

## Abstract

### PITUITARY SURGERY AT THE KENYATTA NATIONAL HOSPITAL

**Kitunguu PK, Kiboi JG Musau CK, Mwang'ombe NJM**

*Division of Neurosurgery, University of Nairobi, Kenya*

**Introduction:** Surgical extirpation of pituitary lesions and can be performed by craniotomy or trans-sphenoidal approaches. This could be for pituitary ablation, excision of pituitary adenomas, craniopharyngiomas, suprasellar meningiomas and other types of tumors of the sellar region. Despite this being a common neurosurgical procedure there is a paucity of data on the local Kenyan experience and outcomes following pituitary surgery.

**Study Design and Site:** A retrospective study at the Kenyatta National Teaching and Referral Hospital, Nairobi.

**Objectives:** To evaluate the clinical presentation, management and outcome of patients undergoing surgery for pituitary lesions at the Kenyatta National Hospital.

**Patients and Methods:** Following ethical approval, patients' records were retrieved and assessed for clinical and radiologic features of pituitary lesions, surgical treatment and post operative outcome. All the data was coded and analysed using Statistical Package for Social Sciences (SPSS) version 16.0. Frequencies and means were computed for description of the various variables and the association between categorical variables calculated using Chi-square test while comparison of mean values was performed using the one-way analysis of variance test (ANOVA).

**Results:** A total of 65 patients were included with 39 (60%) female and 26 (40%) male patients. The mean age was 36.88 years (+ 14.689) and majority of the patients (55%) were aged between 26 and 45 years. The most common presentation were visual disturbances reported by 57 (87.7%) of the patients having reduction in visual acuity, while 37 (56.9%) had bitemporal hemianopia. Amenorrhea and primary infertility were reported by 11 (16.9%) patients while 14 (21.5%) and 8 (12.3%) had galactorrhea and gynecomastia respectively. Ten patients (15.4%) had acromegalic features of hypergnathia and acral enlargement of hands and feet. Sixty two (95.4%) patients were operated during the study period and of these 28 (45.2%) by the transphenoidal approach as opposed to 34 (54.85%) by craniotomy.

The pterional trans-sylvian approach was the most common of the transcranial hypophysectomies accounting for 17 (50%) patients, while 15 patients (44.1%) were operated by the subfrontal approach and two patients were operated via midline inter-hemispheric approach. 2nd Bi-annual International Scientific Conference 2013, Nairobi Kenya 29

Majority (96.4%) of trans-sphenoidal hypophysectomies were by sub-labial incision. Fifty (76.9%) of the patients had good functional outcome while 11 (16.9%) and 4 (6.2%) suffered moderate and severe disability respectively. Patients' age ( $p=0.0029$ ), duration of symptoms prior to surgery ( $p=0.0018$ ) and surgical management versus conservative ( $p=0.001$ ) significantly affected patient outcome. There was no statistically significant difference in outcome between patients of different sex ( $p=0.058$ ) or the type of operation performed ( $p=0.191$ ).

**Conclusion:** Transsphenoidal and trans-cranial approaches are effective and safe treatment strategies for pituitary lesions with low morbidity, mortality and recurrence rates. With the paradigm shift towards more trans-sphenoidal and particularly endonasal approaches, additional prospective studies are required to assess clinical and endocrinological outcomes.

**Key Words:** Pituitary tumors, Trans-sphenoidal, Hypophysectomy, Craniotomy