A vanishing tongue-base cyst

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SUMMARY: Wong K-S, Huang Y-H, Wu C-T. A vanishing tongue-base cyst. Turk J Pediatr 2007; 49: 451-452.

A one-month-old male infant was referred because of noisy breathing sounds, feeding difficulty and shortness of breath. A lateral radiography of the neck showed abnormal soft tissue mass at tongue base. While waiting for a scheduled bronchoscopic examination, respiratory distress and noisy breathing sounds disappeared after nasogastric suctioning. Dramatic improvement in respiratory distress in a young infant with feeding difficulties may have been due to rupture of a tongue-base cyst following oropharyngeal manipulations.

Key words: tongue-base cyst, vallecular cyst, spontaneous resolution.

Congenital laryngeal cysts are an uncommon cause of airway obstruction[1,2]. An approximate annual incidence of 1.82 per 100,000 live births in an oriental population was reported[3]. Recurrence of fluid accumulation may re-emerge after simple aspirations; surgical approach with marsupialization has become the standard therapy by most otolaryngologists[1-3]. Herein, we report a one-month-old infant with a tongue-base cyst suffering from stridulous respiration and dysphagia who experienced spontaneous resolution after nasogastric tube suctioning.

Case Report

A full-term, 33-day-old male infant was brought to our Outpatient Department because of noisy breathing sounds, feeding difficulty and shortness of breath since two days after birth. Physical examination at admission revealed a dyspneic infant with respiratory rate of 42 breaths/min. Suprasternal and subcostal retractions were significant with inspiratory stridor most prominent over the laryngeal level. Hemogram and chest radiograph were within normal limits. A lateral radiography of the neck showed abnormal soft tissue mass at tongue base. A computed tomography of the neck revealed a cystic lesion measuring 15x13x19 mm in size at the hypopharynx (Figs. 1, 2). A tentative diagnosis of vallecular cyst was entertained. However, while waiting for the scheduled bronchoscopic examination the following day, respiratory distress and noisy breathing sounds vanished dramatically after nasogastric suctioning. The bronchoscopic examination performed the following day disclosed a normal appearing epiglottis but

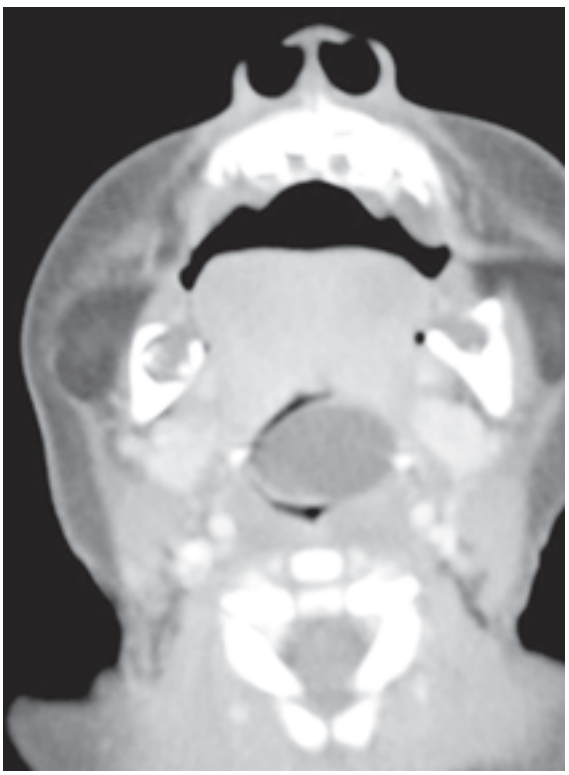

Fig. 1. Neck computed tomography in axial view shows a large cystic mass at pharyngeal level.

Fig. 2. Neck computed tomography in sagittal reconstruction show a large cystic lesion at base of tongue.

slight thickening of arytenoid-epiglottic fold on the left side without visible cystic lesion. He was discharged uneventfully and followed-up at the Outpatient Department for two years, during which there was no recurrence of respiratory distress.

Discussion

In the literature, a variety of terms have been used for tongue-base cysts, such as epiglottic cyst, lingual cyst, vallecular cyst or laryngeal cysts[1,2,4-6]. Previously, laryngeal cysts had been classified into ductal or saccular by DeSanto et al.[7]; however, the classification was not useful for clinical purposes. Forte[8] and colleagues proposed a new classification of congenital laryngeal cyst based on extension and embryonic origin to help the surgeon in clarifying the origin and guide initial management. However, the true etiology and pathogenesis of laryngeal cyst remain speculative.

Tongue-base cysts and vallecular cysts cause respiratory distress, life-threatening obstruction or apnea in some instances[4]. An increasing number of vallecular cysts have been reported with an increasing awareness of this entity since the 1990s.

Finger palpation for a tongue-base mass in children with stridor and swallowing disturbance is simple and may be the first clue to lingual cysts[5]. However, finger palpation of the base of the tongue must be performed with great care, and should be done in a controlled environment for emergency airway management. The palpation may sometimes cause aspiration of the ruptured cyst, bleeding from a vascular lesion mimicking laryngeal cyst or edema of the laryngeal introitus precipitating critical airway obstruction. A lateral radiograph of the neck demonstrates lesions greater than 1 cm in diameter without difficulty if properly taken and interpreted by an experienced radiologist[1]. The primary diagnostic approach of laryngeal or vallecular cyst should be a flexible nasopharyngeal laryngoscopy or bronchoscopy at bedside in the ward, or intensive care unit, with or without sedation but with decongestion of the nasal passage.

Definitive therapy in most cases of laryngeal cysts requires general anesthesia for de-roofing and marsupialization, and sometimes pre-intubation aspiration becomes necessary before the insertion of the endotracheal tube. Spontaneous disappearance of a tongue-base cyst after oropharyngeal suctioning has not been reported previously.

In conclusion, in a young infant presenting with respiratory stridor and dysphagia which rapidly resolve after airway manipulations, spontaneous rupture of a tongue-base cyst should be highly suspected and vigilant follow-up for recurrence is warranted. A consensus for standardized nomenclature and search for the pathophysiology for tongue-base cysts are warranted.

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