

Bleeding disorder is due to increased endometrial surface area, low myometrial contractility, mechanical destruction due to myoma giving endometrial venule actasia and functional disturbance in in large oedematous ovary so common in fibroid patients (1,2,3).

Other symptoms include pressure effect and might manifest as micturition frequency or retention of urine if the bladder neck is distorted by the fibroid (1). Altered bowel habit is also common. Dyspareunia could result from shortened vagina, adherent prolapsed tubes and ovaries in pouch of Douglas of tender uterosacral ligament associated with chronic cervicitis (1). Our patient had adhesions which signified past pelvic infection and could have accounted for some of the complaints she had.

Sarcomatous change is rare 0.1-0.5% (1,2,3). Pap smear was done in our patient and it was class II, histology report showed simple leiomata.

Management of patients with fibroids will depend on size of the fibroid, age and parity, and symptoms caused by the fibroids. Small fibroids without symptoms need to be left alone and patient followed up 4-6 monthly. Fibroids larger than 12 weeks even without symptoms should be removed, and same happens for fibroids that are pedunculated as they can cause complication any time.

In patients with infertility who are less than 40 years and have no other complication other than that then myomectomy should be done. However if one of the complications of uterine fibroids becomes unbearable hysterectomy should be considered. It is however important to consider a whole patient taking into account her medical as well as social needs, those who consider loss of uterus as loss of womanhood need real counselling. Although our patient was 48 years old, she was still having her periods and though infertile, she readily gave in to the operation. She did well after the operation.

REFERENCES

1. Lawson J.B., Stewart D.O.
 - Uterine fibroid
 - Obs.Gyn in the Tropics and Developing countries
1983 Edition pg 383-389
 - English Language Book Society and Edward Arnold
Publishers (Ltd).
2. Benson R.C.
 - Current Obs.Gyn Diagnosis and Treatment
1976 Edition Chapt. 10 pg 196-199
 - Lange Medical Publications, Los Altos, California
3. Dewhurst J.
 - Benign Tumors of the uterus
 - Integrated Obs.Gyn for Postgraduates 3rd Edi. 1981.
Chapter 40 pg 698-703
 - Blackwell Scientific Publications
 - Oxford London-Edinburg, Boston. Melbourne
4. Ndeto G.W.T.
 - Prolactin Levels in Patients with Uterine fibroids
 - M.Med Thesis University of Nairobi 1982
5. Wanjala S.M.H.
 - Uterine fibroids at Kenyatta National Hospital 1974-1975
M.Med Thesis University of Nairobi 1980

OVARIAN CYST

Name: E.W.

Age: 26 years

IP No. 855523

Parity: 0+0

LNMP: 14.10.87

DGA: 4.11.87

DCD: 7.12.87

PRESENTING COMPLAINTS

The patient presented to us with 3 months history of swelling abdomen and legs

HISTORY OF PRESENT ILLNESS

Swelling of the abdomen was insidious in onset but has been progressive. There is no accompanying pain.

Cough persistent and initially progressive has remained dry. There is however accompanying chest pain. There is no history of difficulty in breathing. Cough has no relation to time of day or night. No history of night sweats.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 0+0. Her last normal monthly period was 14.10.87; period comes after every 30 days and lasts 5 to 7 days. Periods are painless.

She had her menarche at 15 years. She has not used any contraceptives.

PAST MEDICAL HISTORY

Nothing of significance.

FAMILY AND SOCIAL HISTORY

She is a first born in a family of 5 children. She is single and stays with her mother at Wangige, a suburb around Nairobi City.

She does not drink alcohol nor smoke. She did not attend school.

ON EXAMINATION

She was in good general condition. She was not pale nor jaundiced. Other general examinations were normal.

Her pulse rate was 94/minute normal, blood pressure 120/80mmHg, respiratory rate was 24/minute regular and temperature was 36°C.

Central Nervous System - No abnormality detected

RESPIRATORY SYSTEM

Throat was hyperaemic and tonsils were swollen slightly. There was no evidence of ulceration or obvious pocket of pus.

Chest was clear.

Cardiovascular system - Was normal

ABDOMINAL EXAMINATION

She had a distended abdomen especially in the lower aspect. There was mass arising from pelvis about 30 weeks size of a pregnant uterus. It was non-tender cystic and mobile.

She had no organomegaly nor did she have any other masses

VAGINAL EXAMINATION

She had a normal external genitalia. Normal distribution of female hair. She had an intact hymen only small hole for vaginal and uterine secretion. Digital examination was therefore not possible.

DIAGNOSIS

Ovarian cyst with upper respiratory tract infection

PLAN:

- Haemogram, Urea and electrolytes
- pelvic and abdominal scan
- Chest X-ray
- Mantoux test
- IVP

The patient was started on Septrin tablets twice daily, actified tablets, 2 twice a day and tablets panadol 2 three times a day.

with the results of the investigations the patient was scheduled for laparotomy

LABORATORY RESULTS

11.11.87

Hb - 11.4g/dl

WBC - $3.6 \times 10^9/l$

Platelets - $311 \times 10^9/l$

BUN - 3.1 mmol/l

K+ - 4 mmol/l

Na+ - 138 mmol/l

RADIOLOGICAL RESULTS

These were ordered earlier in the Gynaecology clinic
28.10.87 - Chest X-ray - Normal findings

- U/S - Normal uterus

- normal liver parenchyma

- Big cystic mass arising from pelvis mainly on right side of pelvis.

MANTOUX TEST

13.11.87 - Negative.

The patient was planned for laparotomy on 20.11.87

The usual preoperative procedures were done. She was premedicated in the usual way on the morning of 20.11.87 and taken to theatre, and operated.

At operation the following was found:-

- Right ovarian cyst $1\frac{1}{2}$ the size of football right ovary was all thinned out.
- Right fallopian tube, left fallopian tube and left ovary were normal
- uterus was normal.

DONE:

- Right ovarian cystectomy and oophorectomy was done.
Specimen was taken for histology.
- Abdomen was closed in layers and anaesthesia reversed.
Patient was taken back to the ward.

The patient recovered uneventfully in the ward under the usual postoperative care. Third day post operative check haemoglobin was 11.2g/dl, PCV, 33.4%

The patient was discharged on the seventh post operative day to come to our clinic after six weeks.

The patient was seen in our clinic and had improved remarkably, she had no complaints.

HISTOLOGY REPORT

Simple ovarian cyst with thick fibrous wall.

COMMENT:

This was a patient who was diagnosed as having a right sided ovarian cyst., laparotomy done and the cyst removed.

Our patient had a simple ovarian cyst. These are often unilocular with thin wall inside is usually smooth with papilliform processes. It is an **epithelial** tumor of the ovary (1,7).

Incidence of simple ovarian cysts have not been worked in Kenya but Ujwang (1974) found that 5.6% of tubovarian masses (TOM) and ovarian tumors are follicular (2). Serous cystadenoma accounts for 3.5% - 9.2% of all tumors (1,3,5).

Aetiology is not known but parity, age, genetic predisposition socioeconomic status and hormonal influence has been shown to affect (1,3). Serous cystadenomas can grow to very large size. Our patient had a cyst which was 1½ times size of football.

Presenting complaints are usually abdominal swelling, pressure effect, occasional pain which could be due to haemorrhage, tension, rupture or infection (5,7). Our patient presented with all of the above. Cyst usually have pedicles and are relatively mobile, most **are** thus symptomless.

Diagnosis is made on history and physical findings. No functional disturbance with the simple cysts. Our patient had been having normal monthly period and was physically of feminine nature. Examination of the abdomen in a patient like ours elicits cysts no ascitis. Small cyst can be ascertained by pelvic examination.

Management of simple ovarian cyst depends on size. General principle in our unit is to leave cysts less than 5 x 5cms. alone.

size more than that should be removed. Adnexial masses really pose some fear to gynaecologists, because it is not easy to know whether it is malignant or not. This fear is genuine and the practice is to follow up this patient for an increase or decrease in size of the tumor or if it is same size on subsequent visits. 40-70% of serous and mucinous have been found to be malignant in Africa, 20-30% in U.S.A. (1).

Laparotomy is the treatment of choice in large simple cyst like was accorded our patient. Histology report is very important as it will for sure tell the simplicity or otherwise of ovarian cyst.

REFERENCES

1. Lucas, S.B., Vella, E.J.
- Ovarian tumors in Malawi: A histopathological study
- Jour Obs.Gyn. East and Central Africa 2(3): 97-101, 1983
2. Ojwang S.B.O.
- Ovarian tumors and Tuboovarian masses at Kenyatta National Hospital
- M.Med Thesis 1974, University of Nairobi
3. Tiltman, A.J.; Sweerts M.,
- Ovarian neoplasm of Western Cape
- S.A. Med. Jour 6(10): 343-345, 1982.
4. Denis, P.M., Coode., P.E., Hulewitz B.S.F.; Kungu, A.
- Comparative Study of ovarian neoplasm in Kenya and Britain
- E.A.M.J. 57(8): 562-567, 1980
5. Beck, R.P., Lalour J.P.A.
- Review of 1019 benign ovarian neoplasms
- Obs.Gyn. 16: 479,485, 1960.
6. Greech, F.S.; and Lewis M.G.
- Ovarian tumors in Ugandan Africans
- E.A.M.J. 44(2): 447-492, 1967
7. Burkins, J.; Hudson, C.N.
- Ovarian Cysts, In Shaws Textbook of Gynaecology
5th-Edition 1983
- Churchill Livingstone

MULLERIAN DYSGENESIS

Name: J.K.

Age: 19 years

IF No. 842400

Parity: 0+0

LNMP: Nil

DCA: 2.8.87

DOD: 2.7.89

PRESENTING COMPLAINTS

Patient was admitted with complaints of not having menstruated since birth, and periodic lower abdominal pain for the last six months.

HISTORY OF PRESENT ILLNESS

The patient has been well until six months ago when she started having some abdominal pain which came roughly monthly and lasted about one week. The pain subsided by itself during which period she was relatively symptom free.

She also noted that she had never had her menstrual flow since birth.

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 0+0. She never had her menses. The patient admits having had coitus a few times though with pain.

PAST MEDICAL HISTORY

None of significance

FAMILY AND SOCIAL HISTORY

She was a single lady working as a housegirl at Nairobi's South B Estate. She reached standard four level of education. She does not smoke nor drink.

Her parents are peasants at Muranga. No similar history in the family.

