

LARYNGEAL PARALYSIS

Laryngeal paralysis occurs when there is a defect in innervation (nerve supply) to the muscles responsible for holding the cartilages at the entrance of the larynx open. The cause of the defect in innervation is usually never known. Often just one side (usually the left) is affected, but both may be so concurrently. Sometimes, this condition can be coupled with a generalized degenerative nerve disease leading to weakness in the hind end and trouble swallowing.

The larynx is the structure in front of the trachea. When paralysis is present, air flow into the larynx and trachea is decreased. Hence, the animal can not take in air appropriately and develops clinical signs referable to this. Larger breed dogs, such as the labrador retriever and golden retriever, are most commonly affected.

Affected pets usually have increased noise while breathing (stridor), especially during inspiration (breathing air in). Typically the dogs will be anxious, panting heavily and may have a bluish tinge to their mucous membranes/gums. In an advanced crisis, they may even become distressed and collapse. An event is often brought about by exercise, heat or other reason for panting and heavy breathing. When the pet is relaxed and quiet, they usually show no signs because they are breathing easily and air flow matches demand. When demand increases with exercise and heat, they simply can not bring in enough air to meet demands and go into crisis.

On presentation to the veterinarian, a very high suspicion of laryngeal paralysis occurs based on the sound on inspiration, the appropriate breed and size of dog and an absence of physical exam findings suggesting disease in other parts of the respiratory tract (i.e. lungs). A more definitive diagnosis comes from examination of the larynx with the patient under sedation/light anesthesia. The clinician can actually visualize decreased opening of the laryngeal cartilage(s) during breathing.

Initial treatment involves sedation of the patient to relax them and slow down/ease breathing. Oxygen supplementation must be provided until the animal becomes stable. Definitive diagnostics, such as chest radiographs/x-rays, are done to be sure no concurrent diseases, such as pneumonia, are present. The more permanent treatment of choice is generally surgery. The surgeon performs a “tie-back” procedure to hold the cartilage(s) at the entrance of the larynx open. The procedure generally has a high success rate and most animals go on to be permanently fixed. However, “tie-backs” can break down over time, secondary aspiration of food/water into the airways resulting in pneumonia can occur and paralysis of the opposite side may develop. It is important for owners to be aware of these things when their pet has such a procedure performed.

A pet with breathing difficulties, such as laryngeal paralysis, should always be treated as an emergency. If untreated, it can certainly be fatal. During transport to the veterinary hospital, the best things an owner can do are keeping the pet as quiet as possible and cool. The immediate and long-term prognoses are usually good, with immediate action by the owner and when secondary problems (i.e. heat stroke, pneumonia) are not present.