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Unusual and Rare Teratoma of the Tongue: A Case Report

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Case Report

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ABSTRACT

Teratoma refers to a group of complex tumors having various cellular or organoid components composed of derivatives from more than one germ layer. They arise most commonly in the midline or paraxial location from brain to sacral area . Pure oral presentation is especially rare. Congenital oral teratoma can be successfully treated by surgery and recurrence is uncommon. We report a case of teratoma of tongue in a 22 weeks old fetus diagnosed in utero. Prenatal ultrasound scan revealed a large obstructive solid and cystic mass with the possibility of a cystic hygroma or a teratoma. The parents opted for medical termination of pregnancy because of anticipated complications of airway obstruction and polyhydramnios . This case is unique due to the large size of the tumor in relation to the fetal size . Although it can cause high mortality a multidisciplinary approach with surgical excision would have resulted in a favourable outcome .

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KEY WORDS – Oral cavity, Teratoma , Congenital , Epignathus

INTRODUCTION

Teratomas are multipotential tumors that are believed to arise from toti- or pluripotential cells [1] . Epignathus is a highly developed congenital teratoid tumor in the oral cavity [3] .They are the most common extra-gonadal germ cell tumors of childhood consisting of tissues from at least two of the three germ layers [4] . These tumors are most often benign in their histology , but result in a high degree of morbidity and possible mortality by virtue of their size and location , causing airway obstruction and respiratory distress [4] .

CASE REPORT

A 28 year old female with a obstetrics history of G_2A_1 admitted to the obstetric service of A.J Hospital at 22nd week of gestation . Prenatal ultrasonography revealed a solid-cystic and voluminous heterogenous mass measuring 12 * 11 * 5cm protruding from the oral cavity .The parents opted for medical termination of pregnancy due to a suspicion of malignancy as well as potential airway obstruction and respiratory distress which are common complications .

The 22 weeks old fetus with the mass was sent for the histopathological examination. Gross examination revealed an irregular solid and cystic mass protruding from the oral cavity (tip of the tongue) without adhesion to the oral vestibule ,weighed 300gm and measured 12 * 11 * 5cm . Section from the mass showed solid areas which were mucoid and gelatinous , and cystic spaces filled with hemorrhagic fluid .The histology showed scattered bony trabeculae , islands of mature neuroglial tissue , immature neuroepithelium forming rosettes, keratin pearl , cartilage admixed with bronchial epithelium and mucinous glands along with smooth muscle fibres.

DISCUSSION

Teratoma of the oral cavity are rare developmental malformation that most commonly present at birth and rarely occur in patients over the age of two years .The etiology of epignathus is unknown and may arise in the region of Rathke's pouch that grow in a disorganized manner [3] . Congenital oral teratoma (epignathus) occurs in 1:35,000 to 1:200,000 live births [3]. Teratomas have been classified in to four types : Dermoids , Teratoids , True teratomas and Epignathi [4] . Most neonates with cervical or pharyngeal teratomas have air-way obstruction . Respiratory symptoms vary from total apnoea to mild dyspnoea [6] . It is reported that more than 90% of oral teratoma are diagnosed during prenatal period [9] . Ultrasonography is useful in prenatal diagnosis , particularly for oropharyngeal teratomas that interfere with the fetal swallowing of amniotic fluid. Maternal hydramnios has been reported in about 18 per cent of cervical teratomas .

Typically teratomas are rapid growing , firm , multilobular masses which are frequently mobile and do not transilluminate [6]. Microscopic examination shows a variety of tissues from the three germ layers with a wide range of cellular differentiation and variable degree of maturation [5] . The

majority of teratomas are benign tumors. However: approximately 5 per cent of neck teratomas were found to contain malignant elements (Stephenson et al., 1989). If antenatal diagnosis is made , two treatment procedures may be used : Intrapartum treatment (EXIT) procedure and Operation on placental support (OOPS) . In the EXIT procedure , after a low transverse uterine incision , the head and at least one hand of the fetus are delivered . In the OOPS procedure , first the airway is secured by endotracheal intubation or tracheostomy , later the baby is completely delivered and the umbilical cord is clamped [8] .

Three-dimensional ultrasound in rendering mode is very useful as a method that is complementary to two-dimensional ultrasound, because it allows spatial evaluation of the lesion , as well as assessment of its relationships with the anatomical structures of the face and head [2] . A good patho-radiological correlation is required to confirm the diagnosis [7] .

CONCLUSION

Large obstructive oral masses that are not diagnosed during the prenatal period carry a significant risk of airway obstruction in the neonatal period. Even though epignathus teratoma is rare condition , it needs to be diagnosed in utero as early as possible. The combination of three-dimensional ultrasound and magnetic resonance imaging provides unquestionable benefits for detailing and confirming the anomaly. This case is unique due to the large size of the tumor in relation to the fetal size . Although it can cause high mortality a multidisciplinary approach with surgical excision would have resulted in a favorable outcome .

