

Thyroglossal duct cyst as a cause of upper air-way obstruction in a dog.

Lain García¹, Jordi Manubens¹, Roberto Gaztañaga¹, Rodrigo Paiva¹, Daniel Borrás²
¹ Hospital Veterinari Molins. Barcelona. Spain ² Citopat Veterinaria. Barcelona. Spain

Introduction

The thyroid gland, although situated in the lower portion of the neck around the trachea, originates in the mouth at the back of the tongue and then moves down the neck during development. As the thyroid gland moves down to its normal position, there is a connection to the base of the tongue that should disappear by the time the thyroid reaches its final position. If it does not, there may be a persistent hollow tube that may allow accumulation of mucoid material and the formation of a cyst at the end. This is known as a thyroglossal duct cyst.

Case History

An 11-year-old male Jack Russell Terrier was referred to the “Hospital Veterinari Molins Cardiology and Respiratory Service” with a 6-month history of cough and progressive unexplained dyspnea. When presented to the hospital, the dog was cyanotic and in marked respiratory distress. Physical examination revealed prolonged inspiratory effort with stridor. These signs were suggestive of upper air-way obstruction.

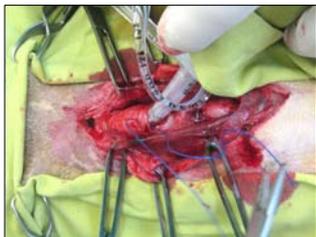


The patient was sedated with acepromazine and buprenorphine, and oxygen was administered by a flow-by system. Once stabilized, a fluoroscopy study showed the presence of a mass behind the epiglottis.



The patient was anesthetized with propofol. A large mass that almost completely occluded the laryngeal lumen was discovered.

A temporal tracheostomy was performed and a 1 cm soft mass was completely resected. Follow-up visits at three and six months after surgery did not show a relapse of the mass. The patient has not shown any subsequent clinical signs of respiratory distress.



Temporary tracheostomy performed to provide an alternate airflow route during surgery.



Partial laryngectomy done by a ventral laryngotomy approach .

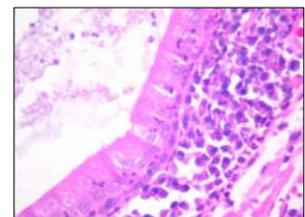
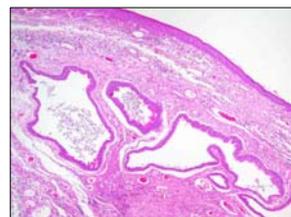


Suture of the thyroid cartilage with interrupted suture in a continuous pattern with no penetration of laryngeal lumen.



Laryngeal lumen without the presence of the mass just after surgery.

A biopsy of the mass was submitted for histologic examination. Histological evaluation demonstrated multiple irregular ductal structures of different sizes covered by a cilindric respiratory-like epithelium. Ductal luminal content included necrotic and degenerative material. Interstitial areas were characterized by a connective and hypervascularized reticular stroma with abundant neutrophilic inflammatory infiltration.



Discussion

Often thyroglossal duct cysts are presented with no clinical signs and are an incidental finding. Nevertheless, an important secondary inflammatory component is occasionally appreciated. Thyroglossal cysts are usually single, smooth, 1-3 cm in size, move when the patient swallows or protrudes above the tongue. Large cysts cause difficulties when swallowing and obstruct the airway. The treatment of choice for a thyroglossal duct cyst is complete surgical excision. Delay in treatment often results in infection, which necessitates antibiotic therapy and delay of the surgery until the infection and inflammation are completely resolved. It is uncommon for the cyst to grow again post surgery even if complete excision of the cyst is not achieved. Post-surgical prognosis is favorable.