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Case Report

NASAL GLIAL HETEROTOPIA

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ABSTRACT
The authors present a case of extranasal glioma in an infant. Clinically unsuspected, histopathologic studies confirmed the presence of neuroglial tissue. The lesion was surgically excised with an uneventful post operative period. Glial heterotopias are important to be suspected clinically and thoroughly investigated radiologically so as to avoid any complications from fine needle aspirations of subcutaneous lesions before confirming any connection with central nervous system.

Keywords: *Glial Heterotopia, Nasal Glioma*

INTRODUCTION
Glial heterotopia is a benign, rare and congenital condition characterized by the presence of central nervous system tissue at places other than the cranial cavity (Bhadani *et al.,* 2002). It may involve the face or the nasal cavity. Incidence remains controversial. There are two types of heterotopias- extra and intranasal, the former being more common (Krishna *et al.,* 2005; Altissimmi *et al.,* 2009). Clinically, the patient presents with a mass at or near the nasal bridge or intranasally as a polyp. These external masses are noticed immediately by parents, however, intranasal masses may present with obstructive or bleeding symptoms. Histologically, neuroglial tissue is seen. Treatment is excision which is curative.

CASES
A 5 months 18 day old female child was brought to the hospital for clinicians opinion on frontonasal swelling present since birth which was the cause of anxiety for the parents. The child was suffering from cough, cold and fever on and off. However, there were no other complaints. Family history did not reveal any significant finding. On physical examination, the swelling was soft to firm in consistency and was present in frontonasal region. It was non fluctuant, non pulsatile and non transilluminant. No other congenital anomaly was noted. On CT scan, a frontonasal mass was noted (Figure 1).

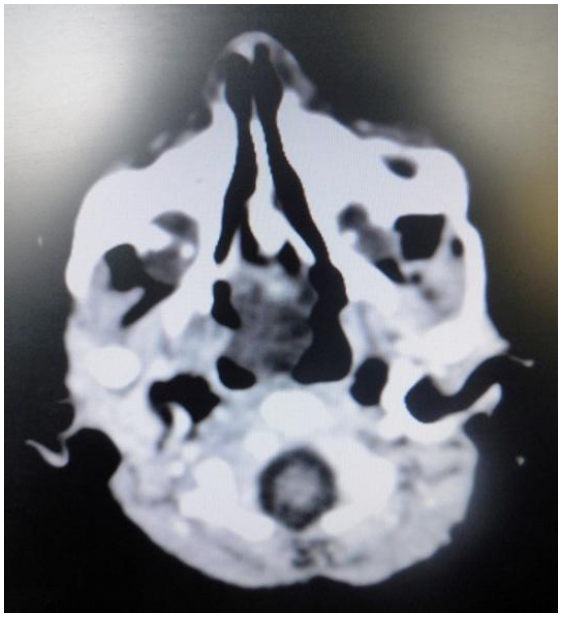

Figure 1: CT scan shows a frontonasal mass

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There was no intracranial connection. Clinically, it was thought to be a teratoma/Dermoid. The lesion was excised by a team of paediatric and neurosurgeons. The gross appearance of the lesion was lobulated and grayish white, totally measuring 5x4x2 cms (Figure 2).

Figure 2: A lobulated, grayish white mass of 5x4x2 cms was received

On cut section, a firm, grayish white lesion was seen (Figure 3).