ON EXAMINATION.

She was in good general condition. She had no jaundice nor palor. Her other general examinations were normal.

She had a Bp of 120/80mmHg, PR 80/min normal; respiratory rate of 20/min and temperature of 36.2°C.

Central Nervous System)
Respiratory System) No abnormality detected.
Cardiovascular System)

ABDOMINAL EXAMINATION

No gross fulness noted. Tenderness suprapubic area; uterus felt 14 weeks size, it was central, mobile and not firm. Some tender mass felt on both sides of uterus.

She had no other mass palpable *per* abdomen.

VAGINAL EXAMINATION

She had normal external genitalia, there was no bleeding nor discharge.

Introitus ended blindly, about 3cm deep. It was difficult to feel with the finger, anything above it as the wall of the blind pouch was **thick and tough**.

Speculum examination was difficult as the blades couldn't pass deeper than 3cm. However the pouch was pink in colour.

RECTAL EXAMINATION

Rectal wall was smooth, there was no mass felt at the normal site of vagina, but some mass was felt higher up most probably uterine.

DIAGNOSIS

Mullerian Dysgenesis with vaginal atresia.

MANAGEMENT

The patient was planned for examination under anaesthesia (EUA).

INVESTIGATIONS DONE

11.8.88 - Blood group O +ve (o- positive)

Hb - 15g/dl

WBC - $8.3 \times 10^9/l$

Platelets - $328 \times 10^9/l$

BUN - 4.1 mmol/l

K+ - 4.6mmol/l

Na+ - 146 - mmol/l

5.8.87 - ultrasound of pelvis: Features suggestive of haematometra

- 28.8.87 IVP - Normal findings.

The patient was prepared for EUA on the 21.8.87

After routine preoperative procedure the patient was examined under anaesthesia. The findings were:-

Abdomen : There was a central mass and bilateral cystic masses which were separate from the central mass.

Per Vaginum and Per Rectum - Mass higher up felt, no masses at normal vaginal site.

- needle aspiration attempted to reach the pouch but in vain.

The operation was left and plan for laparotomy was reached.

Laboratory results before operation were:

Hb - 14.9g/dl

WBC - $8.8 \times 10^9/l$

BUN 2.8 mmol/l

Na+ - 133 mmol/l

K+ - 4.3 mmol/l

The patient was starved overnight on 17.9.87. Her blood was taken for group and cross match and 3 units of blood was available for the laparotomy on 18.9.87. She was premedicated as above and pre-operative procedures were done.

At laparotomy the following were found:-

- large bilateral haematosalpinx
- Normal uterine wall; slightly enlarged in size.
- No vagina
- No opening of the uterus i.e. cervix
- peritubular adhesion found. Flimsy in nature; easy release was effected.

With the above findings a decision to remove both the uterus and tubes were reached and effected. Specimens were taken.

The operation was uneventful, patient was reversed from anaesthesia and taken back to the ward for the usual post operative management. She was transfused one unit of blood.

The patient recovered well. Her post operative haemoglobin level at day 3 was 13.8g/dl.

On the seventh post operative day the patient was discharged to be seen in our clinic after six weeks.

She has been seen thereafter and she has no complaints so far.

HISTOLOGY REPORT

Number SN 3778

- Tubes distended with gelatinous fluid
- Normal myometrium
- Dilated tubes with haematosalpinx.

COMMENT

This was a young lady who presented with periodic abdominal pain and complaints of not having seen her periods since birth. She was found to lack vagina.

Muller (1890) reviewed the origin of female genital tract to arise from what is now called Mullerian Duct and that the lower portion arise from urogenital sinus. It is now known that origin of the vagina is from Mullerian, Wolfian and urogenital sinus (2). Uterine tubes, uterus and upper portion of vagina arise from Mullerian ducts (1,2). By 9th week of intrauterine life two fused Mullerian ducts have reached the urogenital sinus, canalisation of the fused ducts are not complete till 21 weeks of intrauterine life. Errors in timing development and of development lead to varieties of genital malformation. Our patient was found to have well developed uterine tubes and uterus but no vagina.

Uterine development is usually complete but if it is defective it is often associated with inadequate ovarian function. This is more so in neutral individuals in whom there is defective mullerian development (3). Ngumbi (1976) reviewed causes of primary amenorrhea in an 8 year period and found 13 cases had hypoplastic uterus, though genotyping female all the cases have underdeveloped secondary sexual characteristics (10). Our patient had normal looking uterus and as stated above normal secondary sexual characteristics indicating adequate ovarian function. Further more periodic pains and finding of blood collection in the tubes and uterus denoted adequate endometrial response to ovarian stimulus.

Marc (5) showed an association between vaginal and upper genital anomaly in 83% of his cases, and sporadic occurrence of vaginal agenesis at 1:5000. Ngumbi however found that 44.2% of the cases he studied had mullerian agenesis. Our patient had no vagina and not even cervical opening was visualised on the removed uterus.

Vertical and horizontal effect have been noted. Verp (6) observed an affected mother, daughter and grand daughter, Hey (7) found affected daughter, sister and niece (brother's daughter). Given familial aggregates potential explanation include shared environmental toxins, single mutant gene, or polygenic/multifactorial inheritance. In view of generation however, non-genetic factors are unlikely. Our patient had no affected relative. Karanja (1982) showed that aetiology of amenorrhoea can be diagnosed by a single FSH, LH and prolactin determination (8) the same view is shared by Friedman (1972) (9). Aetiology of our patient's amenorrhoea was obvious.

Ngumbi series (1976) 65.6% of patients presented at 20-29 years and amenorrhoea seem to be highest presenting complaints (10). Our patient presented with amenorrhoea and was 19 years.

Our patient had her uterus and tubes removed as the construction of vagina for the purpose of procreation was difficult. The tubes were also very damaged. The patient still attends clinic and if she so desires she can have vaginoplasty for the purpose of sexual fulfillment. She can also adopt a child.

REFERENCES

1. Grosby, W.M., Hill, E.C.
- Embryology of Mullerian duct system
- Obs.Gyn. 20: 307, 1962
2. Sueldo, C.E., Rotman, C.A., Cooperman, N.R., Rana, N.
- Transverse Vaginal Septum - Report of four cases
- Journ. Reproduct. Medicine, 30: 127, 1985.
3. Werrel, D.W.
- Malformation of female genital tract.
- Postgraduate Obs.Gyn. Pathology 1st Edition pg 21 1973
- Fox and Langley
4. Kerr, C.B.
Cytogenetics and genetics
- Human reproductive physiology 2nd Edition pg 9, 1978
- Edited by Rodney P. Shearman
5. Marc, A.B., London S.N., Haney A.F.
- Unusual Mullerian anomalies associated with distal
extremity abnormalities
- Journ. American Collage of Obs.Gyn. 65(2): 293, 1985.
6. Verp, M.S.
- Heritable aspect of uterine anomalies
- Fertility and sterility 4: 80, 1983.
7. Hey, D.
- Uterus unicornis and its relationship to pregnancy
- Journ. of Obs.Gyn. Brit Empire 68; 371, 1961
8. Karanja, J.G., Mati J.K.G., Sekadde-Kigundu, C. et al.
- Value of FSH, LH and prolactin assays in aetiological
diagnosis of amenorrhea.
- Journ. of Obs.Gyn. for East and Central Africa 1(3): 1982
9. Friedman, S.,
- Clinical use of Serum FSH, LH measurement
- Obs.Gyn 39: 811, 1972.
10. Ngumi P.M.
- Primary ammenorrhea, presentation and management at
Kenyatta National Hospital (1967-1974).
- M.Med Thesis, University of Nairobi, 1976

STAGE IB: CARCINOMA OF THE CERVIX UTERI.WERTHEIM'S HYSTERECTOMY DONE

Name: P.W.

Age: 50

Parity: 12+0

IP No.: 932643

LNMP: 18 Years earlier

DOA: 28.11.88

PRESENTING COMPLAINTS

The patient presented with complaints of lost intrauterine contraceptive device and vaginal bleeding.

HISTORY OF PRESENT ILLNESS

Patient was well until about 6 months ago when she started having vaginal bleeding. She had earlier been feeling intrauterine contraceptive device (IUCD) threads but has not been feeling it recently. She ignored the bleeding until she found she could not feel the thread at which time she thought it was the lost IUCD that was causing the problem.

PAST MEDICAL HISTORY

Nothing significant

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 12+0, her last delivery she could not remember, but her first born was born in 1942. She could not remember when she had her menarche but her cycles had been regular. Her last period was about 18 years before the day of admission.

FAMILY AND SOCIAL HISTORY

She was a married lady, her husband having died in 1982. She stays in Lower Kabete with her children.

No other contributing history.

ON EXAMINATION

She was in good general condition, she was not pale and was not jaundiced. She had no adenopathy. Other general examinations were normal. She had a pulse rate of 80/minute RR rate of 22/minute Bp 150/80mmHg and body temperature of 36°C.

Central Nervous system normal

Respiratory system - Nothing noteworthy

She had normal chest findings

Cardiovascular system - Nothing noteworthy

ABDOMINAL EXAMINATION

She had an obese abdomen otherwise there was no tenderness and no masses palpable.

PELVIC EXAMINATION

She had normal external genitalia, some bleeding was noted to be coming from the introitus. Speculum examination revealed normal vagina. Cervix looked raw especially posterior aspect. Digital examination revealed closed cervix with rough surface especially posterior. It was closed, adnexiae and pouch of Douglas were normal. IUCD thread was not visualised nor felt.

DIAGNOSIS

A diagnosis of carcinoma of the cervix with lost IUCD was made.

MANAGEMENT

Patient was prepared for examination under anaesthesia and for location/removal of IUCD. Blood for haemogram was taken.

The patient was then taken for EUA as described in the introduction, haemoglobin level was 14g/dl.

Findings of EUA:-

- normal vulva and vagina, cervix had a hard mass posteriorly.
- Uterus felt bulky
- Adnexiae and pouch of Douglas were free.
- Endocervical currating done and specimen taken.
- IUCD (Lippes Loop) was identified and removed.
- Cervical biopsy was taken.

Patient did well postoperatively. She was staged as IB Histology report were as follows:-

- Cervix section showed invasive anaplastic carcinoma of cervix; uterine curratings showed nests of anaplastic carcinoma.

