caused by the sequelae of noma. Reconstructive procedures are generally required at some subsequent stage and it is usually multi stage procedure. The surgical treatment of the sequelae in the patients affected by cancrum oris is possible, if the surgeon carefully evaluate each patient individually choosing simple, safe, sound and satisfactory technique. (Ref. 1.) There have been reports of one stage reconstruction of defects caused by Noma, which is both cost effective and safe. (Ref. 9).

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Short Communications

NASAL GLIOMA : A CASE REPORT

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Abstract: Nasal glioma , also known as glial heterptopia or the occurrence of isolated non - teratomatous glial tissue is a rare and benign congenital defect. This condition is diagnosed usually at birth time and requires early treatment to prevent facial deformations. We report here a case of extranasal glioma that was diagnosed and treated at the department of ENT, Gandhi Medical College , Bhopal . We emphasize on the developmental theory proposed as the etiology and discuss the clinical aspects, treatment and follow up.

Key words: Congenital midline masses, Glial fibrillary acid protein.

INTRODUCTION

Nasal gliomas are rare, benign congenital masses more accurately referred to as sequestered glial tissue. Habitually diagnosed right after birth may be detected in the neonatal period in 60% cases⁽¹⁾ These are one of the congenital midline masses, a category which also includes nasal dermoids and encephaloceles ⁽²⁾. These disorders are clinically important because of their potential for connection to the central nervous system. Nasal gliomas may be extranasal or intranasal. Extranasal gliomas usually appear at the root of nose⁽¹⁷⁾

We describe here a case of an 11 month old female diagnosed as extranasal glioma at the tip of nose and subsequently treated in our service and to perform a literature review.

CASE REPORT

This 11 month old female was brought for evaluation of a swelling at the tip of nose, just lateral to the midline on the left side. (figure 1). Detailed history yielded that the swelling was congenital , gradually increased in size to the present . The delivery was uneventful and the family history was unremarkable.

Physical examination revealed an external bulging about 1x1 cm in size, located on the nasal tip just left to the midline, firm, non pulsatile ,covered with normal healthy skin with no evidence of telangiectasias. There was no change in the size of swelling on crying and the FURSTENBERG'S TEST was negative (no change in the size of the swelling with bilateral compression of the internal jugular veins). Rhinoscopy revealed an intranasal

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Fig 1: Pre operative photograph showing swelling at the tip of nose

Fig 2: Rhinoscopy image showing nasal mass covered with normal mucosa

mass attached to the lateral wall causing reduction in the left nasal cavity but covered with normal mucosa (figure 2). CT scan showed a subcutaneous mass with reduced lumen of the left nasal cavity without any intracranial extension or any skull base defect.

The patient was planned for surgical removal via a lateral rhinotomy approach. The entire mass was removed (figure 3) and clinical pathology revealed a nasal glioma. Post operative patient recovered well and 6 months post surgery there was no complication.

DISCUSSION

Non-teratomatous extracranial glial tissue is an uncommon lesion and has been reported in 2 general locations - paraneuraxial & remote from neuraxis⁽³⁾. Majority of these lesions present as congenital nasal or nasopharyngeal masses and are commonly referred to as nasal gliomas, more appropriately termed as NASAL GLIAL HETEROTOPIAS⁽⁴⁾. Extranasal locations include orbit⁽⁵⁾, palate⁽⁶⁾, skin⁽⁷⁾ and submandibular region⁽⁸⁾.

DEVELOPMENTAL THEORY PROPOSED AS ETIOLOGY

At the end of 2nd week a small fontanelle is located between frontal and nasal bone, the nasofrontalis fonticulus. At the beginning of

embryogenesis a dura diverticulum (with or without arachnoid or neural tissue) is projected anteriorly through this fontanelle. This can be in contact with and adhere to the skin. Normally this diverticulum regresses and any defect in this process can leave ectodermic tissue through the path. Depending upon the patency of the diverticulum and its content, resulting lesion can be a dermoid cyst, glioma or an encephalocele⁽⁹⁾.

Congenital midline masses of nasal midline are rare occurring in only 1:20,000 to 1:40,000 live births^(10,11,12,13). Nasal glioma is usually an isolated finding. Associated abnormalities include cleft lip /palate⁽¹⁴⁾, hydrocephalus, choanal atresia, supernumary finger⁽¹⁵⁾. Sixty percent of nasal gliomas are extranasal, 30% intranasal and 10% both. Intranasal variety is more often associated with dural attachment (35 %) than extranasal (9%).⁽¹⁶⁾

Radiological study normally confirms the nature of the lesion. Report by Pensler suggested that CT scan is an essential examination to detect the defect at the level of foramen caecum & helps rule out intracranial communication.⁽¹⁸⁾ Lusk⁽¹⁹⁾, Berkovich⁽¹²⁾ suggested that MRI can be useful to assess the soft parts and intracranial communication, in addition to avoidance of exposure to radiation. They suggested that it should be the test of choice for screening of a patient with a congenital midline

Fig 3: entire mass excised via lateral rhinotomy approach

Fig 4: GFAP identification

mass. Definite diagnosis is through the clinicopathological study. Histologically nasal gliomas consist of unencapsulated rest of glial cells predominantly astrocytes embedded

in varying amounts of fibromuscular stroma.^(20,21,22) Similar findings were seen in our patient. (figure 4). Immunohistochemical demonstration of GFAP has been shown to be capable of identifying neuroglial cells with a high degree of specificity. On rare occasions meningiomas may be seen in the nose, identification of S 100 and GFAP helps to differentiate the two lesions.⁽²³⁾

Treatment is complete surgical excision. Extranasal gliomas with no CNS connection can be removed externally with a vertical elliptic incision or horizontal incision over the dorsum of nose with repair of post surgical nasal bone defects.⁽²⁴⁾ Thomson suggested total excision of skin adhering to the mass as seen by the frozen section study. They reported no recurrence in their study.⁽²⁵⁾ Intranasal gliomas require a lateral rhinotomy alone or with a craniotomy/ external ethmoidectomy if CNS extension is present.

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