

Respiratory distress in a new born due to nasopharyngeal and intra oral growth – A rare case of nasopharyngeal benign teratoma.

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DOI: 10.29322/IJSRP.11.05.2021.p11354
<http://dx.doi.org/10.29322/IJSRP.11.05.2021.p11354>

Abstract- Teratoma is a most common extra gonadal germ cell tumour of perinatal or neonatal period , but teratomas of nasopharynx and intra oral are rare in neonates . naso pharyngeal teratoma is a serious condition leading to the respiratory distress in newborn. In present case one day old female newborn female born to a 22 year healthy female by normal vaginal delivery with uneventful antenatal period with intra oral and nasopharyngeal growth protruding from the oral cavity leading to severe respiratory distress. Baby was managed immediately and MRI of head and neck suggested nasopharyngeal mass lesion with left intratemporal and left intra cranial extension suggesting solid cystic , calcified fat components of teratoma. Baby was resuscitated and growth was excised successfully and cleft palate was repaired and patient was discharged on normal bladder and bowel habits. Histopathological examination specimen suggested intraoral and nasopharyngeal benign teratoma. We present the intraoperative and specimen finding and treatment followed in this case.

Index Terms- teratoma , nasopharyngeal , intraoral, respiratory distress, excision.

I. INTRODUCTION

Teratoma is considered as the most common extragonadal germ cell tumour of perinatal or early neonatal and childhood, consisting of tissues from atleast two of the three germ layers. [1] Incidence of teratoma is in 1 in 40,000 of the live births which is relatively rare in head and neck region involving the oropharyngeal and nasopharyngeal teratoma account for less than 2-5% of all the paediatric teratoma.[2]

About half of the childhood teratomas are congenital and among these majority are mature teratoma considered benign on the basis of histological findings.[3] teratoma is the most common germ cell tumour of the fetus and the newborn and usually presents as an obvious mass with signs and symptoms referable to the location of origin.

The usual sites are the gonads , the retroperitoneum and the sacrococcygeal regions. The incidence of teratoma is 1: 4000 births with the sacrococcygeal are being the most common site. In the neonatal age group. The most common site is the sacrococcygeal region constituting about 79.7% of all cases. the other sites are the cervical region , followed by the retroperitoneum mediastinum , head , orbit, abdominal walls and rare cases of nasopharyngeal teratoma. Teratoma of the head and neck account for less than 2% of reported cases of congenital teratomas and are most commonly found in the cervical neck. A female predominance of 6:1 has been widely reported in the literature.[4,5]

II. CASE REPORT

A one day old female baby born to a 22 year old healthy primi female by normal vaginal delivery, presented with cyanosis and respiratory distress with protruding intraoral mass from the oral cavity. The mother's antenatal history was uneventful and the prenatal ultrasonography was unremarkable. She was born in the peripheral health center and the neonate was referred to our tertiary care center for the episodes of respiratory distress.

At admission patient was cyanosed and in respiratory distress , birth weight was normal and neurological examination was normal . on examination 5cm x 3cm intraoral growth (figure 1) with 4cmx 3cm cervical swelling on the left side of the neck with respiratory distress since birth. Paediatric echo and color Doppler followed by MRI of head and neck revealed oronasopharyngeal mass lesion with left infratemporal and left intracranial extension. In view of solid cystic , calcific and fat components revealed possibility of teratoma.

Patient underwent surgical excision under general anesthesia of following:-

- 5cm x3cm intra oral growth originated from nasopharynx in variable consistence is excised.
- Left lateral border swelling from tongue marable consistency 4cm x3cm is excised.



Figure 1

figure 1. showing intraoral growth.