The patient was then planned for Wertheims hysterectomy

Investigations done included:-

Haemogram - Hb - 14.9

WBC - $7.1 \times 10^9/l$

BUN - 4 mmol/l

K⁺ - 4 mmol/l

Na - 140mmol/l

Blood sugar - 5.6 mmol/l

Blood group - O Rhesus positive

IVP - normal findings.

She was put on operation list of 20.3.89. Venous blood was drawn and 4 units were available to accompany the patient to theatre. Informed consent was obtained and the usual preoperative procedures done.

WERTHEIMS HYSTERECTOMY

The day before operation the patient was fasted overnight. On the morning of the operation she was premedicated with Atropine Sulphate 0.6mg and pethidine 100mgs IM.

In the theatre, after appropriate anaesthesia, the patient was put in lithotomy position, vulvovaginal toilet was done and the area draped. The patient was catheterised and the catheter left in situ. The vagina was painted with methylene blue dye and packed with a vaginal pack attached to a piece of gauze to facilitate removal.

The patient was put in a supine position and the abdomen cleaned and draped with sterile gowns. The abdominal cavity was opened through a midline subumbilical incision in layers. There was no free peritoneal fluid or adhesions found. The uterus, tube and ovaries looked normal. The uterus was freely mobile and there was no evidence of parametrial spread of the tumor.

A self retaining retractor was inserted and the gut packed away using sterile abdominal packs. The uterus was then delivered through the incision. The right round ligament was divided between two artery clumps. The two stumps were tied using chromic catgut No. 2 using transfixing sutures. The uterine-vesicle peritoneum was incised anteriorly to the utero-vesical pouch. Then the infundibulopelvic ligament was divided between two artery clumps and the stumps ties with chromic catgut No. 2 using transfixing sutures. A similar procedure was carried out on the left side.

The bladder was dissected using blunt dissection from the uterus, cervix and vaginal vault.

The posterior leaf of the uterine vesical peritoneum was opened and deflected downwards to reveal the para-rectal space.

The right ureter was identified at the pelvic brim and exposed by opening the peritoneal covering. It was then held in a ribbon tape. The ureter was exposed upto the ureterovesical junction. The uterine vessels were identified and divided between two artery clumps. The stumps were then doubly ligated using transfixing sutures with chromic catgut No. 2. The same procedure was repeated on the left side. The utero-sacral ligaments were identified and divided between two artery clumps and the stumps ligated using transfixing sutures with chromic catgut No. 2. The uterus was then removed by circumsicion of the vaginal vault including one inch of the vaginal walls. The vaginal canal was then closed starting at the apexes using chromic cutgut No. 2 leaving an opening at the centre approximately an inch.

Lymphnode dissection was done along the external iliac vessels and in the abuturator fossa. The lymphnodes were not enalrged or fixed. Further dissection along the common iliac vessels was not felt to be necessary. These lymphnodes were sent for histology.

Peritonization was done with chromic catgut after placing some surgical packs on the raw areas to control any oozing. The abdomen was cleaned and inspected. The rest of the cavity was then closed in layers using continuous chromic catgut No. 1. for the peritoneum, interrupted catgut No. 2 for the rectus sheath and silk for the skin. The wound was cleaned and dressed. Blood loss was 800mls.

The patient was reversed from anaesthesia.

Histology report: Tumor consist of large ribbons of small undifferentiated cells. Tumor limited tp cervix. Endometrium is systic-atrophic. Conclusion invasive anaplastic carcinoma IB of cervix.

The patient was marked and started on radiotherapy and is due to finish her course in two weeks time, to get a total of 40-50 grays.

The patient is very stable. Her investigations are normal throughout.

COMMENT

This was a patient who had carcinoma of the cervix stage IB in whom Wertheims hysterectomy was done and patient started on radiotherapy.

In 1898 Vienna Wertheim performed the first radical hysterectomy as a surgical cure for carcinoma of the cervix. In 1902 the Curies isolated radium and used it in the treatment of the cancer. This remains the mainstay of treatment, combination of surgery and radiotherapy as was in our patient. Generally in our unit stage I and stage IIA are treated with Wertheims hysterectomy and then followed by radiotherapy.

Carcinoma of the cervix has its peak of 45-55 years in Kenya, it peaks at 50-59 years (2,3). True incidence in Kenya is not known but its frequency is only second to tumors of the skin (2). It is found in a ratio of 22:1 to endometrial carcinoma in Tanzania (1).

In developing countries, Kenya included patients tend to report late either because of lack of facilities with which to screen the females as in developed countries. Most patients present late and yet most patients complain of symptoms of short duration (3). Our patient presented with complaints of lost intrauterine contraceptive device and vaginal bleeding. Average duration of symptoms range from 6-8 months (1,3,4).

Most patients present with vaginal bleeding. In Ojuang's study (3), while 71% of patients were found to be complaining of vaginal discharge, by Everett (4). Bleeding can be intramenstrual, postcoital, postmenopausal or unprovoked. Our patient was post menopausal.

Clinical staging has important prognostic factors (5).

Most patients in Kenyatta National Hospital have squamous cell carcinoma. In developing countries mean age is lower than in developed countries (3,7). The difference seem to be attributable to early intercourse and marriage, high parity with short period of rest between pregnancies and poor socio-economic status. These associations are not uniformly agreed on (1). Our patient was postmenopausal of high parity and she married early.

Herpes Type 2 virus and human papilloma virus have been incriminated as etiological factors and Herpes simplex DNA has been demonstrated in invasive cancer, carcinoma-in-situ and dysplasia (8,9).

For patients whose stages are such that they can not be done surgery, external cobalt 60 radiation is given first because most tumors (60%) are exophytic, friable and infected and are thus difficult for intracavitary caesium (1,3,7). Our patient was done Wertheims hysterectomy and followed with radiotherapy. Combined radiotherapy and surgery has been shown to enhance survival rate and radiation is given to a total of 40-50 grays in 4 to 5½ weeks.

Complication of surgery that is guarded most is injury to the ureter. It may not be physically damaged but may undergo avascular necrosis from wounding of the blood supply. Our patient has withstood the radiation therapy well and her blood parameters have been well within normal limit.

REFERENCES

1. Armon, G.S. Missaleck W.
- Carcinoma of Cervix in Tanzania
- E.A.M.J. 55: 534, 1978.
2. Einhorn N, Gebbie D.A.M.
- The effect of preoperative radiotherapy on the cure rate
after surgical treatment for carcinoma of the
cervix in E. Africa.
- E.A.M.J. 51: 194, 1974.
3. Ojwang S.B.O., Mati J.K.G.
- Carcinoma of the cervix in Kenya
- E.A.M.J. 55: 194, 1978.
4. Everett V.J.
- Carcinoma of the cervix in Dar - es - Salaam
- E.A.M.J. 52: 111, 1975.
5. Salim A.M., So-Bosite L.J., Little B.A., Topdinick W.
- Carcinoma of the Cervix Clinical experience
- Obs.Gyn. 14: 77, 1974
6. Taussig F.J.
- Carcinoma of the Uterine Cervix
- Am. Jn. Obs.Gyn. 28: 650, 1934.
7. Eglin, R.P., Sharp F., McLean A.B.,
- Detection of RNA complimentary to HSV, DNA in human
cervical squamous neoplasm
- Cancer Research 41: 3597, 1981.
8. Crum C.P., Fegara, K., Barron B.
- Human Papilloma Virus infection of cervix and CIN
- Gyn. Oncol. 15: 88, 1983.

SEROUS CYSTADENOCARCINOMA OF OVARY STAGE IV: DEBULKINGAND CHEMOTHERAPY

Name: D.B.

Age: 60 years

Parity: 11+0

IP No.: 945622

LNHP 1965

DCA: 10.2.89

DOD: 13.3.89

PRESENTING COMPLAINTS

The patient came to us as a referral from a private clinic in town where she was thought to have ovarian malignancy.

HISTORY OF PRESENT ILLNESS

She had had right sided pain for the last 5 years. She had had some treatment at Mumias Hospital without improvement.

She gives history of vaginal bleeding sometimes in January this year. She has been constipated on and off for 5 months but has had no problem with passing stool. Has occasional problem with passing urine but has no dysuria

PAST MEDICAL HISTORY

None significant

PAST OBSTETRIC AND GYNAECOLOGICAL HISTORY

She was para 11+0. She had her last delivery in 1956 and her last monthly period in 1965. She was on no contraception.

FAMILY AND SOCIAL HISTORY

27

Her husband had died sometimes back. She lives in Bungoma District. She does not smoke nor drink alcohol. No other contributory history.

ON EXAMINATION

She was an elderly female in fair general condition and nutritional status. She had no palor nor any jaundice. She had no adneopathy and no oedema sebral or pedal. Other general examinations were normal. Pulse rate was 70/minute regular, blood pressure 100/60mmHg, respiratory rate was 20/minute regular and she had a body temperature of 36°C. Respiratory system, cardiovascular system and central nervous system were normal.

ABDOMINAL EXAMINATION

Abdomen was distended espicially the lower portion, more on the right side. There was a mass 20 weeks size firm, tender and mobile seem to arise from the pelvis. There was no demonstratable ascitis and no organomegally.

PELVIC EXAMINATION

She had **atrophic** vulva. There was no bleeding and no discharge. Uterus was rather lower down with the cervix pushed posteriorly. Slight pressure of uterus caused it to return to its normal position. The mass was not attached to the uterus. Right adnexia there was fullness of the mass, left adnexia was normal. Pouch of Douglas showed the same filling by the mass.

DIAGNOSIS

A diagnosis of ovarian tumor with uterine prolapse was made.

It was decided to work up the patient for theatre for surgery for the mass then to deal with the uterine prolapse later. Investigations done were as follows:-

- U/S - large multicystic mass characteristic of ovarian cyst. In view of the age malignant ovarian tumor can not be ruled out.

- chest X-ray - normal

- Haemogram

Hb - 10.8g/dl

WBC - $4.1 \times 10^9/l$

PCT - $207 \times 10^9/l$

BUN - 5.1 mmol/l

K+ - 4.2 mmol/l

Na+ - 138 mmol/l

HIV screen - Negative

Blood group - B rhesus positive

IVP - Normal

LFTs - Normal

MSSU for c/s - No growth obtained.

The patient was started on tablets $FeSO_4$ 200mg 8 hourly, folic acid 5mg daily and analgesics.

She was prepared for operation on 27.2.89, 4 units of compatible blood was made available and patient prepared as usual. In theatre, the usual preoperative procedures were done.

