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A newborn case of congenital laryngeal cyst complicated with pneumothorax and pneumomediastinum

Hitoshi Bamba *, Kaheita Hirasugi, Hiroyuki Okano, Takeshi Nishio, Toshiyuki Uno, Yasuo Hisa

Department of Otolaryngology – Head and Neck Surgery, Kyoto Prefectural University of Medicine, Kawaramachi-Hirokoji, Kyoto 602-8566, Japan

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Abstract

Benign congenital laryngeal cysts are rare entities. They often cause chronic hoarseness and severe stridor. Case reports of congenital laryngeal cyst complicated with pneumothorax and pneumomediastinum are very rare. A 3112 g full-term male newborn developed stridor which got worse during crying for 12 h after birth. Chest retractions were present with inspiration. Chest X-rays showed the presence of right pneumothorax and pneumomediastinum. Transnasal flexible laryngoscopic examination revealed a large cystic mass, which occupied almost the entire supraglottic airway. The operation was performed with the techniques of laryngomicrosurgery under general anesthesia. The cystic wall was punctured and serous liquid contents were aspirated. Excision of the entire cystic lesion was performed. The next day, extubation was performed without any troubles. The stridor had disappeared and the pneumothorax and pneumomediastinum were improved without further medical intervention. The histopathological examination revealed that the cystic wall consisted of normal squamous epithelial cells. It is reasonable to think that the high airway pressure due to congenital laryngeal cyst was responsible for pneumothorax and pneumomediastinum.

Keywords: Laryngeal cyst; Newborn; Pneumothorax; Pneumomediastinum

1. Introduction

Benign congenital laryngeal cysts are rare entities. They can cause severe respiratory distress immediately after birth. However, few cases have been reported about the complications due to congenital laryngeal cysts. This paper reports a rare case of congenital laryngeal cyst complicated with pneumothorax and pneumomediastinum.

2. Case report

A 3112 g full-term male newborn developed stridor which got worse during crying for 12 h after birth, whose 5-min Apgar score was 10. Chest retractions were present with inspiration. Chest X-ray film showed the presence of right pneumothorax and pneumomediastinum (Fig. 1).

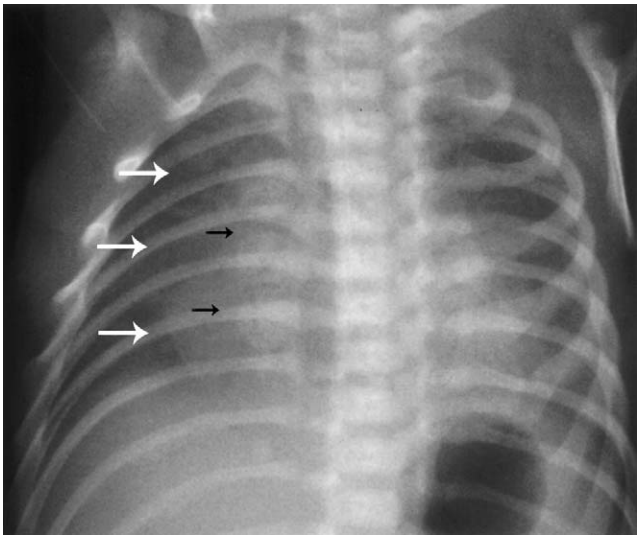

Fig. 1. The chest X-ray film shows right pneumothorax (white arrows) and pneumomediastinum (black arrows).

* Corresponding author. Tel.: +81 75 251 5603; fax: +81 75 251 5604.
E-mail address: hitban@koto.kpu-m.ac.jp (H. Bamba).