Figure 2excised mass



Figure 3 intraoperative during excision

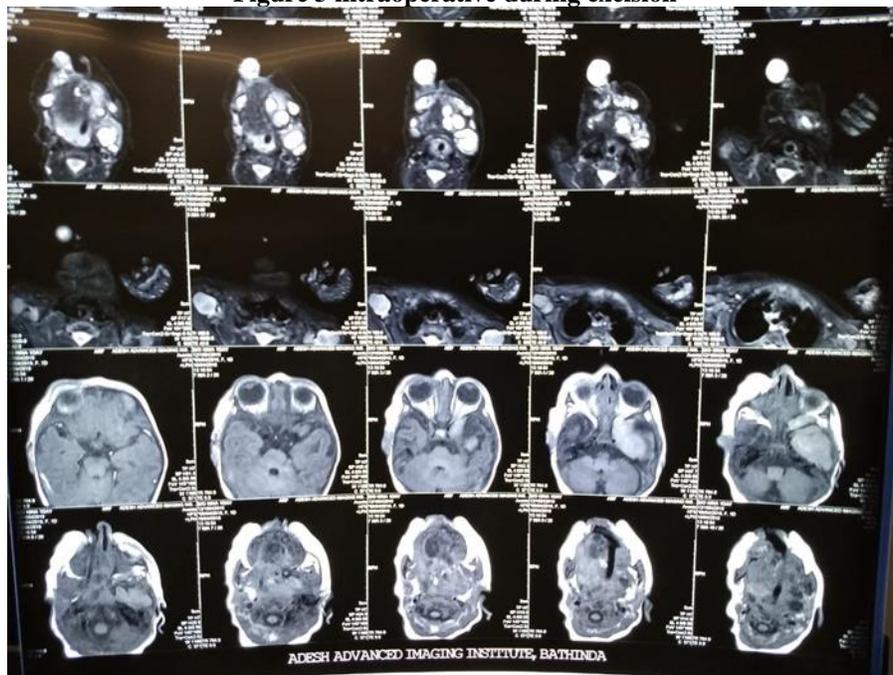


Figure 4 MRI images of teratoma



Figure 5 healthy baby

The microscopic examination show multiple random sections studied have stratified squamous lining epithelium with subepithelium showing normal muscular tissue intermingled with neuroglial tissue. Focally neuroglial tissue showing melanin pigmentation. In between the foci of tall columnar lining epithelium is also discernable. Large areas inflammatory infiltrate comprising of lymphocytes and plasma cells, forming lymphoid aggregates at places along with congested blood vessels are also discernable. Based on this histopathology and morphology a clinical diagnosis of intra oral benign teratoma is made. The baby had an uneventful symptom- free postoperative period and is doing fine.

III. DISCUSSION

In general the respiratory distress in a neonate is due to pulmonary cause. Upper airway anomalies should be considered in the differential diagnosis of any neonate presents with respiratory distress. The differential diagnosis for the nasopharyngeal teratomas include the lesions that can also present with an oropharyngeal mass like encephalocele and nasa gliomas, which are benign congenital malformations are rare as well. Both of these lesions usual in appear in neonatal or paediatric population causing nasal obstruction , oral obstruction difficulty in feeding and naso-oral cosmetic deformities, many times these lesions can be the foci for various infections. It is important to rule out the possibility of such lesions and there intra cranial communication in these lesions , thus putting the patient at risk of intracranial infections and associated complications. In both these lesions, variable proportion of glial tissue is present characterized by neuroglial fibers and astrocytes.

Benign teratomas are rare congenital neoplasms containing elements from all these germinal layers. The Teratomas are usually found in the sacrococcygeal region and the head and neck region (2-5%) of all teratomas. Head and neck most common sites

of origin are neck, oropharynx, nasopharynx , orbit and paranasal sinuses.

Teratomas are usually benign neoplasms which are classified into 4 histological types such as dermoid , teratoid, true teratomas and epignathi but majorities are teratomas, dermoid are the major; true teratoma usually occurs less than the exact etiology is unknown but few theories postulates that head and neck teratomas usually occurs from uncontrolled growth of a pluriopotent cell originating in the region of embryonic notochord.

Ultrasound Imaging such as during antenatal period or at birth such as CT scan and MRI are useful to determine the site , size and extents of the lesions and to differentiate between a solid and a cystic mass and rule out any intracranial extent of nasopharyngeal teratoma. In this case MRI was performed suggesting oro-nasal pharyngeal mass lesion with left intra temporal and left intra cranial extension which is solid cystic, calcified fat component containing teratoma.

Thus surgical excision is the treatment of choice for mature teratoma as the excision is complete the recurrence rate decreases. In the present case nasopharyngeal and fasciocervical teratoma was excised completely under general anesthesia through transoral approach with nasal endoscope help and assistance and cleft palate was also repaired spontaneously. Although the complete extirpation in the ultimate goal of the treatment for head and neck teratoma. The surgical excision may be labourous and incomplete due to complexity of lesion and the surrounding structure involved and complex anatomical area like naso- oro pharynx.

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