Patient in supine position, abdomen was opened in layers and the following were the findings:-

- cystic right ovarian mass with small solid and haemorrhagic mass.
- No ascitis
- There were seedling on the omentum, liver, pouch of Douglas left ovary and intestines.
- left tube looked grossly normal.

Total abdominal hysterectomy was done with bilateral salphingo-ophorectomy. Bleeding was controlled and abdomen closed in layers. Anaesthesia reversed and patient taken back to the wards where she made uneventful recovery, on the usual regime.

Histology report - Serous cystadenocarcinoma.

She was started on alkeran tablets 10mg daily for 5 days monthly. She has now gotten the chemotherapy twice. Her investigations and general outlook are normal.

COMMENT

This was an old lady who had ovarian cancer in whom debulking was done and chemotherapy started.

This is the 3rd commonest malignancy of female genital tract in Kenya. Peak incidence of this malignancy is 46.7 years. Its incidence ratio to that of carcinoma of the cervix is 5.1:8 (1,2,3).

Like most cancers the aetiology of the malignancy is not known but familial tendencies has been attributable. Other factors include low parity, oophoritis, mumps and use of talc containing asbestos (4). Our patient was 60 years, was of high parity and does not give any history of similar problem at home, or any infection earlier on.

At Kenyatta National Hospital, epithelial tumours account for 71% of all ovarian malignant tumors seen 56.6-65.1% being adenocarcinoma (1,2).

The commonest presenting symptom is abdominal swelling, then pain. Other symptoms include bowel disturbance weight loss, abnormal vaginal bleeding and urinary symptoms (1,3). In 40-70% palpable masses are found. Our patient had all these symptoms.

Definitive diagnosis is made at laparotomy and by histology report.

Management revolves around laparotomy at which time staging is also done. The debulking can involve any organ in the abdomen which can safely be removed. In our patient uterus, tubes and ovaries were removed. The volume of tumor left behind is important prognostically (2,7).

In our unit, surgery is followed by chemotherapy. In other centres radiotherapy is used in form of external beam radiation or instillation of radio isotopes into peritoneal cavity (8). Our patient has been on alkeran tablets, the same can be given intravenously in 500mls of normal saline at a dose of 1mg/kg body weight over 30 minutes.

It can also be used in combination with other chemotherapeutic agent and better survival rates have been reported, the only disadvantage is the severer side effect (9).

During the chemotherapy blood is monitored for white blood cell count, haemoglobin and platelets. Platelets should be kept above 150,000 per ml, and white cell count above 3000 per cent. Our patient satisfied these conditions.

After one year a second look operation is advised at which time the response is assessed. Biopsies are taken at various sites for histological assessment. If the patient is found free of the disease then chemotherapy is stopped (10). Prolonged use of chemotherapy is associated with bone marrow depression and development of non-lymphatic leukaemia (11).

Our patient is still going on with chemotherapy and so far no adverse effect noted.

Outlook of ovarian cancer is poor as the patients report late, and will already have distant metastasis (5). Our patient had distant metastasis in liver and was therefore in stage IV.

REFERENCES:

1. Njuki S.K.
Carcinoma of ovary
M.Med Thesis, University of Nairobi, 1979
2. Djwang, S.B.O.; Makokha, A.E., Sinei S.K.A.
- Ovarian Cancer in Kenya
- E.A.M.J. 57: 131, 1980.
3. Morrow G.P.,
- Tumors of the ovary
- Gynaecologic Oncology Vol. 2
- Edited by Coppleston, M.
- Churchill, Livingstone, Edinburg.
4. Richardson, G.S., Scully R.E., Nifrin, N., Nelson J.H.
Common epithelial Cancer of Ovary
New Eng. J. Med. 312 (7): 415, 1985.
5. Piver, M.S., Barlow, J.J.; Lele, S.B.,
- Incidence of Subumbilical metastasis in Stage 1 and 2.
of ovarian carcinoma.
- Obs.Gyn. 52: 10, 1978.
6. Beller, V., Bigelow, B., Bechman, E.M., Brown, B.
- Epithelial carcinoma of the ovary in reproductive years
- Clinical and morphological characteristics.
- Gyn. Oncol. 15: 422, 1983.
7. Warton, J.T., Hensor, J.
- Surgery for common epithelial tumors of ovary
- Cancer 48: 582, 1981.
8. Dembo, A.J., Bush, R.S., Bael, F.A., Been H.A.,
- Ovarian Carcinoma: Improved survival rate following
irradiation (abdominal-pelvic) in patients with complete
pelvic operation.

9. Wharton, I.T., Greighton, L.E., Stringer, C.A., Delctos L.J.
 - Chemotherapy and radiation therapy in treatment of ovarian carcinoma of common epithelial origin.
 - clinic. obs.Gyn. 28(4): 806, 1985.
10. Gerheuson, D.M., Copeland L.J., Wharton, I.T.
 - Prognosis of surgically Determined complete Responders in advanced ovarian cancer.
 - Cancer 55: 1129, 1985.
11. Green, M.H., Boice J.D., Green B.E., Blessing J.A.
 - Acute non-lymphocytic leukaemia after therapy with alkylating agents for ovarian cancer; a study of five randomized trials.
 - New Eng. J. Med. 307: 1416, 1982.

BURST ABDOMEN: REPAIRED WITH TENSION SUTURE

Name: A.A.

Age: 39

IP No: 851318

Parity: 7+1

LMP: 10.9.87

DOA: 30.9.87

DOB: 5.11.87

PRESENTING COMPLAINTS

The patient presented with history of excessive bleeding for 7 months and progressive abdominal swelling for 2 years.

HISTORY OF PRESENT ILLNESS

Abdominal swelling has been increasing steadily. There was no pain usually except during monthly period when the swelling was painful.

She noted excessive vaginal bleeding during her periods for a duration of 7 months. There was an accompanying pain in the abdomen during the periods.

There was no history of vaginal discharge between the periods.

PAST OBSTETRICS AND GYN:ECOLOGICAL HISTORY

She was para 7+1, her last delivery was in 1976 by caesarian section because of transverse lie. The abortion was plontaneous at 2 months and dilatation and curratage was done.

Her last monthly period was 10.9.87, it lasted 7 days and was painful.

She used contraceptive pills from 1976 to 1980, then used intrauterine contraceptive devise from 1980-1984. Now she does not use any family planning method.

PAST MEDICAL HISTORY

Nil of significance.

FAMILY AND SOCIAL HISTORY

She was a married lady and works as a secretary in the City. She does not smoke nor drink alcohol. Her husband also works in the city as an accountant. There is no contributory history in the family.

ON EXAMINATION

She was found to be in good general condition. She was pale moderately, but she had no jaundice. Other general examination was normal.

She had a pulse rate of 80/min regular, blood pressure of 120/75mmHg. Respiratory rate of 20/min and temperature was 36.4°C.

Central Nervous System)
 Respiratory System) No abnormality detected
 Cardiovascular system)

ABDOMINAL EXAMINATION

There was a laparotomy scar. Abdomen was rather full in its lower aspect. There was a single, firm, smooth surfaced mobile mass arising from the pelvis. It was slightly tender. It was the size of 20 weeks pregnant uterus.

PELVIC EXAMINATION

She had a normal external genitalia. Cervix was firm short, parous and smooth. Uterus was 20 weeks.

Adnexiae and pouch of Douglas were normal.

DIAGNOSIS

A diagnosis of uterine fibroid was made.

PLAN:

30.7.88 - Pap smear was done - Class I

2.10.87 - Urea electrolyte: BUN - 1.5mmol/l

K⁺ - 3.4 mmol/l

Na⁻ - 130 u mol/l

Hb - 7.8g/dl

WBC - $8.3 \times 10^9/l$

PCV - 26.1

Adequate platelets

Blood group A RhD positive

9.10.87 - Ultrasound - Uterus appears bulky with large low mass in it. No other masses seen at adnexia.

Conclusion: Uterine fibroid.

While in the ward, the patient was transfused 3 units of compatible blood under cover of chloroquin tablets.

Her haemoglobin level on 12.10.87 was 12.2g/dl, PCV 39.8%, WBC $8.3 \times 10^9/L$.

The patient was prepared for total abdominal hysterectomy on 16.10.87. Her preoperative haemoglobin was 10.8g/dl.

She was prepared the usual way with compatible blood ready.

The operation was done and findings at operation concurred well with clinical assessment. She made uneventful recovery. She was transfused the two pints and her third post operative day haemoglobin level was 11.1g/dl. She was put on the usual post operative regime.

Alternate stitches were removed on the sixth post operative day. Slight oozing of clear fluid was noted from a site, the following day 24.10.87 all stitches were removed at about 9am. There was still the same amount of oozing from the same site. The patient was therefore kept in the ward for observation.

On 25.10.87 at 8am the patient went to toilet and complained of severe abdominal pain and some pv bleeding. On examining the patient was found to have part of the large and small intestines herniating from the halfway opened incision wound.

A diagnosis of Burst Abdomen was made and the patient was prepared immediately for theatre. The herniated viscera were reduced aseptically in the ward and sterile packs put.

At 11am the patient was already in theatre on operation table. She was anaesthetised.

PROCEDURE

Found: The patient was catheterised after the vulvovaginal toilet was done. She was then cleaned at the abdomen, the packs being removed out. The patient was then draped.

On inspection omentum, small intestine and portion of large intestine was eviscerated and partially stuck to the wound which was 75% open.

DONE:

Incision was opened whole length, adherent gut was separated from the incision. Abdominal cavity was found to be clean with no pus nor any abnormality.

Abdominal cavity was rinsed with warm saline then wound edges were freshened. Three tension sutures put: two horizontal mattress with nylon and one vertical. Abdomen was then closed in three layers the usual way. Tension sutures were then tightened.

Anaesthesia was reversed and patient taken back to the ward.

She had uneventful recovery.

She was started on oral sips on the second post operative day and then fully on oral diet on the third day. Her third post operative check h=emoglobin was 10.5g/dl.

On the tenth post operative day the tension sutures were removed, other skin stitches were removed on the seventh day.

The patient was discharged home on the eleventh post operative day.

She was seen in our clinic four weeks later and other than slight pain around the incision site for which she got assurance and panadol, she had no major problems.

COMMENT

This was a patient who was initially admitted to the ward for an operation to remove the uterine fibroid. The TAH was done but on the seventh post operative day the wound gaped and then opened. Successful repair was done with tension suture.

