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VETERINARY VOICE:
Tips of the Trade

Surgery – Geriatric Onset Laryngeal Paralysis Polyneuropathy (GOLPP)

Definition	Canine acquired idiopathic laryngeal paralysis (ILP) is a common condition affecting older, usually large-breed dogs, in which almost all of the intrinsic muscles of the larynx become paralyzed. It is an insidiously progressive disease with high morbidity, where affected dogs develop signs of upper airway obstruction, often becoming severely compromised. It appears from recent studies at Michigan State University that most dogs diagnosed with ILP are in fact presenting with chronic, progressive polyneuropathy and this is better referred to as Geriatric Onset Laryngeal Paralysis Polyneuropathy (GOLPP) rather than Idiopathic Laryngeal Paralysis (ILP).
Signalment and Clinical Signs	GOLPP is most commonly seen in older, large breed dogs, and typically has a slow, subtle, progressive onset and a chronic history. Historical complaints can include noisy and/or difficulty breathing, change or loss in bark, coughing and/or gagging (especially when eating or drinking), exercise and heat intolerance. (Some dogs will present in acute respiratory distress or suffering from severe heat exhaustion.) Neurologic dysfunction is exhibited as regurgitation, conscious proprioceptive deficits, mild ataxia, hind limb weakness and muscle atrophy. Neurologic dysfunction is often overlooked as it may be misinterpreted as weakness from hypoxia or orthopedic conditions in an older pet.
Diagnosis	Diagnosis of GOLPP involves a full physical examination including neurologic assessment for signs of peripheral neuropathy. Laryngoscopic assessment of flaccid (lack of abduction or opening up) of the laryngeal arytenoid cartilages during **inspiration** while the patient is **lightly** sedated. (Slow intravenous injection with one third to one half of the calculated induction dose of propofol followed by Doxapram HCL (2.2mg/kg IV) to stimulate respiration and increase intrinsic laryngeal motion.) Esophogram studies demonstrate that dogs with laryngeal paralysis have abnormal esophageal motility compared with unaffected dogs in all phases (liquid, canned and kibble) with the liquid phase being most affected.
Treatment	In dogs where their airway function is moderately to severely compromised the best long-term treatment is surgery consisting of a unilateral arytenoid lateralization ("tie-back) procedure. (Partial arytenoidectomy and vocal cordectomy is not recommended due to the high complication rates of aspiration pneumonia and glottic stenosis.) However, if severe esophageal or other peripheral nerve dysfunction (such as ataxia and conscious proprioceptive deficits or severe weakness) is also detected, then a non-surgical, palliative approach to treating the GOLPP syndrome may be more appropriate in an older pet. (Keeping pet cool, minimizing excitement or strenuous activity, feeding canned or dry kibble diet and NOT elevating water bowls which could enhance the risk for aspiration).
Prognosis	It is important for pet owners to understand that GOLPP is a progressive syndrome, and dogs vary widely in their presentation and progression of their neurologic disease. Dogs with more severe esophageal dysfunction are more likely to develop aspiration pneumonia with or without surgical treatment of the airway. In dogs with mild esophageal and/or other peripheral nerve deficits, unilateral "tie-back" surgery has a very good prognosis for relief of inspiratory stridor and return to good, pet-quality function. However, other peripheral nerve deficits will continue to progress and may become severe enough over the remainder of the pet's life to affect their ambulation and elimination abilities in the future.
Questions? **Surgical Experts:** **Jim Boulay, DVM, DACVS, MS** **Barb Gores, DVM, DACVS** **Sharon Shields, DVM, DACVS**	The Veterinary Specialty Center of Tucson has board-certified surgeons available for questions and consultations on surgical conditions during the weekdays. A member of the surgery team is on-call 24/7 to provide consultations to VSCT emergency doctors and to perform emergency surgery for patients seen by the VSCT emergency service. Board-certified surgeons have four additional years of training are certified by the American College of Veterinary Surgeons to assure competency in advanced veterinary surgery.