Congenital saccular cyst of the larynx: a case series

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Background: Congenital saccular cyst of the larynx is a very rare cause of respiratory obstruction in the neonatal period and in older children. It can be a potentially life-threatening condition. It can also present less dramatically later in childhood as a voice disorder. Early diagnosis and treatment are very important to avoid the high mortality associated with undiagnosed cases.

Subjects and method: I report here two cases of laryngeal saccular cyst with different clinical scenarios. The first patient presented immediately after birth with respiratory problems and the second presented later at an older age. Both patients were managed with endoscopic excision.

Conclusion: Congenital saccular laryngeal cyst remains an important cause of respiratory obstruction in the neonate albeit being rare. It is amenable to treatment with minimally invasive procedures.

Keywords: laryngeal cyst, saccular cyst, neonatal stridor, child dysphonia

Introduction
Saccular cyst of the larynx is a very rare condition. When literature is reviewed, most of the articles are either case reports or limited case series.1–6 It could be congenital and present with symptoms immediately after birth or later during infancy and childhood or it can be acquired and present during adult life.3,7 Symptoms include respiratory obstruction, stridor, or change of voice.3,6 Here I report two cases of laryngeal saccular cyst with different clinical scenarios.

Case 1
A full-term male neonate who was born by cesarean section at 39 weeks was noticed to have stridor immediately after birth. He was put on continuous positive airway pressure at age 45 minutes. At age 4 hours, he was intubated with endotracheal tube and put on mechanical ventilatory support because of worsening respiratory distress. The ENT was consulted 1 day after the patient birth. Examination revealed a morphologically normal looking neonate weighing 2.99 kg. Diagnostic bronchoscopy revealed a right supraglottic compressible cystic mass obstructing the view of both vocal cords with normal subglottic area (Figure 1). CT scan showed a right laryngeal cystic mass which was 2.2 × 1.5 × 1.3 cm in dimension compromising the aerodigestive tract. The patient failed repeated attempts of weaning from mechanical ventilator and extubation of varying lengths throughout the 13 days following his birth. Informed consent was obtained and the patient was operated on at age 13 days. At operation, the patient was positioned and an operating laryngoscope was inserted and suspended. Xylocaine 1%
with adrenaline 1:200000 was infiltrated around the cyst. Small incision was made using a round knife and then the cyst was completely enucleated using a blunt hook. The cavity was partially closed using vicryl 5/0. The baby was successfully extubated 48 hours after the procedure and remained stable thereafter with mild stridor. However, 2 weeks later the patient developed worsening stridor and became desaturated. He was reintubated and taken to the operation theater again. To our surprise the cyst appeared to have recurred. Re-excision of the newly formed cyst was done using the same procedure. The patient recovered well this time and he was extubated 2 days after the procedure. He was discharged from the hospital 2 weeks later. Follow-up as outpatient continued for more than 1 year and the baby remained symptom-free.

**Case 2**

A 4-year-old girl was referred to our clinic with a history of dysphonia and stridor since infancy associated with occasional attacks of sudden arousal from sleep. Her parents were anxious because their daughter’s socialization appeared to be affected by this problem. Clinical assessment revealed an otherwise normal child with a clearly hoarse deep voice. Fiber-optic nasopharyngoscopy was done for her, which showed a rounded mass at the hypopharynx with normally looking mucosa obscuring the left vocal fold (Figure 2). CT scan showed a 3 × 2.5 × 2.2 cm cystic lesion in the right side of the larynx. The patient underwent successful endoscopic excision of the cyst using the same technique as in case 1 under general anesthesia. Follow-up for more than 2 years showed complete resolution of the symptoms without any recurrence.

**Discussion**

Congenital stridor and respiratory obstruction can be caused by several conditions. These could be supraglottic, glottis, or subglottic conditions. Laryngomalacia is the commonest

![Figure 1](https://www.dovepress.com/)

*Figure 1* The saccular cyst before and after the first excision in case 1.

![Figure 2](https://www.dovepress.com/)

*Figure 2* The cyst before and after excision in case 2.
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Abstract

Congenital laryngeal saccular cysts are rare and may present as a cause of stridor in neonates and young children. If left untreated, there is a risk of airway compromise and death. The present report describes two cases of congenital laryngeal saccular cysts seen at the Jazan University Hospital in Saudi Arabia. The first case was a 16-month-old male infant with recurrent episodes of stridor. The second case was a 9-month-old male infant with severe stridor at birth. Both patients were successfully treated with endoscopic marsupialization and CO₂ laser vaporization of the cyst lining. The authors conclude that these procedures are effective and safe in the treatment of congenital laryngeal saccular cysts.

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Disclosure

The author reports no conflicts of interest in this work.

References