Process of healing starts with traumatic plasma exudate from damaged vessels, infiltration of the sites by leucocytes and macrophages. Fibroblast invasion takes place and in 10-14 days result in what would be scar tissue (1).

Incidence of burst abdomen range from 0.3-3% and aetiological factors implicated include the type and location of incision, type of suture used, inherent strength of tissue, vitamin or protein deficiency, malignancies, anaemia and when incision were made through scars. Vertical midline incisions are more prone to burst than horizontal incision; non absorbable suture for fascia is associated less with wound dehiscence. Our patient had had a previous scar following caesarian section, the incision was made through the scar, the incision was midline and vertical and absorbable suture was used for the fascia. Perhaps these could account for the occurrences. Infection is also known to be highly associated with dehiscence (2). Our patient had no infection.

Wound dehiscence usually occur at between 5-8 days post operative usually starts with exudation of watery or serosanguinous fluid this is then followed by gaping of the wound and then evisceration (2,3,4,5). Our patient dehiscence occurred on the 8th post operative day, she had exudate and wound started by gaping.

Diagnosis of wound dehiscence should be made quickly and action taken fast as the complication can result in mortality in 15-35%.

Management aims at immediate repair in theatre. In the intervening period sterile gauze should be put to cover the wound. The wound edges should be freshened and a non-absorbable inert suture to pass through all layers of abdominal cavity. These stitches are left in situ for 10-24 days depending on the state of the wound when it was opened. Our patient had all these procedures fulfilled.

Prevention is geared towards identification of at risk patients and choosing the right incisions and right technique and suture. In such patients some authorities recommend use of tension suture from the beginning.

REFERENCES

1. Walker, J., McGillivray, I., MacNsughton, M.
 - In combined Textbook of Obs Gyn. 9th Edit.
 - Churchill, Livingstone 1976.
2. Mattingly, R.F., Thompson, J.D.
 - In Te Lindes Operative Gynaecology 6th Edition pg 171, 198
 - J.B. Lippincott Company Philadelphia.
3. Alexander, A.C., Pruden J.F.
 - The cause of Abdominal Wound Disruption
 - Surg. Gyn. Obs. 122: 1223, 1966.
4. Mann L.S., Spinnazola A.J. et al
 - Disruption of abdominal wounds
 - J.A.M.A 180: 1021, 1962.
5. Sustendel, G.F. and Collins G.G.
 - Abdominal Wound Complication in Obs. Gyn. Surgery
 - Obst. Gyn. 1: 264, 1953.
6. Nelson J.A.
 - In Atlas of radical pelvic surgery
 - Appleton-Century-Crofts.

GYNAECOLOGY LONG COMMENTARY**TOPIC:**

**KNOWLEDGE, ATTITUDE AND PRACTICE OF CONTRACEPTION
(FAMILY PLANNING METHODS) AMONG TEENAGERS IN SOUTH NYANZA
DISTRICT, KENYA.**

INTRODUCTION AND LITERATURE REVIEW

"The future of a country, and of mankind depends on its children. For children to grow into healthy, able adults they need good food, clean water, education and medical care" (1).

The above opening remark summarises in a nutshell what any country should consider a priority in planning for her people. In Kenya, about 50% of the population is below 15 years of age and there are more females than males. This excess in the number of females is kept throughout the reproductive years i.e. upto 34 years (2). It is therefore clear that the bulk of Kenya's budgetary plan is utilised by the youth who don't contribute to the economy.

In Sub-Saharan Africa, population growth is fastest in the world, 3rd, this simply means that more youth is added into the population with the negative result of even higher dependency ratio. By many quality-of-life indexes, for example education, infant mortality, industrial input, majority of African countries are at a standstill, or growing backwards (3).

In a number of African countries, a lot of resources are expended in putting up sophisticated hospitals in urban areas and neglecting provision of basic health care (4). There is a need for complete reappraisal of priorities of health needs.

In Third World two thirds of the population are children under 15 years of age and females of child bearing age (1). This certainly means that for any government policy to have impact on a population, the children and females must be born in mind. Children need to be born healthy, and so need mothers who are already healthy and families that can give them care and attention they need.

Development plans tend to fall astray due to the high rate of population increase (5). This obviously, is the very base of the basic health care and, like the preventable diseases, is capable of being controlled at the grassroots.

1969 Kenya census showed a population growth rate of 3.3%, one of the highest in Sub-Saharan Africa. It was 11,247,000 people and is projected to triple by the year 2000 A.D. (6). Kenya is 538,000 sq km. It was projected that by 1980 there was 2.6 acres for every Kenyan, and by the year 2000 A.D., there will be 0.5 acre per person. To have the picture clearer, only 17%

of Kenya land surface is cultivable under present technology, and four fifths of the Kenyan population reside in this cultivated area. (7). It is not difficult to compute the kind of change that there will be by the year 2000 A.D. The Alma-Ata Declaration about health for all by the year 2000 A.D. (4), will even at that time still be an aspiration.

500,000 women in the Third World die during pregnancy and childbearing every year (10). Some of these deaths, if not most are preventable by simple basic health care.

There is increased tendency to marry late all over the world. The girls are often victims of culture in transition. (8). Pregnancies occur at much earlier age all over the world than in the past. By 1977 in Kenya, 7.6% of teenagers, 15-19 years, were currently pregnant; in 1963 in U.S.A. 14.5% of deliveries were teenagers, this went up to 17.1% by 1969 and 19.3% by 1972 (9). Ngoka found teenage pregnancy at Kenyatta National Hospital of 10% in 1980 (10). In Nairobi the incidence of teenage pregnancy in 1983 was 18.6% and the youngest mother was 10 years and 2 months (11). Muraya, in his study of teenage pregnancy in Rural Kenya, found that 26% had had one or more pregnancies, and that 58.4% became pregnant in the first 8 years of school. He also found incidence of teenage pregnancy to be 10%. 53.3% of teenagers were already married.

Jagdeo found adolescent fertility to be generally high in Africa reaching 130/1000. In Indonesia, Asia, it is as high as 240/1000 and by 17 years of age 41% of girls have delivered. (12)

Teenage pregnancy is therefore raising alarm. There is already a 10 year 2 months old mother and this is an alarm enough. Something is got to be done.

Mean age at menarche has continued to be lower over the years with USA recording 12.7 \pm 1.2 years; in Madras, it is 12.5 years. In Addis Ababa it is 13.7 years (14).

Modern Education with concomitant loss of cultural bonds (15) has put the youth of today in a very contemptuous state to his elders. Some youth suffer not because of being contempt but because of lack of parental guidance (10). Hoffmeyer found that almost 100% of the 18-19 year old seeking abortion came from homes where their parents for one reason or another could not satisfy them emotionally (16).

Early menarche and increased teenage sexuality and exposure to school puts the teenagers in a dangerous position that unless they are protected we will witness unplanned pregnancies, induced abortion and its consequences, population explosion with disorganisation of the country's plan. The need for protection has shown itself so clearly that there is no longer the question as "Is there a need for instruction? When shall such instructions be given, in childbearing or in puberty?" (19).

Njoroge showed that 22.1% of undergraduate students had had sex by 19 years of age, the youngest had sex when she was 12 years old (20). It has been shown that girls with better education seem to know more about ways of getting rid of unplanned pregnancy. The teenagers most of whom are still in primary school or early secondary schools therefore are mostly unaware of ways of getting rid of unplanned pregnancy and therefore carry pregnancy to term with all their unpreparedness (21).

Cyril Young et al found that 1:8 girls and 1:3 boys had had sexual intercourse by 16 years of age and were thus exposed to unplanned pregnancy (22). Kenya Fertility survey showed that 28% of 15-19 year olds were married already (23). In USA more than 50% of the 19 year olds and below had engaged in sexual activity and their fertility were comparable to the women in their twenties (23).

On realisation of the rate of population growth, Kenya Government adopted official policy on Family Planning in 1965 and Kenya National Union of Teachers noting the vulnerability of the adolescents declared that sex education should be introduced in school syllabus in 1972 (6).

Studies have shown that legalising abortion does not alter the rate of teenage pregnancy as there will obviously be bureaucratic restrictions, distance to approved centres and expense involved (24). In developing countries there is general increase in the incidence of illegal abortion and this pay burden to governments budgets, as an illustration in Bolivia 60% of cost of running Obstetrics and Gynaecology department is devoted for the treatment of complications of abortion; in Turkey one in seven women had had illegal abortion by 1975 while the figure was one in fourteen in 1963. In El Salvador maternity hospital, one quarter of hospital deaths were due to illegal abortion (8).

It has been shown that sex education without provision of contraception increases conception rate (25).

It is therefore clear that intervention must be done at a stage early enough to interrupt this vicious cycle where unplanned pregnancies in young girls result in high maternal mortality and morbidity and infant mortality due to unprepared maternity; this gives poor national quality-of-life indexes in which people engage in nothing else but in bringing up children in a state of gambling that if some die some will remain. The intervention has got therefore to be at the teenage, and the means should be contraception as already reproductive biology is being taught in schools. This must be done if we have to see our population and development improve.

This study will be done at Western part of Kenya in South Nyanza District which is in Nyanza Province.

The District has total water and land area of 7,778 sq km (Land area is 5713 sq.km). This forms 1:33% of National Surface area. It has a population as at 1979 of about 817601 with population density of 143 people per sq. km. It has nine administrative Divisions namely Oyugis, Kendu Bay, Rongo, Rangwe, Mbita, Ndhiwa, Migori, Macalder and Kehancha. Except for Kehancha District the rest of the Districts is composed mostly of Luo ethnic group.

Luos formed 31% of total teenage pregnancy which was very high considering their population is only 19% of their Nairobi population (26). Incidentally, the district also has the highest infant mortality rate in the whole country.

The District borders Kisii, Kericho, Kisumu and Siaya Districts, and also borders Tanzania through its Kehancha and Macalder divisions.

OBJECTIVES OF THE STUDY

IMMEDIATE OBJECTIVES

A.

1. To evaluate knowledge attitude and practice of contraception, and sexuality amongst the teenagers in South Nyanza District.
2. To assess their degree of exposure to sex and their vulnerability to unplanned parenthood.
3. To find suitable means of availing contraceptive services within easy reach to run hand in hand with sex education.

