



ISSN: 0976-3376

Available Online at <http://www.journalajst.com>

ASIAN JOURNAL OF  
SCIENCE AND TECHNOLOGY

Asian Journal of Science and Technology  
Vol. 07, Issue, 12, pp.4017-4019, December, 2016

## RESEARCH ARTICLE

### ECTOPIC SINONASAL MENINGIOMA- A CASE REPORT

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#### ARTICLE INFO

##### Article History:

Received 16<sup>th</sup> September, 2016  
Received in revised form  
21<sup>st</sup> October, 2016  
Accepted 29<sup>th</sup> November, 2016  
Published online 30<sup>th</sup> December, 2016

##### Key words:

Extracranial,  
Meningioma,  
Primary,  
Sinonasal Tract.

#### 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 on and off and bilateral nasal obstruction. On examination a polypoidal 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 meningotheial 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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#### INTRODUCTION

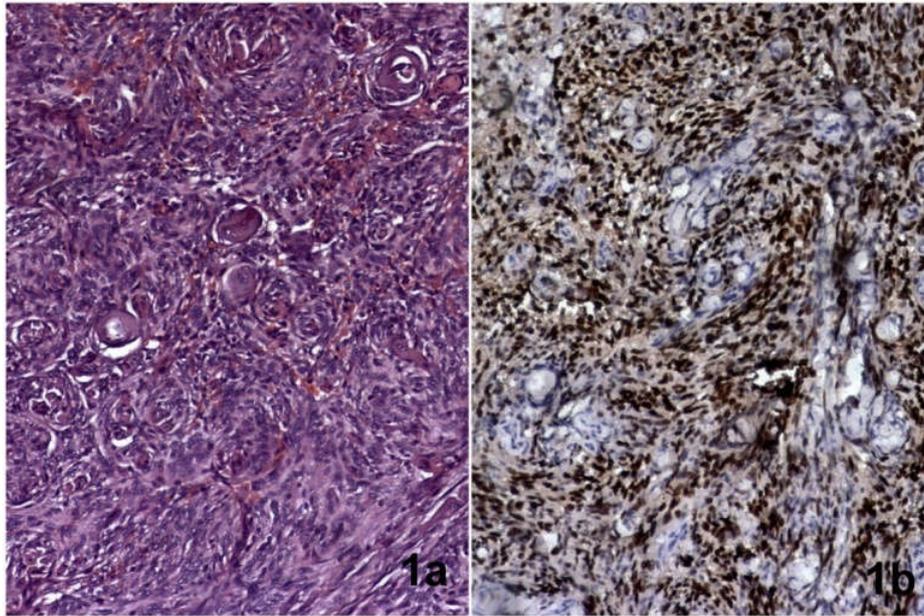
A very common complaint in otorhinolaryngology is the nasal obstruction. It has various causes such as rhinitis, nasal septum deviation, and nasal polyps; rarely are the nasal and paranasal tumors. Meningioma is a slow growing, generally benign, and common neoplasms account for 13-26% of all intracranial 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.

