CASE REPORT

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Teratoma of the tongue in neonates: report of a case and review of the literature

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Abstract

A female newborn presented with a huge mass protruding from the mouth. She had no respiratory distress but had difficulty swallowing. The mass originated from the tongue and was completely extirpated on the day of birth. The histologic diagnosis was mature teratoma. Three days later, another mass measuring 1 cm in diameter was found attached to the upper pharyngeal wall and was also completely extirpated 20 days after birth. The histologic diagnosis was also mature teratoma. The infant had a complete cleft palate, but no other malformation was found. Two years after surgery there is no sign of recurrence.

Key words
Teratoma · Tongue · Newborn

Introduction

Teratomas of the tongue (TTs) are extremely rare, and only 11 cases have been reported in the literature; all were in newborn infants. Interestingly, most of the reported TTs did not cause respiratory problems although teratomas of the head and neck usually present with respiratory distress. We add a 12th case of TT with a review of the previous literature.

Case Report

A female infant born by cesarean section after 39 weeks' gestation presented with a huge mass protruding from the mouth. The mass was attached to the left side of the tongue and measured 7 × 5 cm (Fig.1). There was no maternal polyhydramnios. Ultrasound scans had been performed at intervals of 1 month starting at 3 months' gestation, but the tumor was not detected. The birth weight was 3,688 g and the Apgar score at 1 min was 10. There was no respiratory distress. The baby had a complete cleft palate, but no other abnormalities were found. Computerized tomography demonstrated that the mass, which arose from and was attached to the left side of the tongue, was composed of mixed cystic, solid, calcified, and fatty components. With the presumptive diagnosis of TT, it was completely extirpated with a 3-mm margin of normal tongue 13 h after birth. The alpha-fetoprotein level (AFP) at birth was 49,500 ng/ml. Three days later another mass, which had initially been overlooked, was found attached to the left side of the upper pharyngeal wall. It was 1 cm in diameter and was extirpated 20 days after birth.

Histopathologic examination disclosed that both tumors were composed of a mixture of tissue elements from all three germ-cell layers. Cystic spaces within the tumor were lined with squamous epithelium, ciliated columnar respiratory epithelium, and columnar gastrointestinal epithelium. The solid portions contained cartilage, mature neural tissue, fatty tissue, and connective tissue. There were no malignant elements found, and no explanation for the high AFP level. The histopathologic diagnosis was mature teratoma. The postoperative course was uneventful and there has been no sign of recurrent disease in the 2 years since surgery. The AFP level is within normal limits.

Discussion

Teratomas of the head and neck account for approximately 5% to 10% of tumors seen in newborns [1,2], but TTs are extremely rare. Since the first report of a TT in a newborn in 1966 by Miller and Owens, only 11 cases have been reported (Table 1) [3–13]. These usually consist of a huge mass protruding from the mouth. Respiratory distress was seen only in 2 or 12 cases, but feeding problems were encountered in all but 1 instance.
The mass was completely extirpated surgically in all 12 cases and recurrence was not observed in any patient, reflecting the benign nature of the tumor.

TTs rarely cause respiratory difficulty, while nasopharyngeal or head-and-neck teratomas generally present with respiratory problems, probably because newborns are obligate nasal breathers and TTs obstruct the oral cavity but not the airway. The female preponderance seen in teratomas of other sites is not observed in TTs [12, 13]. Associated malformations occasionally seen in patients with TT include cleft palate (3 of 12 cases) and teratomas of nearby regions (2 of 12 cases). There were no malignant findings in any of the 12 cases, probably because the tumors were found immediately after birth, i.e., before malignant degeneration of tumorous elements had occurred. The prognosis is usually excellent after complete extirpation.

References