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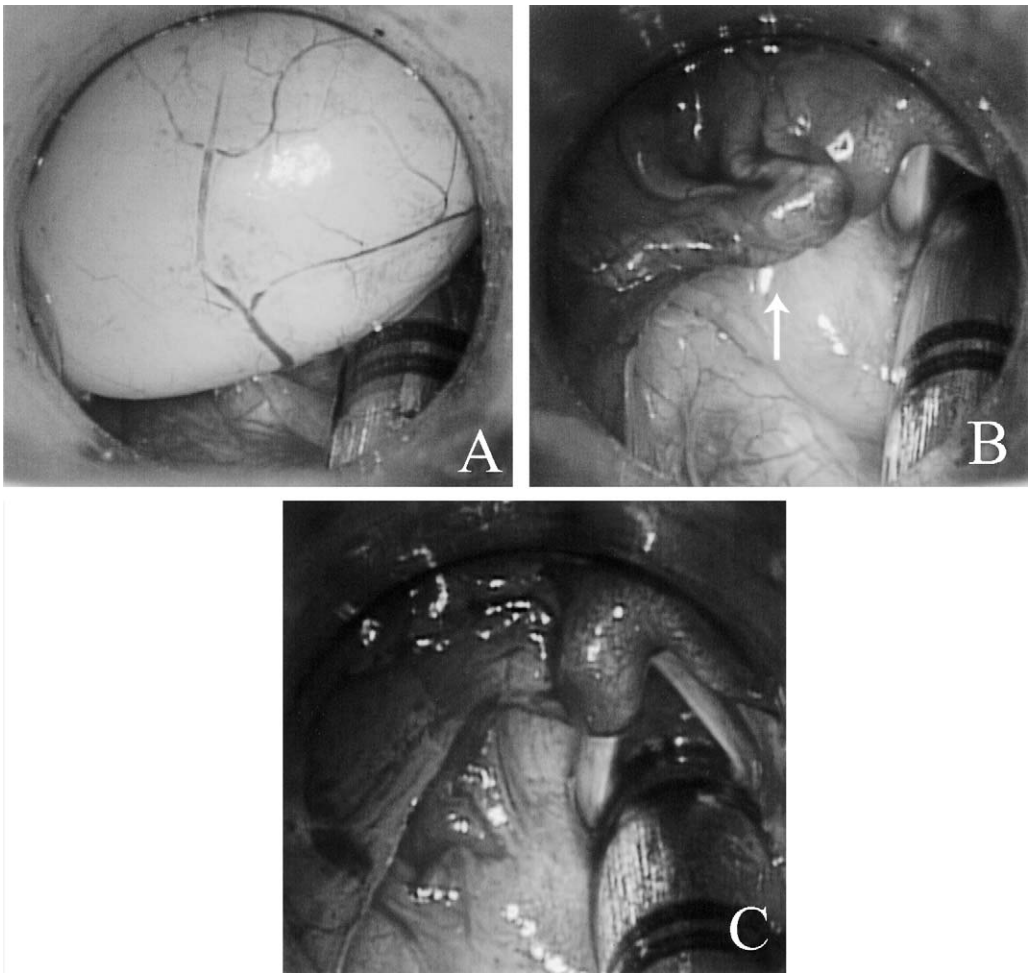

Fig. 2. (A) Large cystic mass occupying almost entire supraglottic space. (B) The cystic mass is diminished after aspirating procedure. It attaches to the left aryepiglottic fold (arrow). (C) The cystic wall is entirely excised.

Otolaryngology consultation was conducted 2 days after birth. Transnasal flexible laryngoscopy revealed a large cystic mass which occupied almost the entire supraglottic airway. It seemed to arise from the vallecula or the aryepiglottic fold, but the origin of the cystic mass could not be detected. Fiber-guided endotracheal intubation was performed successfully and emergency surgery was arranged. The operation was performed with the techniques of laryngomicrosurgery under general anesthesia (Fig. 2). The cystic wall was punctured by 21G fine needle and serous liquid contents were aspirated. The cyst was found to be attached to the left aryepiglottic fold after this procedure. Excision of the entire cystic lesion was performed. Tracheotomy was not necessary because the supraglottic airway could work sufficiently by this procedure.

The patient remained intubated overnight and the next day, extubation was performed without any troubles. The stridor disappeared and respiratory pattern returned to normal. The pneumothorax and pneumomediastinum were improved without further medical intervention (Fig. 3).

The histopathological examination revealed that the cystic wall consisted of normal squamous epithelial cells

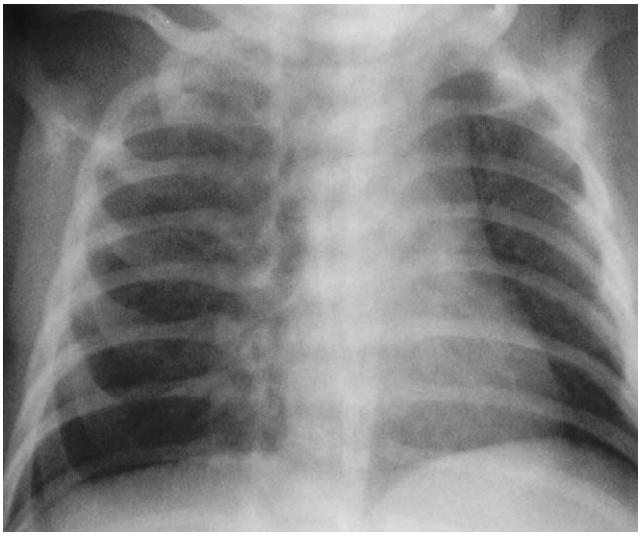

Fig. 3. The pneumothorax and pneumomediastinum are resolved.