ECTOPIC SINONASAL MENINGIOMA- A CASE REPORT

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ABSTRACT

Introduction: Meningiomas occurring outside the cerebrospinal axis can be primary at an extracranial site (accounting for 1-2% of all meningiomas), includes head and neck region, mediastinum, skin and soft tissues or secondary extending from an intracranial lesion.

Material and methods: A 59 year old female presented with history of headache, left nasal epistaxis and off and bilateral nasal obstruction. On examination a polypoid growth was identified. Sections were prepared and stained with hematoxylin and eosin.

Results: On Histomorphological and Immunohistochemical examination the tumor was identified as meningioma.

Discussion: Meningioma are predominantly benign tumors of adults, usually attached to the dura that arise from the meningothelial cells of the arachnoid. These constituting about 13-26% of all primary intracranial tumors. However, primary extracranial meningiomas are very rare, accounting for 1-2% of all meningiomas. Extracranial as well as intracranial meningiomas are more commonly seen in females than males.

Conclusion: Nasal and paranasal sinuses are a rare site for the occurrence of meningioma and are therefore a difficult rare entity to be diagnosed. Prognosis of ectopic meningioma is good if excision is complete.

INTRODUCTION

A very common complaint in otolaryngology is the nasal obstruction. It has various causes such as rhinitis, nasal septum deviation, and nasal polyps; rarely are the nasal and paranasal tumors. Meningioma is a slow growing, generally benign, and common neoplasms account for 13-26% of all intracranial tumors (Louis et al., 2000). However, primary extracranial meningiomas are very rare, accounting for 1-2% of all meningiomas (Fernandez Liesa et al., 1991). The most common sites of extracranial meningiomas are the skull, scalp, nose, orbit, paranasal sinuses, middle ear, neck and skin (Kjeldsberg, 1972). Extracranial meningiomas of the sinonasal tract are rare tumors that are frequently misdiagnosed, resulting in inappropriate clinical management. The clinical diagnosis of these tumors is difficult, based on only history and physical examination. Certain complementary investigation such as computed Tomography (CT scan) and Magnetic Resonance (MRI scan) are required to exclude the presence of an intracranial mass or any underlying bony erosion of the skull base. Here we present a case of primary extracranial meningioma of the nasal cavity in a middle aged female confirmed on histopathological examination.

Case Report

A 52 year old female presented in our hospital, with history of headache and left nasal epistaxis on and off since past 10 years; presently complaining of bilateral nasal obstruction since 3 month. On examination a polypoid growth was identified in the left nasal cavity, which was resected. Sections were prepared and stained with hematoxylin and eosin. Results: On Histomorphological and Immunohistochemical examination the tumor was identified as meningioma.

Discussion: Meningioma are predominantly benign tumors of adults, usually attached to the dura that arise from the meningothelial cells of the arachnoid. These constituting about 13-26% of all primary intracranial tumors. However, primary extracranial meningiomas are very rare, accounting for 1-2% of all meningiomas. Extracranial as well as intracranial meningiomas are more commonly seen in females than males.

Conclusion: Nasal and paranasal sinuses are a rare site for the occurrence of meningioma and are therefore a difficult rare entity to be diagnosed. Prognosis of ectopic meningioma is good if excision is complete.

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Patient underwent nasal mass resection. Biopsy from nasal mass was submitted. Microsection examined on routine hematoxylin and eosin stained sections show cells arranged in synctitial pattern along with presence of Psammoma bodies. Mitosis and necrosis were not seen (Figure 1a) Tumor cells had an Immunohistochemical positivity with progesterone receptor (Figure 1b).

**DISCUSSION**

Meningioma are predominantly benign tumors of adults, usually attached to the dura, that arise from the meningothelial cells of the archnoid. These constituting about 13-26% of all primary intracranial tumors (Louis et al., 2000). However, primary extracranial meningiomas are very rare, accounting for 1-2% of all meningiomas (Fernandez Liesa et al., 1991).
According to the literature, extracranial as well as intracranial meningiomas are more commonly seen in females than males (Weinberger et al., 1985). Extracranial meningiomas include both primary and secondary types, based on the absence or presence of intracranial attachments respectively. Primary extracranial meningiomas (PEMs, ectopic meningiomas) arise ectopically within a given tissue with no evidence of direct attachment to the brain tissue. Of the PEMs, only 11.5% are encountered in the nasal cavity and paranasal sinuses (Mattox et al., 2010). The origin of extra cranial meningiomas is still unclear, however there are several hypotheses that these tumors arise ectopically from embryonal arachnoid rests that were pinched off and left behind or misplaced in intraosseous locations during the embryonic developmental stage or arise from pleuripotential mesenchymal cells (Rushing et al., 2009). This could explain the diversity of various pathological spectrum found in meningioma cases. Shimada et al presented a case of multiple extracranial meningiomas, occurring in orbit, both ethmoidal sinuses and the frontal sinus, but there was no intracranial involvement seen, confirmed by CT scan (Shimada et al., 1985).

Daneshi et al observed that primary meningioma can be differentiated from a secondary one if on imaging or surgical inspection the bony wall of the sinus is intact and no intracranial meningioma has been found, or a bulging of the sinus wall toward the cranium rather than in the opposite direction is identified (Daneshi et al., 2003). One study reported total 146 cases of extracranial head and neck meningiomas (Shimada et al., 1985), among which majority were of skin and scalp (n=59), middle ear (n=26), nasal cavity (n=17), temporal bone (n=2), or the parotid gland (n=1). Other similar studies included also found patients with meningioma of the sinonasal tract (n=30), ear and temporal bone (Thompson and Gyure, 2000). The meningioma described in the present study was of nasal cavity which are extremely rare and diagnosis may be difficult. It needs to be distinguished from various inflammatory or granulomatous process and other benign and malignant neoplasms that can be of epithelial origin (carcinoma), neurogenic (olfactory neuroblastoma and melanoma), bone, cartilaginous, odontogenic tissue (ameloblastoma), vascular (angiofibroma), hematopoietic (lymphoma), and mesenchymal origin. These tumors are frequently misclassified with unpredictable clinical behaviour resulting in inappropiate clinical management. Therefore extracranial sinonasal tract meningiomas are needed to be considered in the differential diagnosis of sinonasal tumors. Complementary investigation such as MRI and CT scan are imperative in diagnosis, to know extent of the disease and to rule out intracranial extension of the mass.

Conclusion

Nasal and paranasal sinuses are a rare site for the occurrence of meningioma and are therefore a difficult rare entity to be diagnosed. Prognosis of ectopic meningioma is good if excision is complete.

REFERENCES


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