

BOAS Surgery Lecture

– Describe the components of and pathophysiology of BOAS

Primary Components of BOAS

- Stenotic Nares
- Elongated soft palate
- Hypoplastic trachea

Secondary Component of BOAS

- Everted laryngeal saccules

– Identify which components of BOAS are amenable to surgical intervention

Non-surgical Anatomic Aspects of Brachycephalic Syndrome

- Tracheal hypoplasia
- Nasopharyngeal turbinates
- Redundant pharyngeal tissue
- Macroglossia

Surgical Components of Brachycephalic Syndrome

- Stenotic nares
- Elongated soft palate
- Everted Laryngeal saccules
- Nasal turbinates?
- Laryngeal collapse?
- Tonsil hypertrophy/eversion?

– Describe the surgical options for and approaches to surgical treatment of BOAS

Stenotic Nares

- Wedge Resection – need to ensure adequate depth or else this is only cosmetic and provides negligent air flow improvement
- Alar amputation – must get deep enough to remove entire alar cartilage to be effective

Elongated Soft Palate

- Cut and sew, Laser and Ligasure tool
- Folded Flap Palatoplasty
- Split Thickness
- H Pharyngoplasty

– Advise on the risks of and likely outcomes after surgery for BOAS, including possible complications

Folded Flap Palatoplasty

- Loss of neuromuscular function of soft palate – denervated/excavated pharyngeal muscle
- Higher risk of procedural complications

Laryngeal sacculectomy

- Laryngeal Web
 - Clinical signs of upper respiratory obstruction 1-4 months post-sacculectomy

Laser-Assisted Turbinectomy

- The nasal cavity in normal dogs contributes to 80% of the total airway resistance during inspiration

– Discuss post-anesthetic/post-surgical recovery and postoperative care considerations

Post-operative Recovery

- Slow and calm recovery is preferred
- Extubate with cuff partially inflated
- Careful monitoring
- Some may need a temporary tracheostomy to recover
- Oxygen
- E-collar if sx on external nares
- Increased risk of post-op period aspiration pneumonia with BOAS procedures
- Analgesia – do not sedate too heavily or else airflow may be impacted
- Pre-emptive prophylactic steroid administration before tissue injury and swelling occurs
 - Dexamethasone Sodium Phosphate 0.2 mg/kg IV once given at induction – don't wait for recovery period

Post-operative care

- NPO for the first 12 hours
- Soft food x1 week
- GI protectant medication as needed
- Mild exercise restriction x2 weeks

Overall prognosis is dependent on the severity of the disease. Dogs will never have a normal airway and it is crucial for owners to understand the management of these conditions and surgical recovery

– Discuss long term management considerations

Additional Considerations

- Poor thermoregulation – more prone to overheating
- May exhibit disrupted sleep patterns / sleep apnea
- Predisposed to dermatitis and infections
- Shallow orbit, exophthalmia, corneal ulcers, infections, and risk of ocular prolapse
- Dental crowding
- Dystocia