

CASE REPORT

Congenital Supraglottic Cyst with Stridor Immediately after Birth

¹Deepanava Jyoti Das, ²Abhijeet Bhatia, ³Ripan Debbarma, ⁴Kalyan Sarma

ABSTRACT

Congenital laryngeal cysts are rare with an estimated incidence of <2 per 100,000 live births. We present here a case report of congenital supraglottic cyst arising from the glossoepiglottic fold that presented with respiratory distress immediately after birth. Direct laryngoscopic examination revealed a cyst in the left supraglottic area. Surgical resection was carried out and stridor disappeared following surgery. Congenital supraglottic cyst presenting with stridor immediately after birth is rarely documented but should be born in mind as a differential diagnosis.

Keywords: Congenital supraglottic cyst, Immediately after birth, Stridor.

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INTRODUCTION

Congenital laryngeal cysts are rare with an estimated incidence of <2 per 100,000 live births.¹ Most laryngeal cysts arise from the vallecula, aryepiglottic fold or the sacculle of the ventricle, with epiglottic cysts being the least common.^{1,2} They have the potential to cause severe airway obstruction and death.³ Most cases present within the first few weeks of life. Stridor and respiratory distress are the most common presenting features secondary

to narrowing of the airway.⁴ Treatment is required only if the patient is symptomatic. Excision of the cyst under magnification or via external approach is the recommended surgical management.⁵

We present here a case report of congenital supraglottic cyst arising from the glossoepiglottic fold that presented with respiratory distress immediately after birth. In spite of extensive search in net congenital supraglottic cyst presenting immediately after birth is rarely documented and no documentation of cyst arising from glossoepiglottic fold. The authors could find only one case of congenital supraglottic cyst presenting immediately after birth, the workers of which claimed it to be only the second reported case in literature.⁶

CASE REPORT

A 3 kg female child delivered at term by normal vaginal institutional delivery, presented with shortness of breath, high respiratory rate immediately after birth. She was not feeding well. The baby received treatment for 7 days in the same institution. The parents reported to this institution on the 8th day. Details of management during initial 7 days were not available.

The baby presented to the department of pediatrics of the current institute, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong, India institute with stridor and respiratory distress.

On examination, the child was irritable and her body weight was found to have decreased to 2.3 kg. Her pulse rate was 130/min and respiratory rate was 62/min. At room air, child was not maintaining saturation with saturation of peripheral oxygen (SpO₂) of 80%. The child was afebrile. The child was found to have inspiratory stridor, with suprasternal and subcostal retraction with conducted sound positive on auscultation.

Cardiovascular and other systemic examination was normal.

Routine investigations (hemogram, serum electrolytes, serum bilirubin, blood urea, blood culture and chest X-ray) were found to be within normal limits.

Department of eye, nose and throat (ENT) was then approached for evaluation of the airway. Direct laryngoscopic examination revealed a cystic lesion in the left

^{1,3}Senior Resident Doctor, ²Assistant Professor
⁴Postgraduate Trainee

^{1,2}Department of ENT, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya India

³Department of Pediatrics, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya India

⁴Department of Radiodiagnosis, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong Meghalaya, India

Corresponding Author: Deepanava Jyoti Das, Senior Resident Doctor, Department of ENT, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong Meghalaya, India, Phone: 9864607633, e-mail: deepanava_das@rediffmail.com

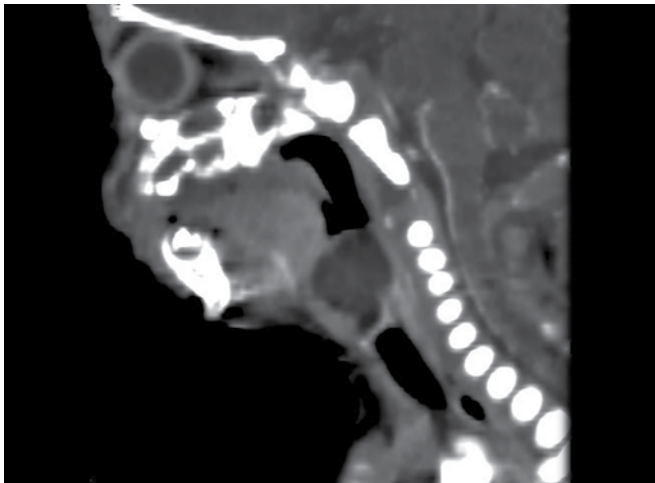


Fig. 1: Computed tomography showing the cyst compromising the airway

supraglottic area that was covering more than half of the airway. Glottis was not visualized. Exact site of origin could not be delineated.

Computed tomography (CT) was done which revealed a cyst in the left supraglottic region significantly narrowing the airway (Fig. 1). The child was intubated and planned for excision under general anesthesia. Surgery was undertaken on day 10 after birth. Direct laryngoscopy was done and incision was given over the cyst, straw colored fluid was drained. Deroofing of the cyst wall was done under microscopic visualization. The cyst was seen arising from left glossoepiglottic fold. Mucoïd discharge was drained out.

Postoperative baby was kept in pediatric intensive care unit (ICU). The infant received single dose of broad-spectrum antibiotic and steroid. Postoperative period was uneventful and the infant was successfully extubated after 24 hours. There was no evidence of upper airway obstruction or distress post extubation and the infant was discharged home on day 15 of life. The child came for follow-up after 1 month and had no further respiratory distress.

DISCUSSION

The most usual cause of inspiratory stridor and supra-laryngeal airway obstruction in infancy is laryngomalacia. Congenital laryngeal cysts are rare cause of airway obstruction but may be fatal. The largest single center series collected only 20 cases over a 15 years period.² Apart from acute life-threatening airway obstruction, presenting symptoms may include stridor, feeding

problems, chest retractions, apnea, cyanosis, failure to thrive and hoarse cry, as in our patient. Severe antenatal obstruction may lead to polyhydramnios and pulmonary hypoplasia. Antenatal diagnosis by ultrasonography and fetal magnetic resonance imaging (MRI) is useful in optimizing immediate postnatal management.⁷

Most infants with congenital laryngeal cysts develop symptoms within the first week of life, though presentation may be delayed also. Our case is among the few cases documented in literature that presented with respiratory distress immediately after birth.

Diagnosis can be easily established by laryngoscopy. Radiological investigations are required to delineate the extent of the disease and for surgical planning.

Treatment can be deroofing, excision of the cyst under magnification or via external approach (laryngofissure or lateral pharyngotomy).⁵ Marsupialization is a definitive procedure for epiglottic cysts and may be performed with carbon dioxide laser, electrocautery or microdissection.³ The current authors carried out deroofing of the cyst using cold instruments.

CONCLUSION

Laryngeal cysts are rare entities; symptomatic cysts are even rarer. Treatment if required is by partial or complete surgical excision. On account of rarity of the disease, multicentric analysis of presentation and management of such cases may be carried out.

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