LONG TERM OBJECTIVES

1. To reduce teenage pregnancies and attendant complications
2. To create awareness of reproductive body function at a stage that is critical, when the teenagers are capable of procreation and yet know little about reproductive body function.
3. To establish family planning services at strategic points for easy access and sustained supply to the clients.
4. To attain population growth sustainable by rate of economic growth.

STUDY METHODOLOGY

SELECTION OF SUBJECTS AND SIZE OF SAMPLE

The district has 9 administrative divisions. The aim of the study was to include primary, harambee and Government schools. Each division had to be given equal chances. Our target was 2000 students. We covered a total of 1944 students but as 104 questionnaires were not properly filled or the respondents were either underage or overage only 1840 questionnaires qualified and are presented here.

All teenagers were included in the study. Schools were chosen randomly from the District Education Officer's register, for every division. Primary schools were chosen first and then the nearest secondary schools chosen. A limited number of students per school were chosen so that a division is represented as much as possible. In so doing, we covered a total of 12 primary girl schools, 13 primary boys schools, 5 Harambee girl secondary schools, 4 Harambee boys secondary schools, 4 Government girls schools and 4 Government boys schools.

STUDY TYPE

This was a descriptive survey type of study.

STUDY INSTRUMENT

This study was conducted using questionnaires. Most of the questions were close ended. A pilot study had been done earlier in different parts and necessary adjustments made.

A group of students legible for the administration of questionnaires were put in a class and briefed before commencement of the response. Questionnaires were given to all and any corrections made before they start. They were made free to ask any questions concerning any question they don't understand well. This was done quietly with the student involvement.

DATA COLLECTION AND ANALYSIS

Questionnaires were filled same time in same school. Three assistants were at hand to collect, sort out questionnaires into different categories and give them serial numbers thereby knowing how many students we have interviewed. The responses were then analysed and tallied.

ETHICAL CONSIDERATION

No ethical problems involved. Informed consent was obtained before administration of questionnaire.

CONSTRAINTS

Reliance was put on an assumed subjects ability to understand English language and questions. This was overcome by assurance and freedom of expression.

Some students might not have been telling the truth but assurance and anonymity of the respondent and guaranteed confidentiality is hoped to have eliminated if not reduced the number of intentional wrong response.

All except one headteacher found the questions very pertinent in light of high premarital and school age sexual activity. More so they found discussion that followed very interesting and informative. The school whose headteacher was hesitant was left out of the study.

Incomplete filling of the questionnaire was envisaged and this was minimised as much as possible by encouraging the students not to leave any vacant place.

In view of the recommendations, follow up is necessary.

PRESENTATION

This is in form of tables accompanied by comments. Discussion and literature review follow.

RESULTS

This study interviewed a total of 1840 students. They were spread amongst boys and girls in primary schools, secondary schools Harambee, and Secondary Schools Government. The responses were recorded and grouped into the various subjects under study; analysed and presented.

Subject	Boys	Girls
English	1000	840
Mathematics	950	890
Science	900	840
History	850	800
Geography	800	750
Arts	750	700
Physical Education	700	650
Music	650	600
French	600	550
Other	550	500
Total	1840	1840

COMPOSITION OF STUDENTS BY TYPE OF SCHOOL AND NUMBERTABLE I

	BOYS	GIRLS	TOTAL	%
PRIMARY	377	330	707	38.4
HARAMBEE	176	359	535	29.1
GOVERNMENT	271	327	598	32.5
TOTAL	824	1016	1840	100

Table 1

This table shows the breakdown of the total number of students interviewed as they were distributed per school type.

The breakdown was as follows:-

	<u>Number</u>	<u>%</u>
- Girls Primary School	330	17.9
- Girls Harambee Secondary	359	19.5
- Girls Government Secondary	327	17.8
- Boys Primary School	377	20.4
- Boys Harambee Secondary	176	09.7
Boys Government Secondary	271	14.7
TOTAL	1840	100

Distribution per School

Primary School Students	707	38.4
Harambee School Students	535	29.1
Government School Students	598	32.5
TOTAL	1840	100

% AGE DISTRIBUTIONTABLE 2

AGE YRS	PB	PG	HB	HG	GB	GG
12-15	3	2	0	0	0	0
16-18	65	35	58	18	36	55
19-20	28	60	39	82	63	45
NO RESPONSE	4	3	3	0	1	0
TOTAL	100	100	100	100	100	100

KEYS:

PB - Primary Boys
 PG - Primary Girls
 HB - Harambee Boys
 HG - Harambee Girls
 GB - Government Boys
 GG - Government Girls

TABLE 2

Over 90% of students in each of the six categories in this study were of age group 16-20 years. Considering that primary school students formed the majority of our study group 38.4% and also noting that only 5% of primary school students were in age group 12-15 years it would appear that age gap between secondary and primary school students was not wide.

Lema (30) dealing with secondary school students found peak of ages 15-17 years and this accounted for only 56.4%. In Maggwa (29) series age group 16-20 years accounted for 68.3%. This study was in a rural set up.

% OF STUDENTS NOT MARRIEDTABLE 3

	PB	PG	HB	HG	GB	GG
Not Married	40	100	86	90	99	97
Married and no response	60	0	14	10	1	3
	100	100	100	100	100	100

Marital status of students were next looked into. Percentage responding as not married ranged from 40% for primary boys to between 86%-100% for other categories, The response in the primary boys category look suspicious as the percentage who were married is rather too high and seem to be in isolation.

This question was specifically asked because in South Nyanza Districts, primary school students who fall out of school due to pregnancy and later on join schools from their husbands' homes are not uncommon.

% WHOSE PARENTS STAY TOGETHERTABLE 4

	PB	PG	MB	HG	GB	GG
Stay Together	90	85	80	96	84	90
Separated or divorced	2	10	11	3	6	5

The study found that 85-96% of student's parents stay together. An average of about 6.1% of parents are either divorced or separated. Maggwa (29) also found in his series over 90% of student to have both parents. This compares well with this study.

TABLE 5: KNOWLEDGE OF IMPLICATION OF MONTHLY PERIODS AND SEXUAL FUNCTION

Question: % saying yes

	PB	PG	HB	HG	GB	GG	
- Periods mean sexual maturity	95	90	81	99	96	93	

Table 6: % saying yes

	PB	PG	HB	HG	GB	GG	
- sex at mid cycle not safe	48	25	24	41	21	39	

Table 7: % agreeing with statement

	PB	PG	HB	HG	GB	GG	
Boys of 13-15 years can't make women pregnant	56	45	49	30	36	29	

Table 5:

On the question whether menstruation means a girls' maturity and can be pregnant, between 81% and 96% said the correct answer.

Table 6:

On the question on when a woman is likely to be pregnant, she plays sex in her monthly calendar, majority had wrong response. The worst response came from primary girls (75%), Harambee boy (76%), and Government boys (79%). Better results came from Harambee girls and primary boys 59% and 54% respectively.

Table 7:

Concerning fertility of boys most students do not think boys of age 13-15 years can make a girl pregnant. The height of ignorance was in primary boys, harambee boys and primary girls. The best response came from Government girls who were 71% correct.

As to whether menstruation means fertility for a girl, the question was searching for knowledge on sexual maturity. Comparative study done by Maggwa (29) found that 73.3% of girls and 68.1% of boys responded correctly. This was lower than this study's in all our six categories. It might be interpreted as a regional variation as the studies were done in different districts.

Knowledge on safe period during the monthly period was then looked into. The finding shows pathetic lack of reproductive body function. In Maggwa (29) series 27.6% of girls and 26.5% of boys had the correct answer. Our study had an average of 31.35% for boys and girls respectively had the right knowledge. Again our series look slightly better than Maggwa's.

Concerning fertility of boys of age group 13-15 years, Maggwa's study showed a more knowledgeable response than this series 61.8% of girls and 80.4% of boys knew that boys of that age group can make a girl pregnant.

SEXUAL MATURITY AND SEXUAL BEHAVIOURTable 8:

Age at Menarche %

		HG	GG
Age in years	10-12	7	3
	13-15	61	63
	≥ 16	20	13

Table 9:

		PB	PG	HB	HG	GB	GG
% Age at first sex	< 8	19	5	0	0	6	1
	8-12	31	29	10	4	29	1
	13-15	25	32	20	22	37	19
	> 15	2	23	9	20	9	3
Not played sex or no response		23	11	61	54	19	76

Table 8:

The only reasonable assessment of menarche was possible in secondary school girls 61%-63% of the girls had their menarche at between 13-15 years, 3-7% had it between 10-12 years and 13-20% at 16 years or after. One girl had menarche at 11 years.

Table 9

Age of first coitus seem to be earlier for boys than for girls. Primary school boys and girls seem to have an edge over their secondary counterparts. At least 59.4% of the students interviewed had had sexual contact.

31.6% of boys were sexually active by the end of 12 years compared to 13.3% for girls. By the end of 15 years, 59% of boys had sexual experience compared to 37.6% of girls.

Question of sexual maturity for girls was addressed. It was found that a reasonable percentage 3-7% had had menstruation by 12 years and that about 66% had had it by 15 years. Percentage of those who had had it by 20 years were 76-88%. In Lema's series (30) 96.2% had had their periods. This comparable with ours.

Age at first sex. Lema's series range between 5 years to 17 years, with 77.7% having had it between 14-17 years. In Maggwa's series, 64.1% of boys and 26.2% of girls had had sexual intercourse by 15 years. This is comparable to our series where 59% of boys and 37.6% of girls had had sexual intercourse by 15 years. In Maggwa's series like in ours, boys seem to have an edge over girls. It is worth noting in present series that 19% primary school boys students had had sex by 8 years, and 5% of girls.

% of those who knew defination

Table 10:

Questions:

Know F.P.

Correct defination

	PB	PG	HB	HG	GB	GG
Know F.P.						
Correct defination	67	75	40	86	87	80

Table 11:

% of those who know

Question:

Which F.P. methods you know

	PB	PG	HB	HG	GB	GG
Which F.P. methods you know						
	39	42	14	55	51	62

Table 10:

Harambee School boys had the poorest knowledge of defination of family planning, 60% of them did not know the meaning. Generally knowledge of family planning seem good with harambee school girls, Government boys and Government girls scoring over 80%. Primary school boys and girls were right in between 67%-75%, of cases.

Table 11

Knowledge of family planning methods were generally lower than that of defination of family planning, itself. Harambee boys did very poorly with only 14% knowing any family planning method. Again Harambee girls, Government boys and girls scored higher 51%-62%. Primary School girls and boys were much better than the harambee boys.

