## ANESTHESIA IN BRACHYCEPHALIC DOGS

Anesthetic management of brachycephalic dogs presents challenges before, during and after any surgical, dental or radiographic procedure. Even sedating these dogs can be more risky than for dogs without the brachycephalic's distorted airway. Caution is taken when choosing sedative and anesthetic drugs as some carry more risk for problems specific to brachycephalic dogs.

Vomiting and regurgitation from anesthetic drugs can lead to aspiration pneumonia, so we will probably want to start a brachycephalic dog on anti-nausea medication the day before anesthesia is administered. Usually this will be Cerenia (maropitant) because it works well to counteract the nausea caused by opioid drugs that are part of most anesthetic protocols.

Minimizing stress is important for these dogs, including both emotional stress and environmental stresses such as heat and humidity. A cool environment, low humidity and antianxiety medication are all helpful. A less stressed and less anxious dog requires less restraint for procedures and has less risk for heat stress. Trazadone is the most common antianxiety drug used. It has few side effects, lasts through an entire day in the hospital and does not affect other anesthetic drugs.

At least one chest x-ray should be taken before anesthesia, to check for tracheal stenosis, aspiration pneumonia, hiatal hernia and heart enlargement. All of these problems are more common in brachycephalic breeds.

An injection of a small dose of steroid before anesthesia can reduce airway swelling from the endotracheal (breathing) tube, and we may also follow up with a couple of days of treatment with an NSAID drug such as carprofen.

The endotracheal tube may need to be cut shorter in order to fit better. A tube that is too long doesn't exchange oxygen as efficiently, can get caught on things if it protrudes too far out of the mouth, and can end up reaching only one lung instead of both if it is pushed too far down into the trachea. This means custom cutting and fitting to shorten a standard length tube.

Once a procedure is completed and the patient is waking up, the tube should be left in place until the dog can blink and swallow. This is another safety measure to ensure that no regurgitation or aspiration will occur.

In most cases, anesthesia of brachycephalic dogs goes as smoothly as for any other patient, as long as we are careful to adjust to their needs. If we are worried about how a patient will do during or afterwards we may recommend that a procedure be done at a referral hospital, or that a patient stay at an emergency hospital afterwards where he or she can be monitored more closely than we can overnight. Rest assured, we will do our best to ensure a safe procedure for your pet.



