

capsules

THE CURRENT LITERATURE IN BRIEF

Laryngeal Paralysis: A Primer

Laryngeal paralysis is a significant and common cause of upper airway obstruction in dogs and is being recognized more frequently in cats. Dysfunction of the recurrent laryngeal nerves results in paralysis of the cricoarytenoideus muscle. Subsequently, the arytenoid cartilages fail to abduct during inspiration and the larynx does not open. The disorder is usually bilateral. In this article, current information on the pathophysiology, diagnosis, and surgical repair of laryngeal paralysis is reviewed. Laryngeal paralysis is diagnosed most often in large- and giant-breed dogs, and most reports indicate that males are more frequently affected than females. No sex or breed predilection has been identified in cats. The mean age range of dogs surgically treated for this disorder is 9.5 to 12.2 years. In cats, the median age at diagnosis is 11 years (range, 4 months to 17 years). The cause of laryngeal paralysis can be genetic or acquired. The hereditary form has been described in several dog breeds. The Labrador retriever is the breed most commonly affected with the acquired form, which is described as an idiopathic, progressive, noninflammatory disease of the recurrent laryngeal nerves. Little is known of the pathophysiology of laryngeal paralysis in cats. In dogs, the authors suggest that laryngeal paralysis may be only 1 clinical sign of a more generalized polyneuropathy with variable neurologic signs. The most common clinical signs of laryngeal paralysis are stridor, exercise intolerance, respiratory distress, and change in phonation. Concurrent disease, including megaesophagus and generalized neuromuscular disease, is frequently present in both dogs and cats. Many dogs will also be hypothyroid, but the relationship between this and the laryngeal paralysis is unclear. Regardless, because of the frequency of concurrent illness, the authors stress the importance of a thorough evaluation of these patients, including a complete neurologic exam. Techniques for diagnosing laryngeal paralysis are described by the authors—the accepted standard is direct visualization of the larynx under light anesthesia. Several anesthetic protocols in dogs were compared for this procedure. Two protocols, intravenous thiopental alone and intramuscular acepromazine with intramuscular butorphanol plus isoflurane by mask, resulted in the least laryngeal depression. Several surgical techniques for treating laryngeal paralysis were also described. Of these, arytenoid lateralization (tieback) yielded the best clinical outcome.

COMMENTARY: This article provides an excellent review of a common and potentially life-threatening upper airway syndrome, laryngeal paralysis. Clinical suspicion is highly sensitive and specific for correct diagnosis of severe laryngeal dysfunction, but partial paralysis in less-affected patients often poses a diagnostic challenge. Selection of an appropriate anesthetic protocol is critical for accurate diagnosis of the problem, and this article provides both anesthetic protocols and surgical treatment options with observed complications and expected outcomes.—Bess P. Brosey, MZS, DVM, Diplomate ABVP & ACVIM

Laryngeal paralysis: Pathophysiology, diagnosis, and surgical repair. Griffin JF, Krahwinkel DJ. COMPEND CONTIN EDUC PRACT VET 27:857-869, 2005.