Knowledge and practice of contraception was studied with a view to finding the depth of knowledge and extent of use. Correct definition was generally better than enumerating types known. In Lemma's series, 82.6% had the correct knowledge of what contraceptives are. This was comparable to our secondary school girls 80-87%. Scanty knowledge of contraceptive methods were also bone of contention in Lema's and Maggwa's series (29,30).

TABLE 12: CONTRACEPTION KNOWLEDGE AND PRACTICE

% of those never used FP methods

PB	PG	HB	HG	GB	GG
92	92	97	43	79	57

% not using any F.P. method now

Table 13:

PB	PG	HB	HG	GB	GG
95	92	97	44	86	93

Table 12:

Harambee school girls and government school girls had used contraceptive more than others 43%-57%. Others' usage only ranged between 3%-21%.

Table 13:

Even at the time of interview 56% of Harambee school girls were using one or the other method of contraception. In the other category only 3-14% use any method.

Having noted the high sexual activity amongst adolescents, the use of contraceptives was then checked. It was worthy of note that between 43%-57% of secondary school girls had used one method or another of contraceptives. Otherwise the rest of our category had poor contraceptive practice despite deligent sexual activity. Maggwa (29) found that 96.4% of boys and 89.7% of girls had never used contraceptive methods.

Harambee girls on contraceptives were 56% of the total. The rest of the categories ranged between 3%-14%. This is comparable with Lema's 5.5% (30).

Students attitude to sex and family planning.

45-49% in our series maintain that pregnancy is a way of showing that a girl is mature. Maggwa (29) found about the same response, 45-52.9%. This is an attitude which, on face value, if left could destroy the students.

Reason for playing sex was asked. 30% in this series do it to keep their friends, Maggwa found this response in 37%-52%. 20% do it because their friends want so they yield. On further question whether sexual intercourse is good when one is still in school more than 50% in all categories responded 'NO'. In Lema's series he found that 77.8% condemn sex as bad and can cause pregnancy. 61.6% in our series say sex should be left for married people only.

70%-83% of primary school students will marry after college, 57%-65% of Harambee Students will marry after college, and this percentage dropped to 48%-52% in Government secondary students.

41%-52% of the students say contraception is good. Others give varied answers with 25% saying it is dangerous to the mother. Maggwa found this response of dangerous effect in 39%-42%.

53%-64% of our students will have 4 children or more when they marry.

DISCUSSION

This study was done in South Nyanza District and involved 1840 students. Results and tables of results are as already shown. Breakdown is as shown in Figure 1.

Primary school students were more than any of the other two categories. This was intended as it was considered that these students mostly come from the District and assessment of their knowledge, attitude and practice of the subjects under study would be a better reflection of the area than the other study groups. Further, Harambee schools and Government schools were put for comparison. Results of boys are compared with that of girls whenever obvious differences were encountered.

Over 90% of the total students interviewed were in the age group 16-20 years. This was significant considering that more than 1/3 of the students were from primary schools. It also shows that the age gap amongst almost all students was very narrow. 3% of primary school boys and 2% of primary school girls were below 16 years. In Maggwa (1987) study done in a rural population in the same country, age group 16-20 years accounted for 68.3%. His series had slightly younger students than the present series. This finding implies that we were dealing with very mature people who have the biological capacity of procreation (9,10).

Some parts of the District where this study was done are known to have their girls marry early. Some of these marriages don't hold and the girls often return to schools. These girls are essentially married, with this in mind, question of marital status was raised. 86%-100% of the students stated that they were not married; but only 40% of primary school boys responded in this manner. This percentage was rather too low; some could have actually married but some perhaps did not understand the question clearly.

Kenya Fertility Survey in 1978 found that 28% of girls aged between 15-19 years were already married (23). Jagdeo (1984) working in the Carribean found that 53.3% of the teenagers were married. This question was therefore relevant and although the percentage is small generally, it is worth recording.

Religion is known to have influence on sexuality. There are presently schools of thought that this influence does not actually exist, (29,30). In this study 78% of the students were protestants with 82% of these being Seventh Day Adventists (SDA). The remaining students were so spread into small different religious groups that it was not practicable to really come out with a conclusion.

85%-96% of the parents of students interviewed stay together. About 6.1% of the students had their parents either divorced or separated. In Maggwa's series over 90% of the parents stay together (29). In Lema's series done in an urban set up 77.7% of the students had their parents staying together (30). Difference with Lema's series perhaps arises from the known problems of urban centres where incidence of single parents are many. This series compares well with Maggwa's above. Parental guidance and stability of homes have been shown to contribute to steady performance in school and less tendency to deviant attitudes. Hoffmeyer found out that almost 100% of girls between 18-19 years going for abortions were not satisfied with their parents emotionally (16). Lema (1987) showed that sexual activities were minimum, 16.8%, amongst girls staying with their parents. This percentage went up to 39.8% if staying with brother, 45.9% if staying with sister and to 70% if staying with relatives (30). Stable homes therefore breeds stable children with stable behaviour. Our number for those whose parents are separated was small and amongst the affected students no untoward observations were made.

Knowledge of monthly period and implication was studied. 81%-96% of the students knew that it marks a point when a girl becomes capable of being pregnant. Maggwa found this response to be 73.3% for the girls and 68.1% for the girls (29). This type of knowledge is mainly acquired in schools, but can also be imparted by friends and agemates.

This knowledge was further tested to find out whether the student knows more about the monthly period. A question of safe period in monthly cycles was asked. The majority gave wrong answers. The largest percentage of wrong answers came from primary school girls, Harambee boys and Government boys who scored 75%, 76% and 79% wrong response respectively. In Maggwa's series 31% and 35% of boys and girls respectively had correct answer. This is, converted to wrong response is 69% and 65% respectively. (29) These findings are comparable though Maggwa's series looks better.

As to the fertility of boys, Government girls, Harambee girls and Government boys had reasonable responses with only 29%, 30% and 36% respectively of them giving wrong answer. The rest ranged between 45%-56% wrong answers. They did not know that boys of 13-15 years can make a girl pregnant. Maggwa's series had a better result with 38.2% of girls and 19.6% of boys getting the wrong answer. (29)

These findings send bad signal to the question of fertility control. These are essentially people capable of giving birth, on the one hand they know that when a woman gets her monthly periods, she can be pregnant and give birth to a baby, on the other hand they don't know that there is a specific period within the monthly cycle that is not safe; they also don't know that at 13-15 years most boys are already fertile and can impregnate a girl (29). This information puts the students in a very precarious situation.

61%-63% of the girls had their menarche at between 13-15 years, with 3%-7% who had it before 13 years. The earliest time recorded was at 11 years. A total of 76%-88% had had monthly period by 20 years. This figure compared to Lema's 96.2% could indicate some stimuli to menstruation in Lema's series (30). It is known that the student in urban set up is exposed to some of the things that a student in rural areas are not. These include television, magazine and closer relation with peers. These tend to stimulate earlier onset of puberty.

By the end of 15 years 59% of the boys had had sexual intercourse. Boys were observed to have sexual relation earlier than girls, and primary students seem to have an edge in this respect over their secondary counterparts. This edge could be a reflection of the area of the study as was mentioned earlier. Maggwa (29) found that 64% of boys and 26.2% of girls in his series had had sexual intercourse. The difference between boys and girls was more marked in Maggwa's study findings. While the difference is obvious between the boys and girls, it is not easy to know why. We can postulate that boys have intercourse with older girls, or that boys share some few girls that have been known to yield easily. Lema (30) found that 77.7% of girls in his series between 14-17 years had had sexual intercourse.

These observations are alarming. Age of menarche has been known to lower, sexuality of contemporary societies is rampant, breakdown of cultural bonds which were once responsible for general guidance, and peer group pressure are all responsible for early sexuality amongst teenagers. It is alarming that they involve in these acts without knowing the implications and consequences. This trend has been observed all over the world. Fundikira found the youngest age of menarche at 8 years (21). In Indonesia 41% of girls by 17 years have delivered (13), in U.S.A. by 1977 19.3% of teenagers delivered, in Nairobi, incidence of teenage pregnancy was 18.6% in 1984 (9); Young found that 1:8 girls and 1:3 boys had sexual intercourse by 16 years and were exposed to unplanned pregnancy (22), Njoroge showed that 22.1% of undergraduate students had had sexual intercourse by 19 years. (20). It is obvious that these students are sexually active and also sexually mature, they are capable of parenthood and also vulnerable to unplanned pregnancy.

Defination of family planning was good, except for Harambee boys who scored very low percentage, the correct defination was got by 67-87% of the students. For the secondary school students, this correct answer was recorded in between 80%-87%. Lema found correct response in 82.6% (30). There, therefore, does not seem to be any difference in urban set up and rural set up for secondary school students.

Our study recorded small percentage for those who know definite contraceptive methods. This scanty knowledge also seem to have been an experience in Maggwa's and Lemma's series (29,30).

Practice of contraception was looked into next. 43% of Harambee girls had used a method of contraception or another; 57% of Government girls also had used contraception. For the rest 79%-97% had not used any method of contraception.

44% of Harambee girls were using contraceptive methods at the time. For the others, usage ranged between 3%-21%. Maggwa's findings were the same 96.4% of boys, and 95.7% of girls had never used any method of contraception (29).

These students are maturing early, they do not know when they can be pregnant, they have sporadic unprotected sexual relation, they do not know methods of contraception and they do not practice contraception. This is a pathetic situation. It can be seen that these youths are exposed to unplanned pregnancies, unprotected sexuality is rampant and specific contraceptive knowledge and practice is almost zero. Lema in urban centre found contraceptives use as low as ours, 5.5% (30). The problem is therefore as serious in rural as it is in urban areas. It is worth noting that most of the students who had ever used contraception used unreliable methods, and although a number gave examples of the contraceptives they use, most gave safe period method and went ahead to point at wrong timing in menstrual calendar. The finding is very pathetic. Source of knowledge about contraceptive perhaps was contributory. In this study 21.1% got information from school, 15% from magazines, and 7.2% from friends. Lema's series 33.3% got information from magazines, 21.4% from school and 7.2 from friends (30). As can be noted, information from school will mainly be reproductive biology revolving around safe periods at best. Other sources of information are likely to be unreliable. Thus the student indulges in sexual relations with false sense of security. They get caught unawares and they do not know what next to do.