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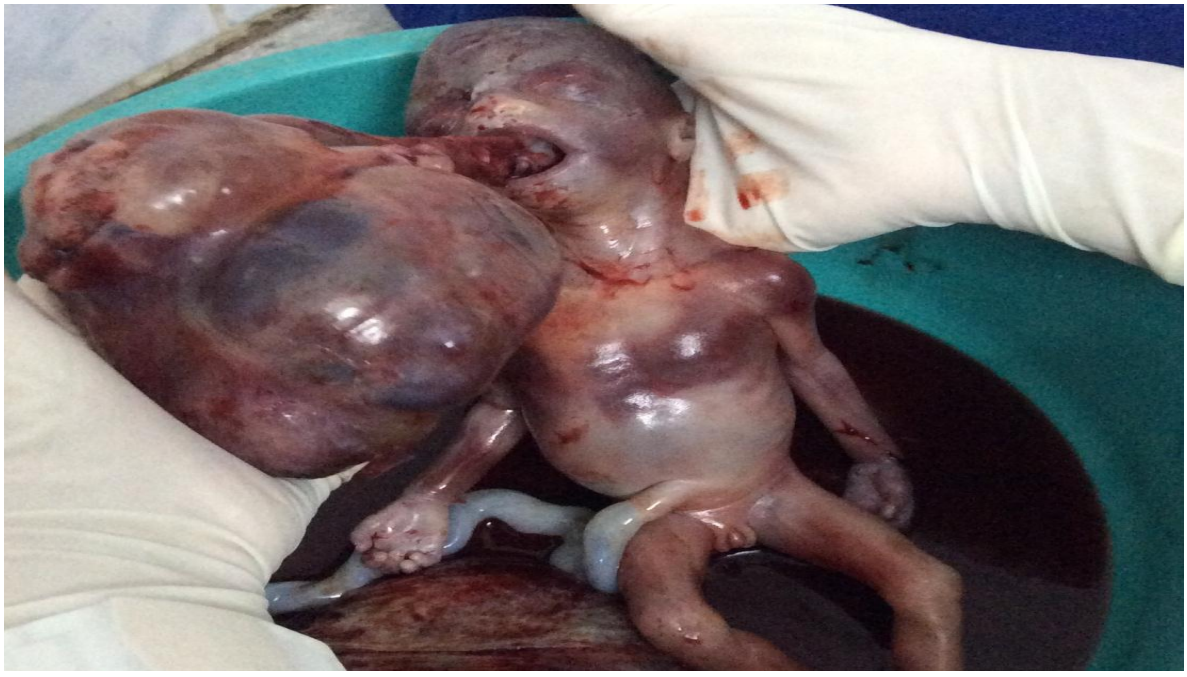
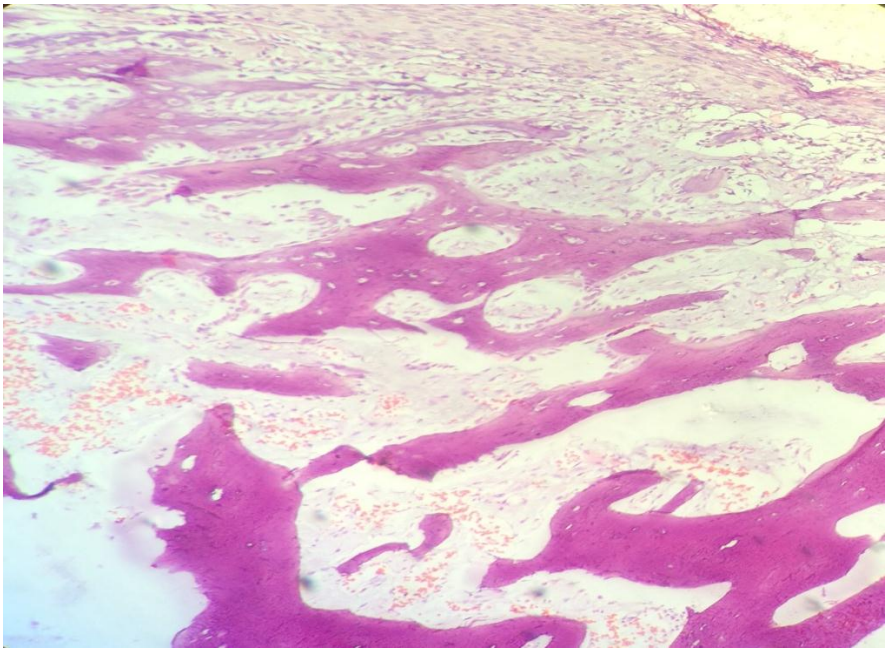
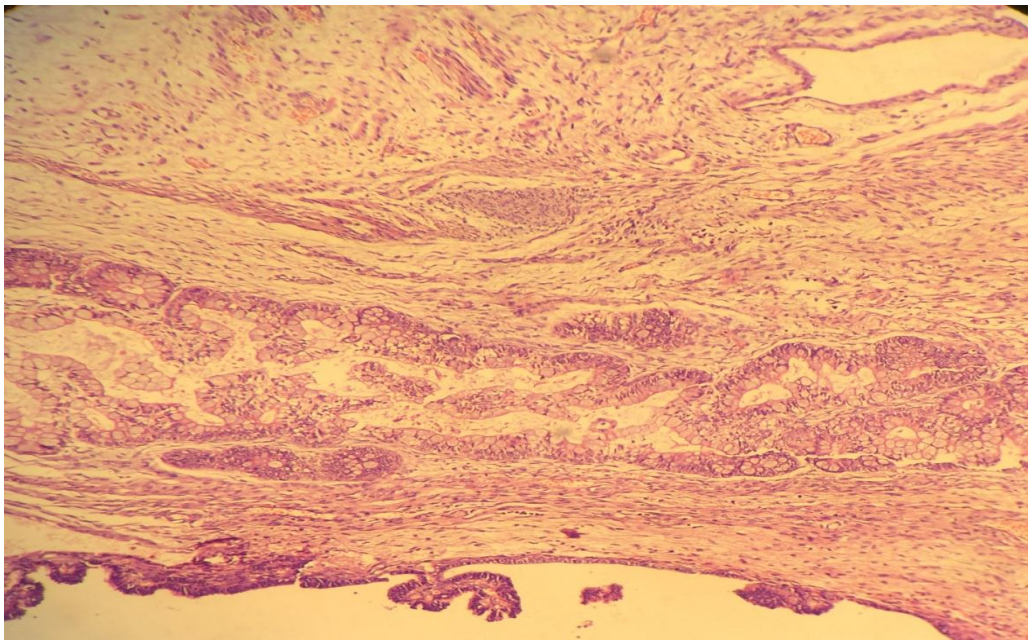
PICTURES:



