

Case Report: How a Vallecular Cyst Could Have Become an Airway Emergency

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Received date: June 25, 2022 Accepted date: July 14, 2022 Published date: July 20, 2022

Citation: Adam Kandil, Andrew Caravello, James Espinosa, Robin Lahr, Alan Lucerna. (2022). Case Report: How a vallecular cyst could have become an airway emergency. *J. Clinical Otorhinolaryngology*, 4(4); DOI: [10.31579/2692-9562/064](https://doi.org/10.31579/2692-9562/064)

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Abstract:

Here we report a case of a 40-year-old male with a chief complaint of sore throat. He reported some pain with swallowing. He denied any fevers, chills, sick contacts, cough, congestion, rhinorrhea, ear pain, neck pain, rash, recent travel or recent insect bites. Physical examination was significant for mild posterior pharyngeal erythema. He had some bilateral tonsillar swelling without exudates and without lymphadenopathy. The remainder of the physical examination was normal. A rapid strep testing was negative. He had slight change in his voice at the end of his emergency department evaluation, prompting additional evaluation including a soft tissue CT scan of this neck, which showed a vallecular abscess. The vallecular cyst required surgical intervention. This could have progressed further into an airway emergency. Providers should be aware that vallecular cysts can be infected or noninfected and can present with a cluster of symptoms including sore throat, a sense of a lump on the throat and pain with swallowing.

Keywords: vallecular cyst; vallecular abscess

Introduction:

Vallecular cysts, also known as epiglottic mucous retention cysts are known to be a generally self-limiting laryngeal lesion. They can, however, also be associated with dysphagia and airway obstruction in neonates [1]. In adults, they are usually asymptomatic, and usually incidentally diagnosed. At times, they are diagnosed during rapid sequence intubation and contribute to endotracheal intubation difficulty. The incidence of vallecular cysts (infected and non-infected) is not clearly delineated in the literature. It is said to be rare [2,3].

Case Presentation:

A 40-year-old male presented to an emergency department for the evaluation of a sore throat. He reported that his symptoms began the day prior to emergency department (ED) evaluation. He stated at times he felt that his voice was hoarse. He reported some pain with swallowing. He denied any fevers, chills, sick contacts, cough, congestion, rhinorrhea, ear pain, neck pain, rash, recent travel or recent insect bites. He had all of his childhood vaccinations but was not vaccinated for COVID-19. The patient was assessed as low acuity at triage.

Physical examination was significant for mild posterior pharyngeal erythema. He had some bilateral tonsillar swelling without exudates and without lymphadenopathy. The remainder of the physical examination was normal.

A rapid strep testing was negative. A specimen for throat culture was sent. The patient was reevaluated for anticipated discharge and was noted to have a slight voice change. There was no respiratory distress and there were no other new symptoms or examination findings. A soft tissue neck computerized tomography (CT) scan with IV contrast was performed. The CT scan revealed a vallecular abscess measuring 2.0 X 1.9 cm. There was edema adjacent to the tongue and epiglottitis. [Figure 1] Antibiotic therapy (clindamycin) was initiated. The otorhinolaryngology service was consulted. Five cubic centimeters (cc) of purulent material was drained from the abscess with significant improvement of the patient's pain and with a return to baseline phonation. The patient was admitted to the hospital and was discharged in good condition for later definitive surgical removal of the cyst.



Figure 1: A soft tissue neck computerized tomography scan with IV contrast demonstrating a vallecular abscess measuring 2.0 X 1.9 cm with edema adjacent to the tongue and epiglottitis.

Discussion

A vallecular cyst is classified as a ductal cyst. It is a consequence of obstruction and mucus retention in collecting ducts of submucosal glands. Vallecular cysts are also known as epiglottic mucous retentions cysts. Vallecular cysts are lined with ductal cells [1].

Vallecular cysts in adults are generally asymptomatic and are discovered in the course of intubation. However, vallecular cysts in adults may progress and can cause pain with swallowing, dysphonia and can even become infected and initiate adult epiglottitis [1].

From review of the literature, it appears that a series of patients with adult vallecular cysts by Berger et al is the largest study available.

[1] The series looked at 38 consecutive patients with adult vallecular cysts and identified two distinct groups: infected (63%) and non-infected (37%). 91% of the patients in the infected group had infected vallecular cysts with epiglottitis. One third of the patients with infected vallecular cysts with epiglottitis developed some form of airway compromise. None of the patients with vallecular cysts without infection developed airway compromise. 91% of the patients in the infected group presented with sore throat and odynophagia, typically with onset from 1 to 7 days prior to presentation. 87% had dysphagia. 30% had a change in voice. Where an abscess cavity was present, cultures showed normal pharyngeal flora, Klebsiella pneumonia and Enterococcus species. Non-infected patients generally had a several month progression of sore throat, odynophagia and a sense of a lump in the throat [1].

Non-infected patients with vallecular cysts can have severe difficulty with the process of intubation [2-4]. Pedunculated vallecular cysts can pose particularly difficult problems in airway management [2,5]. Our patient was an adult. Much of the vallecular cyst literature describes pediatric presentations of vallecular cysts in neonates and infants, with various combinations of feeding difficulties, airway compromise and failure to thrive.

The incidence of vallecular cysts (infected and non-infected) is not clearly delineated in the literature. It is said to be rare [2,3,6,8].

Treatment can be aspiration in the short term, but complete removal is definitive and can occur after any infection has been cleared [2]. After surgical excision, the recurrence rate is low [3]. However, recurrence can occur even after definitive transoral excision [7].

Conclusion:

Here we presented a case in which a vallecular cyst progressed requiring surgical intervention. This could have progressed further into an airway emergency. Providers should be aware that vallecular cysts can be infected or noninfected and can present with a cluster of symptoms including sore throat, a sense of a lump on the throat and pain with swallowing.

Conflicts of Interest:

The authors declare that they have no conflicts of interest.

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DOI: [10.31579/2692-9562/064](https://doi.org/10.31579/2692-9562/064)

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