The question of abortion then came in; 75%-90% knew the real meaning of abortion; primary school boys and harambee school boys however scored lower percentage 31% and 51% respectively. This high level of knowledge indicates that this is an act that is discussed freely; it is discussed so freely that its knowledge far exceeds that of contraceptive methods. Some students had even responded that it is a method of contraception ! This expression has its rightful place as Aggarwal et al (17) have shown that the majority of patients being admitted to Gynaecology ward as abortions at Kenyatta National Hospital 62.3% were induced or likely to be induced. Amongst these the majority were adolescent girls who had little or no knowledge of contraceptions. Even at University level, Njoroge (20) found that 40.9% of the students wanted abortion to be legalised. Chen et al (31) has also shown that females seeking abortion in his series were becoming progressively younger; 8-9% were teenagers, 82% of which were unmarried with 35% of them only having primary education. He also showed that girls with better education were twice as much in the abortion act than their counterparts with less education. It can be noted that scanty knowledge of prevention of pregnancy do send the youth into having illegal abortion with all its attendant problems. Aggarwal et al (17) showed that the dangers of abortion were 10-250 times more than that of contraception depending on age and duration of use. Dangers of teenage pregnancy and that of illegal abortions have been adequately reviewed by many workers (9,10,17,24).

45% - 49% of the students in this series maintain that pregnancy is a way of a girl proving that she is a grown up. Maggwa found this response in 45%-52.9% (29). This, needless to say, is a misguided attitude and a lot of input in rehabilitating this knowledge is necessary. The two series are comparable.

Reasons for playing sex was sought, 30% in this series do it to keep their boyfriends or girlfriends, 37%-52% in this response was found in Maggwa's series; 20% do it because it is nice, 15% do it because their friends want so they yield. On the question whether sexual intercourse is good when one is still in school more than 61%-75% of the students in all categories say "NO". Lema found 77.8% condemning sex as bad because it can cause pregnancy (30). 61.6% in the present series say that sex should be left for married people only.

The fact stands that these students play sex while still in school, they have no good reason for the act, they have an inner conflict as to whether it is good to have premarital sex or not, they have scanty knowledge about their reproductive body function and these acts are generally unprotected. These are the students who know what abortion is and a good number say that it is a method of family planning. The author find this a sticky situation which the students might not be able to reconcile. An intervention looks inevitable.

70%-83% of the primary school students will marry after college, 57-65% of Harambee students will marry after college, and only 48%-52% in Government will marry after college. It is difficult here to really appreciate the results but what comes out is that primary student aim higher at the material time than secondary school students. It might appear that this ambition dwindles as years in school go by. So that at secondary school those aiming at college education become fewer.

53%-64% of the students will want four or more children when they marry, 7%-18% will want two or less children when they marry. This observation is important given the sort of sexually active young people we are dealing with, should they fall out of school due to pregnancy and get married we expect a much larger family size due to uncontrolled fertility. This obviously does not argue well to the health of the nation.

41%-52% of the students say that contraception is good. Others gave varied answers with 25% stating that it is dangerous to the mothers' health. Maggwa (29) found this response of dangerous in 39%-42% in his series.

This attitude is not only dangerous to the students and the population but could also be a reflection of whatever knowledge they get from some of the sources mentioned earlier. A better approach is therefore needed for these young people.

CONCLUSION AND RECOMMENDATIONS

This study has shown that sexual activities amongst the students start early even before they reach fertility ages. Boys seem to start at an earlier age than girls. They indulge in sexual activities sporadically without knowing the likely consequences. These sexual activities are not protected because the students do not know how to get these protections and which protections are available. The ones that claim to be practicing any contraception use unreliable methods.

Knowledge of abortion is almost perfect but what sends chills down the spine is that some students know it is a form of family planning. Such erroneous knowledge is dangerous to the students who will not even know where or when to go for professional termination of pregnancy. The implications are obvious.

Attitude towards sexual activities was reasonable but the very act itself makes attaching importance to this attitude not valuable. The students could really have the urge to restrain from sex while still in school, but peer group pressure and the urge to explore makes these feelings secondary.

It is worth noting that sexual activities in primary schools were comparable to or even higher at some instances, than their secondary counterparts. It might be concluded that this was due to region of the study and that early sexuality is not uncommon. The finding really is a challenge because it poses a question of where, if at all, should intervention start, and by whom?

Contraception attitude was poor and if considered together with practice the situation is close to hopeless. Sexuality is peak, contraceptive knowledge and practice is close to zero. Worse still, knowledge of reproductive body function was very poor.

The question of whether these teenagers are exposed to sex, therefore, is foregone conclusion and with the sort of zeal and ignorance with which they have their sexual relation vulnerability to unplanned pregnancy is high.

The proper meaning of contraception need to be inculcated into the youth for already we know that they practice it. Secondly there is a need for intergrated lessons touching on reproductive body functions or sex education together with contraception. It has been noted that sexuality begins early so that these people are exposed to the risk of unplanned pregnancy at a very tender age. From this study -- the question need to bog our minds any more is "where shall we start this sex education?". The need has been shown clearly that for sex education to have any impact on the youth's fertility then education must be imparted at lower primary school level, and this must go hand in hand with provision of family planning methods.

As parents there is a need to reappraise our thinking and accept that these are capable of procreation and that to this effect they need parental guidance and careful counselling.

Government policy bottlenecks need to be re-evaluated in the face of current trend of adolescent fertility. Freehand should be given to health experts to work in conjunction with school teachers to come with appropriate curriculum on sex education and contraception.

Contraceptions are for the risk of unplanned pregnancy; a adolescents are at special risk of unplanned pregnancy. This study therefore recommends supply of adequate knowledge of contraceptives and sustainable supply of contraceptives.

Because teachers and parents are very important in the life of youth especially during this tender age, it is recommended that they should be enlightened about contraception. An abundant amount of ignorance was perceived amongst many school teachers about contraception. It is recommended in this study that they should be a target group.

REFERENCES:

1. Family Planning: Its impact on the health of the mother and children
- Centre for population and Family Health, College of Physicians and Surgeons, Colombia University, 1981.
2. Statistical Abstract, Kenya Government, 1982.
3. Sai, T.F.
- Studies in Family Planning 6:1,60 Jan/Feb 1985.
4. Mati, J.K.G.
- Editorial, Jour. Obs.Gyn. East and Central Africa 1:3, 1982.
5. Sanghvi, H.C.G.
- Voluntary Surgical Sterilization
- Journ. Obs.Gyn. East and Central Africa 3:3,101, 1984
6. Were, M.
- Youth and Family Planning
- Some thought on Population 3:26.
7. Mulei, C.
- Is there a need for Population Control in Africa
- Some thought on population 2:11
8. Complications of Abortion in Developing Countries
- Series F 7: 105-155.
9. Sanghvi, H.C.G.
- Outcome of Teenage pregnancy in teenage mothers in Nairobi
- Journ. Obs.Gyn. East and Central Africa 2:134,1983.
10. Ngoka, W.M., Mati, J.K.G.
- Obstetric aspect of adolescent pregnancy
- E.A.M.J. 57(2): 125, 1980
11. Sanghvi, H.C.G.
- Outcome of Teenage Pregnancy in teenage mothers in Nairobi
- Journ. Obs.Gyn. East and Central Africa 2:134, 1983.
12. Muraya, C.N.
- Teenage Pregnancy in Rural Kenya
- Journal of Obs.Gyn. East and Central Africa 4(½):73, 1985.
13. Jagdeo, T.P.
- Teenage Pregnancy in Carribean
- I.P.P.F. Western Hemisphere Region Pg 2, 1984.

14. Diejomaoh, F.M.E.
 - The age of menarche in a group of secondary school girls in Benin City, Nigeria.
 - Journ. Obs.Gyn. East and Central Africa 3:1,38-39, 1984.
15. Sanger, M.
 - What every boy and girl should know, pg 7.
16. Hoffmeyer, H.
 - Role of Family Planning and school in sex education of a child
 - I.P.P.F., Warsaw, Poland 71: 152-154.
17. Aggarwal, V.P., Mati, J.K.G.
 - Epidemiology of induced abortion in Nairobi, Kenya
 - Jrn. Obs.Gyn. East Central Africa 1(2): 56, 1982.
18. Atiqur Rahman
 - Maternal mortality in Rural Bangladesh, Jamalpur District
 - Studies in Family Planning 17(1):9, 1986.
19. Katner, J.F., Zelnik M.
 - Sexual experience in young unmarried women in United States
 - Studies in Family Planning 4(4): 9, 1982
20. Njoroge, C.N.
 - K A.P. of contraceptives on female University Undergraduates
 - Long Commentary Gynaecology
 - M.Med Thesis University of Nairobi, 1984.
21. Fundikira S.R.
 - Sexuality, Fertility and Contraception knowledge and Attitude among secondary school girls in Dar es salaam
 - DPH Thesis 1985, Dar es salaam University
22. Young, C., Cowper, A.
 - Family Planning 10: 129, 1980.
23. Kenya Fertility Survey
 - First report 1:70-82, 1977-1978
24. Tietze, C.
 - Induced abortion, a world review
 - Population Council of 4th February, 1981.
25. Nicholas, D., Ladipo, O.A., Paxman, J.M., Otolorin, E.O.
 - Sexual behaviour, Contraceptive practice, and reproductive Health among Nigerian adolescents.
 - studies in Family Planning 17:100, 1986.

26. Mati, J.K.G.
 - Nairobi Birth Survey
 - Journ. Obs.Gyn. East and Central Africa, 2(4): 134 1982

27. Sadja Goldsmith
 - K.A.P. on Teenage Contraceptives
 - Advances in Planned parenthood
 - Volume III proceedings, 9th annual meeting of American Planned parenthood Physicians, Aprilm 1971.

28. Oyeka, I.C.
 - Family Planning among Nigerian Post Secondary Female Students
 - Studies in Family Planning 17(3): 146-152.

29. Magowa, A.B.N.
 - Knowledge, Attitude and Practice Survey on Sex, contraception and teenage pregnancy among teenagers in Rural set up in Kenya.
 - M.Med Thesis University of Nairobi, 1987.

30. Lema, V.M.
 - Knowledge, Attitude and use of Contraceptives with relation to sexual knowledge and behaviour amongst adolescent secondary school girls in a cosmopolitan city in Africa.
 - M.Med Thesis, 1987, University of Nairobi.

31. Chen, A.J.
 - Legalised Abortion
 - Studies in Family Planning 16(3): 170-178, 1985