A STUDY OF TUMOURS OF THE SELLAR REGION

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ABSTRACT

BACKGROUND

The tumours of the sellar region that are encountered according to literature are Craniopharyngioma [WHO grade I], Granular cell tumour of the neurohypophysis [WHO grade I], Pituicytoma [WHO grade I], Spindle cells oncocytoma of the adenohypophysis [WHO grade I]. The aim of the study is to study the tumours that are encountered in the Sellar Region. The incidence of the sellar region is very less in this region of Karnataka.

METHOD

The sample size included 100 cases of intra-cranial neoplasms that turned in the Department of Medicine in KVJ Medical College, Sullia and different local private hospitals of Sullia and Mangalore.

RESULTS

Only one case of craniopharyngioma was encountered in this study. It accounts for 1(1%) of all intracranial tumours studied in this series. Tumour was located in the suprasellar region. This case was reported in a 52-year-old female patient. Presenting complaint was bilateral visual loss and loss of memory.

Microscopically-Stratified squamous epithelium was seen lining a cyst and solid ameloblastomatous tissue, calcification ossification and inflammatory reaction were common features.

CONCLUSION

The incidence of the sellar region is very less in this region of Karnataka.

KEYWORDS

Tumors, Sellar, Craniopharyngioma, Central nervous system.

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INTRODUCTION: The tumours of the sellar region that are encountered according to literature are Craniopharyngioma [WHO grade I].

A benign, partly cystic epithelial tumour of the sellar region presumably derived from Rathke's pouch epithelium.

Craniopharyngiomas account for 1.2-4.6% of all intracranial tumours, corresponding to 0.5-2.5 new cases per million population per year[1] being more frequent in Nigerian [18% of all CNS tumours][2] and Japanese children with an annual incidence of 5.25 cases per million in the paediatric population.[3] According to Percy K.A. et al Craniopharyngioma accounts for 4(4.2%) among 96 cases of primary neoplasms of CNS.[4] According to Wong T. T. et al, 986 primary paediatric brain tumours 82(8.32%) cases were Craniopharyngiomas.[5,6] Pal AK and Chopra SK diagnosed 5(11.9%) among 142 ICSOL.[7] They are the most common non-neuroepithelial intracerebral neoplasm in children, accounting for 5-10% of intracranial tumours in this age group.[8] Russel and Penny reported 27% of their craniopharyngiomas above 40 years, but all the patients were under 70 years.[9] In a study conducted by Rodriguez F. J. et al among 3 Craniopharyngiomas 2 were men and 1 men.[6] Male to female ratio was 1.5 in a study conducted by Wong T. T. et al.[6] Among the 467 intracranial tumours in children 42(9%) cases occurred at the median age of 9 years.[10] Craniopharyngiomas mostly affect children between the ages of 4 and 16. There is a peak at the age of 10 years of age.[11] A bimodal age distribution of adamantinomatous craniopharyngioma is observed[1] with peaks in children aged 5-15 years and adults aged 45-60 years. Rare neonatal and intrauterine cases have been reported.[12] Papillary craniopharyngiomas occur virtually exclusively in adults, at a mean age of 40-55 years. Craniopharyngiomas show no obvious sex predilection. One of the study showed mean age of presentation as 18.3 years.[7]

The most common site is suprasellar with a minor intrasellar component. Unusual locations such as sphenoid sinus have been reported.[13] Although most cases of craniopharyngiomas remain localized to suprasellar region, they can extend in all directions, anteriorly to frontal fossa (2-5%), posteriorly to posterior fossa (1-4%) and laterally to middle fossa (20%).[9]

Granular cell tumour of the neurohypophysis [WHO grade I].

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An intrasellar and/or suprasellar mass arising from the neurohypophysis or infundibulum, composed of nests of large cells with granular eosinophilic cytoplasm due to abundant intracytoplasmic lysosomes.

Pituitary tumours constitute about 10 to 15% of the intracranial neoplasms. Small incidental adenomas may occur in upto 27% of pituitary glands examined at autopsy.[14,15,16] and upto one fifth of the population has a pituitary abnormality on MRI.[17,18]

Uncommon in paediatric population, representing about 2% of pituitary adenomas.[19,20,21,22]

Pituicytoma [WHO grade I]: A rare, circumscribed and generally solid, low grade spindle cell glial neoplasm of adults that originates in the neurohypophysis or infundibulum.

Spindle cells oncocytoma of the adenohypophysis [WHO grade I]: A spindle to epithelioid, oncocytic, non-endocrine neoplasm of the adenohypophysis that manifests in adults and follow a benign clinical course.

AIMS AND OBJECTIVES: To study the tumours that is encountered in the Sellar Region.

MATERIALS AND METHODS: The sample size included 100 cases of intra-cranial neoplasms that turned in the Department of Medicine in KVJ Medical College, Sulliya and different local private hospitals of Sulliya and Mangalore.

The cases were studied in an inter Department co-ordination. Most of the cases were diagnosed by clinical approach and confirmed by the Department of Radiology and The Department of Pathology.

RESULTS: Only one case of craniopharyngioma was encountered in this study. It accounts for 1(1%) of all intracranial tumours studied in this series. Tumour was located in the suprasellar region. This case was reported in a 52-year-old female patient. Presenting complaint was bilateral visual loss and loss of memory.

Microscopically-Stratified squamous epithelium was seen lining a cyst and solid ameloblastomatous tissue, calcification ossification and inflammatory reaction were common features.

DISCUSSION: The present study showed 1 case (1%) incidence of craniopharyngioma. This is much less compared to study by Banerjee et al[23] who reported an incidence of 5.2%. A high incidence of mal developmental tumours has been reported in the Katsura study (9.44%) in the Japanese population.

The age of craniopharyngioma in the present study is 54 years which was higher than the average age incidence in other studies. This was located in the cerebrum.

Craniopharyngioma	% of intracranial	Avg. age in years
Verma et al[24]	3.18%	20.2
Banergee et al[23]	5.2%	18.1
Pal and chopra et al[7]	4.2%	18.3
Present study	2.6%	54

Table 1: Comparison of age incidence of tumours of the sellar region

CONCLUSION: The incidence of the sellar region is very less in this region of Karnataka.

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