



MEDICAL LARYNGEAL PARALYSIS

What is LARYNGEAL PARALYSIS?

Laryngeal paralysis is defined as the inability to abduct or open the arytenoid cartilages and attached vocal folds during inspiration. This inability to open the entrance to the upper airway often leads to periods of severe respiratory distress especially during hot, humid weather. Laryngeal paralysis can be an inherited trait in breeds such as Bull terriers, Huskies and Dalmatians. Although seen more often in older, large breed dogs (especially Labrador retrievers), it can be seen in any breed of dog. The underlying cause is unknown (idiopathic) in the majority of cases, however, it can be secondary to neck or chest trauma, head, neck, or chest cancer, systemic neurological disease, or previous neck or chest surgery. Ineffective laryngeal function also predisposes animals to food aspiration into the airway during swallowing because the opening to the airway is insufficiently covered. This entry of food into the lungs can cause life-threatening aspiration pneumonia.

Diagnosis

Early signs of laryngeal paralysis include noisy (goose honking) breathing, voice (bark) changes and exercise intolerance. Onset tends to be very slow, often taking more than 6 months before animals are significantly affected. The condition can initially involve one of the paired arytenoid cartilages or both simultaneously. If only one is involved the clinical signs tend to be more subtle but will progress as both sides become equally affected. As the condition progresses, patients can have difficulty breathing all of the time or end up in a life-threatening respiratory crisis. Breathing with laryngeal paralysis is like having to constantly breathe through a narrow opening such as a straw. Definitive diagnosis is made by direct visual inspection of the arytenoid cartilages under very light sedation to see if they're functioning during inspiration. Additional tests are performed to ensure there are no underlying causes such as cancer or lower airway disease.

Treatment

The surgical treatment for laryngeal paralysis is an arytenoid lateralization (cricoarytenoid lateralization or "tie-back") technique. By "tying back" one of the arytenoid cartilages, the opening to the upper airway is increased 240% on average. This procedure typically results in good long-term function including a significant decrease in respiratory effort, much quieter breathing, and increased exercise tolerance especially in hot weather. Complications can include failure of the procedure to maintain the enlarged opening, incisional infection, post-op laryngeal swelling, and aspiration pneumonia. Surgery cannot restore the airway to its normal function, just permanently enlarge the opening to make breathing easier/ more efficient. Patients will always be more susceptible to aspiration pneumonia, therefore feeding smaller meals and not allowing them to gulp large volumes of water at one time is recommended.

