veterinaryspecialtycentertucson

VETERINARY VOICE:
Tips of the Trade

SURGERY - Brachycephalic Airway Syndrome	
Definition	Brachycephalic airway syndrome is partial upper airway obstruction resulting from the conformation of "short head"/"short nose" breeds of dogs and cats. Obstruction may include any of the following airway passages: nasal (stenotic nares), pharyngeal (overlong soft palate), laryngeal (everted laryngeal saccules, laryngeal collapse), and tracheal (hypoplastic trachea). Many of these dogs also have chronically enlarged hyperplastic tonsils which can add to the occlusion of the pharyngeal region and further compromise airflow. Not all brachycephalic breeds have all problems present.
Signalment and Clinical Signs	Commonly affected breeds include the English and French Bulldog, Chinese pug, Boston terrier, Shih Tzu, Lhasa Apso, Pekingese, Persians and Himalayans. The majority of the animals that require surgery are recognized as having noisy and difficulty breathing as young puppies/kittens. If older pets present for sudden onset of clinical signs, an underlying reason for this acute exacerbation must be determined, since brachycephalic airway conformation is congenital.
Diagnosis	Heavy sedation/light anesthesia of the pet is necessary to perform a laryngeal examination to define the potential areas of narrowing. Since anesthesia is then needed to perform the corrective surgeries, often times, the diagnosis and treatment anesthesias are combined. We advise performing airway assessment +/- any corrective surgery when the patient is young (6-12 months of age) at the time of an elective spay or neuter. It is imperative to perform the corrective surgeries prior to the pet developing long-term chronic irreversible changes such as laryngeal collapse, chronic restrictive fibrous pulmonary changes, etc.
Surgical Treatment	Surgical resection of the soft tissues that narrow the airway is the most appropriate treatment for uncomplicated brachycephalic airway syndrome. Resection of stenotic nares, resection of the elongated soft palate and everted laryngeal saccules and tonsillectomy can all be performed to improve airflow. However, these procedures cannot relieve a hypoplastic or collapsed trachea, or laryngeal collapse, nor can they reverse chronic changes in the lower airways that occur in older brachycephalics. The CO2 laser offers multiple advantages in performing these airway procedures because it dramatically controls the potential hemorrhage, minimizes post-surgical swelling since there is no tissue contact/trauma during the resection surgery, and there is less postoperative discomfort due to less bruising and swelling. We can do these surgeries faster and with less trauma using the laser than with traditional techniques.
Prognosis	Prognosis is very good when corrective surgery is performed in the young (6 month to 1 year old) pet, since this opens the upper airways and dramatically delays or prevents the onset of chronic compensatory changes such as laryngeal collapse, chronic barotraumas to the soft tissues lining the airways, noncardiogenic pulmonary edema, inflammation and respiratory muscle fatigue. It is important to advise owners that although corrective surgery will often help to decrease the pet's overall respiratory noise, the pet will still continue to snore and be a noisy breather.
Questions? **Surgical Experts:** **Jim Boulay, DVM, MS, DACVS** **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.

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