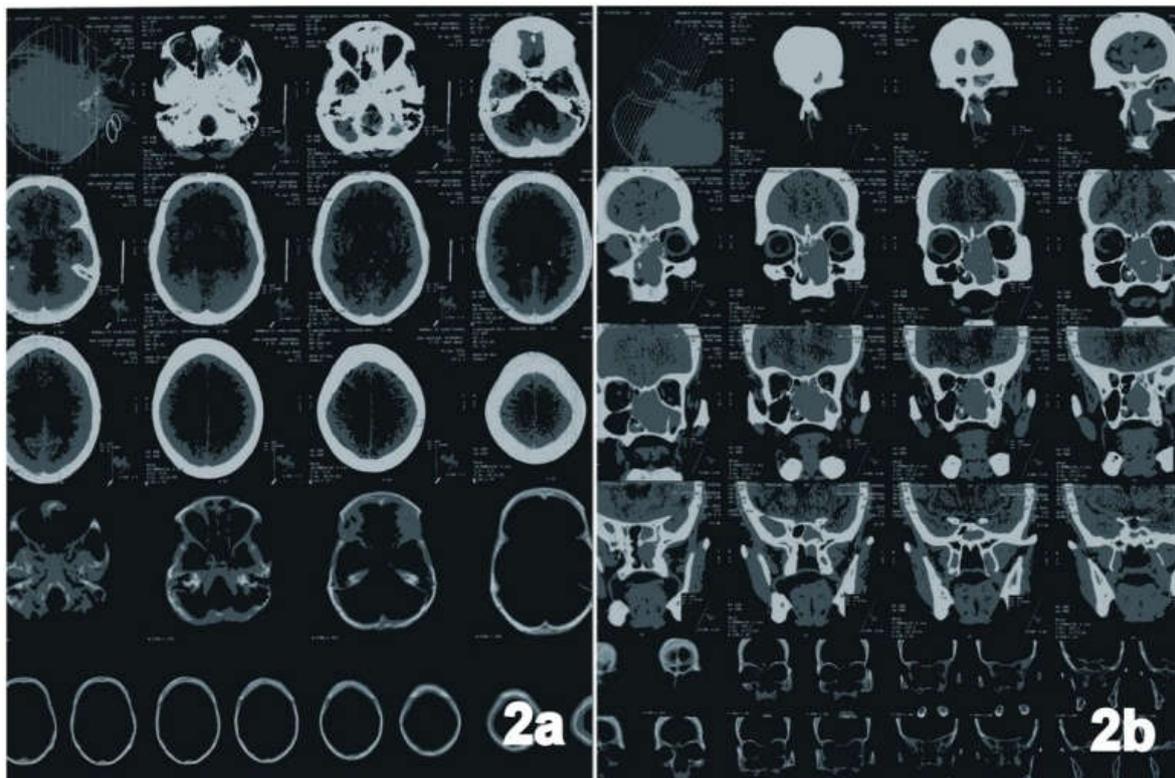
#### Case Report

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 polypoidal growth was identified in the left nasal cavity. Routine investigation revealing Hb-11.2gm%, TLC-3900/cumm, ESR-37 at 1 hr. Biochemical tests and coagulation profile was normal. Patient underwent CT scan of brain, showing no significant abnormality; an incidental finding detected as soft tissue density seen in left ethmoid sinus with erosion of septum and medial wall of left nasal cavity along with lamina papracea. Further contrast CT scan of PNS showing left nasal expansile polypoidal soft tissue mass lesion.

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**Figure1.** Photomicrograph show (a) Hematoxylin Eosin stained section show cells arranged in syncytial pattern along with presence of Psammoma bodies. (b) Tumor cells showing Immunohistochemical positivity with progesterone receptor



**Figure 2:** (a) CT scan of brain, showing no significant abnormality; an incidental finding detected as soft tissue density seen in left ethmoid sinus with erosion of septum and medial wall of left nasal cavity along with lamina papracea. (b) Contrast CT scan of PNS showing left nasal expansile polypoidal soft tissue mass lesion

Patient underwent nasal mass resection. Biopsy from nasal mass was submitted. Microsection examined on routine hematoxylin and eosin stained sections show cells arranged in syncytial 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 meningotheial 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 with in 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 pluripotential 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 inappropriate 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

- Daneshi, A., Asghari, A., Bahramy, E. 2003. Primary meningioma of the ethmoid sinus: a case report. *Ear Nose Throat J.*, 82:310-11.
- Fernandez Liesa, R., Rivares Esteban, J., Perez Obon, J., Ros Mendoza, L., Gambo Grasa, P., de Miguel Hernandez, D. 1991. Primary meningioma of the nose and the paranasal sinus. *Ann Otolaryngol Chir Cervicofac.*108:34-37.
- Kjeldsberg, C.R., Minckler, J. 1972. Meningiomas presenting as Nasal Polyps. *Cancer.*29:153-56.
- Louis, D.N. Budka, S.B., von Deimling, H., Kepes, A. and. Meningiomas, J.J.2000. Lyon:IARC Press.
- Mattox, A., Hughes, B., Oleson, J., Reardon, D., McLendon, R., Adamson, C. 2010. Treatment recommendations for primary extracranial meningiomas. *Cancer.*117:24-38.
- Rushing, E.J., Bouffard, J.P., McCall, S., Olsen, C., Mena, H., Sandberg, G.D., Thompson, L.D. 2009. Primary extracranial meningiomas: An analysis of 146 cases. *Head Neck Pathol.* 3:116-30.
- Shimada, K., Shimada, A., Yamamoto, H., Tasaka, Y., Hayashi, A. 1985. A case of multiple extracranial meningiomas.31:1427-32.
- Thompson, L.D., Gyure, K.A. 2000. Extracranial sinonasal tract meningiomas: a clinicopathologic study of 30 cases with a review of literature. *Am J Surg Pathol.*, 24:640-50.
- Weinberger, J.M., Birt, B.D., Lewis, A.J., Nedzeski, J.M. 1985. Meningioma of nasopharynx. *Am J Otolaryngol.* 14:5.

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