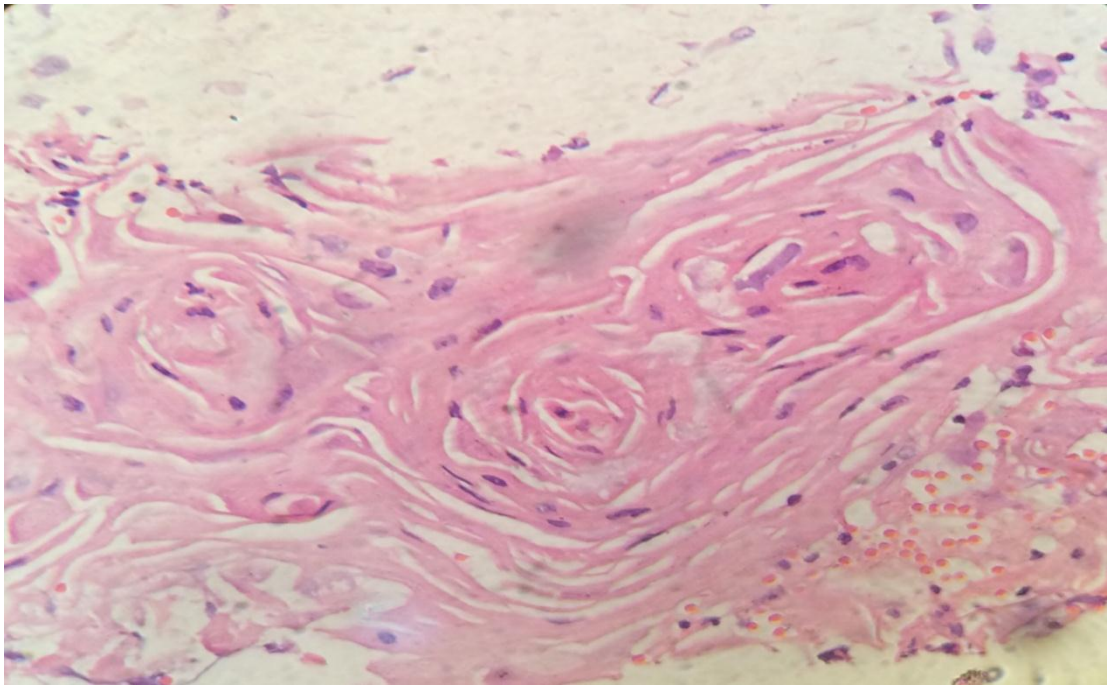
Picture 1- Fetus with large solid-cystic mass arising from the tongue



Picture 2: Scattered bony trabeculae (H & E 10X)



Picture 2: Mucinous glands with smooth muscle fibres (H & E 10X)



Picture 3: Squamous keratin pearls (H & E 10X)