MATERNAL NUTRITION, AGE, PARITY AND THEIR RELATIONSHIP TO GROWTH AND DEVELOPMENT OF THE INFANT - A LONGITUDINAL STUDY IN MACHAKOS DISTRICT

by
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A B S T R A C T

A longitudinal study of the relationship between food intake, nutritional status during pregnancy, and outcome of pregnancy was carried out among Akamba women in Machakos District, Kenya. The main objective of the study was to make a comparison between low parity mothers (group A) and high parity mothers (group B) in respect to:

(a) Nutritional status, disease pattern of the mother during pregnancy and lactation and

(b) Birth weight, growth and development of their children during the first year of life.

The data were collected by the investigator over a 22 months period. Expectant mothers were seen twice during pregnancy. The examination included selected anthropometric measurements and a clinical examination. In addition the food intake during pregnancy was recorded (semi-quantitative 24 hour recall method) and blood, urine and stool sample were collected for analysis. Lactating mothers were measured and examined within two weeks after delivery and every three months up to one year. The children were examined and measured after birth and every six weeks until the end of the first year.

It was found that:

-there was an initial weight difference between the two groups, the high parity women weigh more than the low parity women;

-the high parity women gained more weight during pregnancy than the low parity mothers;

-high parity mothers had more clinical signs suggestive of malnutrition (anaemia and lack of vitamins) than the low parity mothers;

-both groups had food intakes below recommended daily allowances;

-there was no correlation between individual food intake and weight gain for either group during pregnancy (this may be partly due to the method employed);

-higher incidence of stillbirth occured in the high parity group than in the low parity group;

-there was no difference in average birth weight between the A and B group babies; the percentage of low birth weight was 3.2 in group A and 5.9 in group B;

-food intake and weight gain during pregnancy were not correlated with birth weight in either group;

-more babies from the younger or low parity group were reported with clinical disorders, notably diarrhoea;

-the involution processes of the women after delivery in both groups were comparable;

-as far as growth is concerned, the children of both groups behaved in a comparable way;

-weight change during lactation was similar in both groups. However, group B women increased in weight at 42 weeks after delivery. Other anthropometric parameters increased significantly at six weeks after delivery in both groups.

By and large Akamba women start pregnancy in good nutritional status. However, as pregnancy advanced, mothers appeared to use their stored energy-so they lost weight. The mean birth weight of the Akamba babies was within the "normal" range according to the international standard: The mean birthweight of the A group children was 91% of the standard and the B group children was 94% of the standard. The difference is not significant. This seem remarkably good in view of the :

i. low food intake;

ii. low weight gain during pregnancy;

iii. fact that maternal energy store (as measured by Skinfolds) decreased in the course of pregnancy and

iv. unfavourable environmental condition the women lived in.