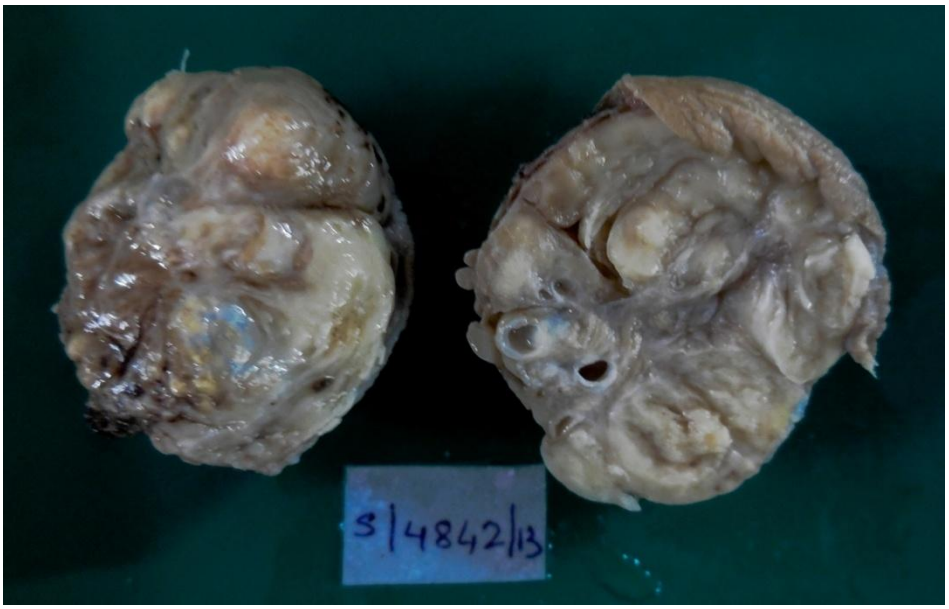

Figure 3: Cut section was lobulated, firm, grayish white in color

Histological sections showed an unencapsulated mass composed of fibrocollagenous tissue lined by flattened to cuboidal to ciliated pseudostratified epithelium. Subepithelium showed fibrillary glial tissue and neurons along with mucinous glands, nasal cartilage and lymphoid tissue (Figure 4).

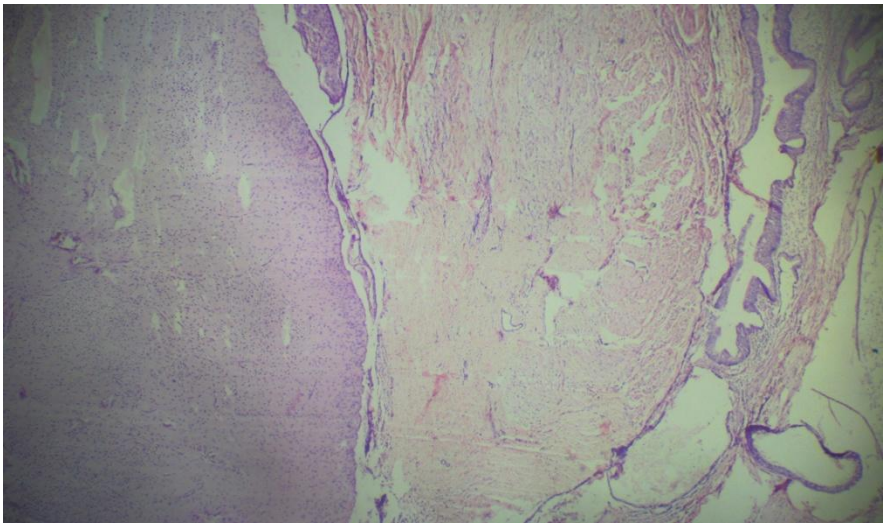

Figure 4: Glial tissue present with the overlying respiratory epithelium (4X HE)

DISCUSSION

Nasal glial heterotopia was first described by Reid in 1852 (Enfors, 1975). These are congenital masses which are detected immediately after birth or during infancy, however, few rare adulthood reports are also available. Majority of the masses are situated extranasally (60%). Intranasal heterotopias account for 30% cases and both intra and extra nasal account for 10% cases (Uzunlar *et al.*, 2001; Rusu *et al.*, 2009). Male to female ratio is 3:2.

No familial predisposition or associated conditions are known. Literature describes nasal glial tissue as a encephalocele with no intracranial connection (Bhadani *et al.*, 2002; Altissimi *et al.*, 2009). Extranasal tumors are solid and subcutaneously situated on either side or midline of the root of the nose. Intranasal heterotopias can cause a deviated nasal septum or bleeding from the nose or respiratory difficulty.

The clinical suspicion of this lesion is important from the view of similar location of encephaloceles which have a intracranial connection (Altissimi *et al.*, 2009).

Diagnostic or surgical intervention without complete radiological investigations may lead to serious complications of iatrogenic intracranial infection (Saettele *et al.*, 2012). Both of these lesions have a common embryological origin, though intracranial connection is absent in heterotopias unlike encephaloceles. Histopathological confirmation is the gold standard for the diagnosis. Presence of neuroglial tissue helps arrive at the diagnosis. Ancillary techniques like GFAP (Glial fibrillary acid protein) stain can be done for documenting of glial origin of the lesion (Rusu *et al.*, 2009; Barnes *et al.*, 2005). Complete excision of the lesion is curative (Rusu *et al.*, 2009).

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