

UPPER AIRWAY OBSTRUCTION IN DOGS

Brachycephalic Obstructive Airway Syndrome (BOAS) is a syndrome of respiratory distress that results from structural abnormalities in the upper airways of dogs. The definition of brachycephalic is "short faced", where the dog has a short muzzle. Examples of brachycephalic breeds include Pugs, British Bulldogs, Boxers, Cavalier King Charles Spaniels, Shih Tzu, Boston Terriers etc.



Oscar and Cooper (Boston Terriers)

Structural abnormalities found in brachycephalic dogs include stenotic nares (narrow nostrils), an elongated soft palate and swelling/eversion of saccules in the larynx. These abnormalities cause resistance and obstruction of airflow during breathing and predispose dogs to snoring and breathing difficulties. Dogs that suffer from BOAS for years will develop secondary changes to other soft tissue structures in the throat. The secondary changes include swelling of the walls of the pharynx (throat), collapsing larynx (voice box) and collapsing trachea (wind pipe). These secondary changes will diminish the success of treatment. Occasionally non brachycephalic breeds suffer from elongated soft palates and nose and larynx issues too. Their symptoms and treatment are the same as for brachycephalic dogs.

Virtually all brachycephalic breeds will have some degree abnormality in their airways which predisposes them to BOAS. The age at which a dog develops signs of BOAS will depend on the severity of the abnormalities. Dogs with severe changes may show clinical signs while they are still puppies. Milder abnormalities may not cause problems until the dog is an adult or even middle-aged. Clinical signs include snoring when sleeping, audible noises from the throat when awake (especially when panting), and decreased exercise tolerance. Dogs with BOAS are at risk of developing heat stress during very hot weather because their ability to pant effectively is diminished. Heat stress can be rapidly fatal and is of concern in Queensland summers.

Treatment

The main aim of treatment is to correct as many of the structural abnormalities as possible. This involves surgical corrections to open up the nostrils, shorten the soft palate and increase the opening of the larynx by removing enlarged saccules. The best results are achieved if the surgery is performed while the dog is young, between 6 months and 1 1/2 years old.

Chronic secondary changes with BOAS are difficult to treat. Some dogs with severe anatomical and secondary changes may collapse and require emergency resuscitation. If a dog suffers from severe secondary changes, the usual surgical methods may be of no benefit. A permanent tracheostomy (diversion of airflow away from the upper airways via a permanent stoma created in the neck/trachea) may be required in such instances. Permanent tracheostomies are not undertaken lightly as they require life-long monitoring and life-style restrictions for the dog. For this reason some veterinarians recommend corrective surgery be performed in brachycephalic breeds at the same time they are desexed (six months of age) to decrease the potential for severe airway changes to occur later in life.

Your veterinarian can diagnose BOAS by clinical signs and physical examination and will recommend referral for surgery if appropriate. A general anaesthetic is required to thoroughly examine the soft palate and larynx. Often surgery can be performed under the same anaesthetic. Occasionally chest radiographs (X-rays) and endoscopy is indicated to assess for secondary changes.

Dogs that have suffered from reduced exercise tolerance, loud snoring and noisy breathing prior to surgery will have improved exercise tolerance after surgery. Snoring and noisy breathing improves but the clinical signs may not resolve completely due to other changes in the upper airways which are not treatable.

Surgery of the upper airways can cause acute post-operative swelling of the airways. If this occurs, your pet may require additional hospitalisation and treatment until the swelling subsides. Soft palates may stretch and elongate over a period of time, especially in dogs with ongoing problems like larynx and trachea collapse. Further surgery is usually required to correct this if indicated.

Post operative Care

Your dog will be monitored continuously post-operatively for breathing difficulties for 24 hours after surgery. Occasionally if there is post operative swelling that might cause temporary respiratory difficulty we may keep your dog in hospital for an extra day or two.

Post-operative care will involve feeding your dog soft food only for the next two weeks. Your dog should have only short leash walks and avoid excitement and excessive activity during this period.



Cooper (Boston Terrier)

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