



Lingual thyroglossal duct cyst in newborns: Previously misdiagnosed as laryngomalacia

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KEYWORDS

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Summary

Objective: To distinguish lingual thyroglossal duct cyst (LTDC) from laryngomalacia in newborn.

Methods: The clinical data of five newborns who were diagnosed as LTDC were retrospectively analyzed.

Results: Inspiratory stridor with chest wall retraction was cardinal symptom of newborn with LTDC. A slightly gray and round cyst with smooth surface at the base of the tongue was found with laryngoscopy. In computed tomography examination of larynx, a well-circumscribed lesion with low intensity was detected at the base of the tongue protruding into the air passage. Pathological examination demonstrated the cyst wall was composed of tabular and columnar epithelium.

Conclusions: LTDC is a common disease in newborns, which is similar with laryngomalacia. For neonate suspected of LTDC, laryngoscopy examination should be taken first, while laryngeal CT scan is an important diagnosis basis to be reg. Cyst puncture can ameliorate the symptoms of LTDC, while surgical removal serves as a radical cure for LTDC.

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1. Introduction

Lingual thyroglossal duct cyst (LTDC) happened in newborns is vary scare. As to my knowledge, only a few cases have been reported [1–3]. Five LTDC

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newborns with laryngomalacia who were less than 6 months were included in our research [4], which suggested that this disease is easy to be misdiagnosed. We reviewed the clinical data of the five newborns with LTDC to help doctors distinguish LTDC from laryngomalacia.

2. Objects and methods

2.1. General data

Five newborns (three males and two females) diagnosed as LTDC by laryngeal CT scan hospitalized in the department of neonatology of our hospital from December 2004 to July 2005 were included in our research. All of them were full-term infants without birth injury while labor. Their mean gestational age was 38.9 ± 1.1 weeks and mean body weight was 3357 ± 213 g. Among them, two cases were reconfirmed by surgery and pathology.

2.2. Method

Two sick newborns accepted direct laryngoscopy (rigid) examination under phenobarbitone anesthesia with a constant pulse oxygen saturation and cardiopulmonary monitoring. All the newborns accepted CT scanning of laryngeal on a 16-slice CT scanner (PHILIPS Mx-8000) combined with 3D reconstruction of laryngeal. The scanning layer thickness is 2 cm.

3. Results

3.1. Clinical symptom

Major symptoms observed in the five newborns were: (1) the disease took place within 7 days after birth; (2) laryngomalacia was the initial presentation; (3) varying degree of inspiratory dyspnea were observed, which aggregated after crying; (4) no obvious changes of lung were observed; (5) all the cases were misdiagnosed as laryngomalacia before admitted to our hospital.

3.2. Laboratory test

(1) No evidence of infection (except for case 3); (2) serum calcium was normal; (3) chest radiography is normal; (4) cardiac structure and function was normal.

3.3. Direct laryngoscopy

Two of the five newborns received laryngoscopy upon admission before diagnosis of LTDC by CT scan.

Two round cysts which were $1\text{ cm} \times 1\text{ cm}$ and $2\text{ cm} \times 2\text{ cm}$ in size were found at the base of the tongue in these two patients. All the cysts are slightly hoary, smooth and soft.

3.4. CT results

All the cases received plain CT scan examination and 3D reconstruction of larynx. The CT features were as follows: (1) site of the cysts: all of the lesions were located at the base of the tongue; (2) features of the cysts: round lesions of low intensity with the diameter ranging from 0.8 cm to 2 cm. All the lesions were well-circumscribed with an even and smooth wall; (3) air passage constriction: varying extent of pressure existed on the level air passage at the base of the tongue (Figs. 1–6).

3.5. Treatment

Three newborns with severe respiratory embarrassment who could not accept emergency tracheal intubation were relieved immediately after receiving cyst puncture under NICU puncture orthophoria, constant pulse oxygen saturation and cardiopulmonary monitoring. Two newborns accepted cyst puncture with tracheal intubation under general total anesthesia in the operating room. The cyst liquid is clean and gelatum-like.

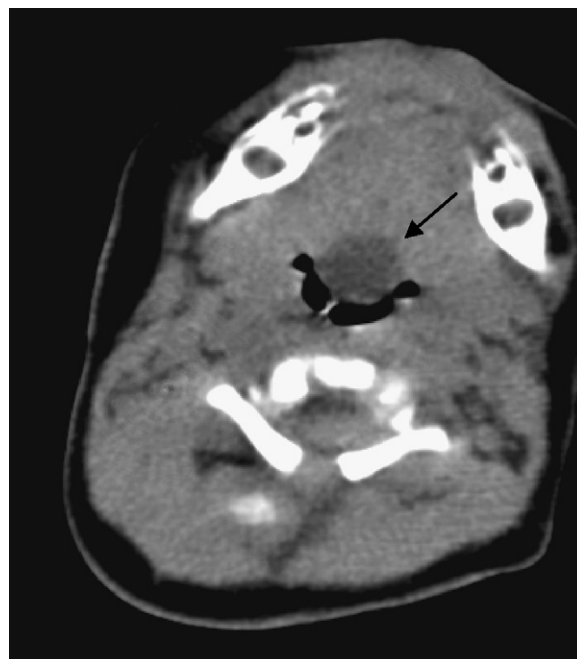


Fig. 1 Plain CT scan of larynx (axial view). The arrow shows a round cyst of low density in the midline of anterior neck (neonatal period).

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