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CASE REPORT

Congenital Teratoma with Cleft Palate in a Neonate: A Rare Case Report

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Abstract

Teratomas in the palate are the rare tumors that are associated with high mortality secondary to the obstruction to the airway tract. The incidence of teratoma in the oral cavity, and particularly in hard palate is relatively rare. The present case report is of a mature teratoma associated with the cleft palate in a 20 days old female neonate.

Key Words

Teratoma, Cleft palate, Neonate

Introduction

Teratomas are the benign neoplasm that contains cells from ectoderm, mesoderm and endoderm. In newborns, the most common site of teratoma is sacrococcygeal region. Head neck teratomas are rare benign tumors consisting of 3% of all teratomas.[1] The incidence of oropharyngeal teratomas is 1 in 35,000-2,00,000 live births.[2] The location and size of the teratomas has great impact on their physiological outcome. When present in the upper aerodigestive tract, they result in life threatening complications due to the compromise in the airway,that result in the high mortality rate. Teratomas can be seen associated with mid face defects including cleft lip and palate if they extend beyond the mouth.

The present case is of a congenital teratoma associated with cleft palate in a female neonate

Case Report

The present case is of a 20 days old, full term female neonate weighing 2.5kg born vaginally by a 34 years old mother with no significant antenatal history. The mass in the cleft was noticed due to the feeding difficulties. On palpation, a well defined soft tissue mass was noticed on the right side of the palate with associated cleft palate. Contract enhanced computed tomography (CECT) face and neck showed a evidence of 5mm defect in the hard palate with well defined soft tissue density lesion measuring 2.3x1.4x1cm with internal fat attenuation areas and a densely calcified focus measuring 9x9mm, extending to left nasal cavity and into oral cavity reaching upto dorsal surface of tongue. Possibility of midline oral teratoma was extended. The mass was excised and sent for histopathological examination in the post graduate department of pathology, Government medical college and hospital, Jammu.

Gross examination showed a globular tissue piece measuring 2.5x1.5x0.5cm. Outer surface was whitish and appeared smooth with multiple hairs present. Cut section was pale brown and firm in consistency (*Fig. 1*).

Microscopic examination of the multiple sections showed the lobules of mature adipose tissue admixed with fascicles of skeletal muscle, serous and mucinous acini of salivary gland and covered by keratinized squamous epithelium

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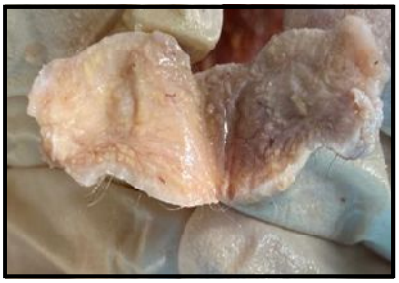

Fig 1. Gross Image Showing a Globular Tissue With Multiple Hair Present on Outer Surface and Pale Brown on Cut Section.

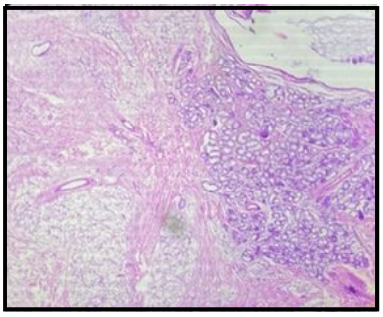

Fig 2: H & E Stained Section Showing Serous and Mucinous Acini of Salivary Gland along With Lobules of Mature Adipose Tissue

containing hair follicles associated with sebaceous and eccrine glands (*Fig 2 & 3*). Focal areas of calcification were also seen. The final diagnosis of mature teratoma was made.

Discussion

The word teratoma was coined by Virchow in 1869. 'Teraton' meaning 'monster', 'onkoma' meaning 'swelling' was used to describe mammoth sacrococcygeal growths.[3]

Teratomas are the tumours derived from pleuripotent stem cells and consist of various tissue elements derived from the ectoderm, mesoderm and endoderm.[4]

The occurrence of the teratoma in the oral cavity and particularly on the hard palate is relatively rare. Only 23 cases have been reported in the English medical literature. A cleft palate is the malformation most associated with teratoma's with an incidence of 6-20%.[5] The possible cause is the mechanical obstruction caused by the tumour preventing the closure of palatal shelves. When tumour develops before 8th week, it can interfere with normal closure of the secondary palate in the midline, it can also hinder the confluence of the two halves of nose and tongue, resulting in bifid nose or tongue. It can also contribute to abnormal maxillofacial development with

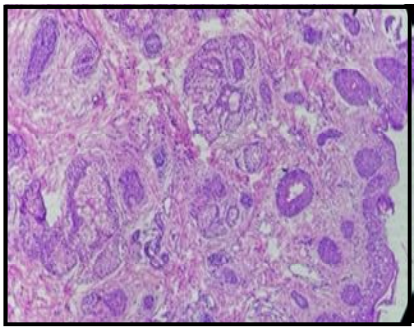

Fig 3. H & E Stained Section Showing Stratified Squamous Epithelium Along with Hair Follicles Associated with Sebaceous and Eccrine Glands.

micrognathia ogival palate.[6]

Histologically, teratomas are classified into 4 groups:

(a). Dermoid cyst that consist of epithelium lined with skin elements composed of ectodermal and mesodermal cells.

(b). Teratoid cyst that are composed of all the 3 germ cell layers.

(c). True teratomas that consist of all the 3 germ cell layers that differentiate into specific tissues and organs.

(d). Epignathi that are rare oral tumours associated with developmental fetal organs and limbs, with a high mortality rate.

Conclusion

Soft palate teratomas are the rare entity that needs early recognisation because of their association with high mortality in the newborn period due to the life threatening airway obstruction and feeding difficulties. Complete surgical resection is the only definite treatment and confirmation by histopathology remains the gold standard.

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