

Probl Vet Med. 1991 Jun;3(2):188-97.

# **Brachycephalic airway obstructive syndrome.**

[Wykes PM.](#)

## **Source**

Reference Surgical Veterinary Practice, Englewood, Colorado 80110.

## **Abstract**

This is a complex condition, recognized primarily in brachycephalic breeds, that results in varying degrees of upper airway obstruction. The signs consist of respiratory distress, stridor, reduced exercise tolerance, and in more severe cases, cyanosis and collapse. The inherent anatomy of the brachycephalic skull contributes to the development of these signs. Such anatomic features include: a shortened and distorted nasopharynx, stenotic nares, an elongated soft palate, and everted laryngeal saccules. The increased negative pressure created in the pharyngolaryngeal region, as a result of these obstructing structures, ultimately results in distortion and collapse of the arytenoid cartilages of the larynx.

[J Am Vet Med Assoc.](#) 2007 May 1;230(9):1324-8.

# **Surgical correction of brachycephalic syndrome in dogs: 62 cases (1991-2004).**

[Riecks TW](#), [Birchard SJ](#), [Stephens JA.](#)

## **Source**

MedVet and Associates Ltd, 300 E Wilson Bridge Rd, Columbus, OH 43085, USA.

## **Abstract**

### **OBJECTIVE:**

To assess results of surgical correction of brachycephalic syndrome (including stenotic nares, elongated soft palate, and everted laryngeal saccules) in dogs and determine whether dogs with hypoplastic trachea have a less favorable long-term outcome.

### **DESIGN:**

Retrospective case series.

### **ANIMALS:**

62 dogs with brachycephalic syndrome.

## **PROCEDURES:**

Medical records from 1991 to 2004 were reviewed for information regarding signalment, clinical signs, diagnosis, surgery, and long-term outcome. Surgical outcome was rated by owners as excellent, good, fair, or poor. Common abnormalities, treatments, and long-term outcomes among the 62 dogs were assessed.

## **RESULTS:**

Predominantly affected breeds included English Bulldog, Pug, and Boston Terrier. Elongated soft palate was the most common abnormality (54/62 [87.1%] dogs); the most common combination of abnormalities was elongated soft palate, stenotic nares, and everted sacculles (16/62 [25.8%] dogs). The English Bulldog was the most common breed for all abnormalities, including elongated soft palate (27/54 [50%] dogs), stenotic nares (14/36 [38.9%] dogs), everted sacculles (20/36 [55.6%] dogs), hypoplastic trachea (7/13 [53.9%] dogs), and laryngeal collapse (2/5 [40%]). No dogs had everted sacculles alone. Outcome did not differ between dogs undergoing staphylectomy by use of laser or scissor resection. Follow-up information was obtained for 34 dogs; 16 (47.1%) had an excellent outcome, and 16 (47.1%) had a good outcome. Overall treatment success rate was 94.2%, and overall mortality rate was 3.2%.

## **CONCLUSIONS AND CLINICAL RELEVANCE:**

Surgical treatment of brachycephalic syndrome in dogs appeared to be associated with a favorable long-term outcome, regardless of age, breed, specific diagnoses, or number and combinations of diagnoses.

[J Small Anim Pract.](#) 2006 Mar;47(3):150-4.

# **Results of surgical correction of abnormalities associated with brachycephalic airway obstruction syndrome in dogs in Australia.**

[Torrez CV](#), [Hunt GB](#).

## **Source**

University Veterinary Centre, Faculty of Veterinary Science, University of Sydney, NSW 2006, Australia.

## **Abstract**

## **OBJECTIVES:**

To describe clinical features of brachycephalic airway obstructive disease in dogs, the incidence of laryngeal collapse in dogs presenting for surgery and the outcome after surgery in dogs with laryngeal collapse.

#### **METHODS:**

Basic clinical details were reviewed retrospectively in 73 dogs. Presence of laryngeal collapse and short-term outcomes after surgery were determined for 64 dogs with complete medical records. Long-term outcomes were reviewed for 46 dogs by telephone survey between 19 and 77 months following surgery.

#### **RESULTS:**

Stenotic nares were present in 31 dogs (42.5 per cent), elongated soft palate in 63 (86.3 per cent) and everted laryngeal saccules in 43 (58.9 per cent). The most common breeds were the pug (19 dogs, 26 per cent), Cavalier King Charles spaniel (15 dogs, 20.5 per cent), British bulldog (14 dogs, 19.2 per cent) and Staffordshire bull terrier (4 dogs, 5.5 per cent). Laryngeal collapse was present in 34 of 64 (53 per cent) dogs. No dogs died perioperatively and only one dog was euthanased as a result of its respiratory disease three years after surgery. Telephone interviews indicated that 26 dogs (56.5 per cent) were much improved after surgery, 15 (32.6 per cent) had some improvement and 5 (10.9 per cent) showed no improvement. Signs that persisted after surgery were snoring during sleep (34 dogs, 73.9 per cent), stertor/stridor while conscious (23 dogs, 50 per cent), excessive panting (13 dogs, 28.3 per cent) and dyspnoea (10 dogs, 21.7 per cent). Long-term outcome was considered good, even in dogs with laryngeal collapse.

#### **CLINICAL SIGNIFICANCE:**

Laryngeal collapse is relatively common in dogs presented for surgical correction of brachycephalic airway obstructive disease. Dogs with severe laryngeal collapse often respond well to surgery. Clinical signs rarely resolve completely following surgery.

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[J Small Anim Pract.](#) 2006 Mar;47(3):150-4.

[J Small Anim Pract.](#) 2006 Mar;47(3):137-42.

## **Long-term results of upper respiratory syndrome surgery and gastrointestinal tract medical treatment in 51 brachycephalic dogs.**

[Poncet CM](#), [Dupre GP](#), [Freiche VG](#), [Bouvy BM](#).

**Source**

Centre Hospitalier Vétérinaire Frégis, 43 av. A. Briand, 94110 Arcueil, France.

## **Abstract**

### **OBJECTIVES:**

After a first clinical study showing a high prevalence of gastrointestinal tract diseases in brachycephalic dogs presented for upper respiratory syndrome, a prospective study was performed to determine the influence of medical treatment for gastrointestinal tract disorders associated with upper respiratory syndrome surgery.

### **METHODS:**

The gastrointestinal tract and respiratory disorders of 61 brachycephalic dogs presented for upper respiratory syndrome were evaluated. Together with surgery of the upper respiratory tract, a specific gastrointestinal medical treatment was administered. A minimal follow-up of six months was required for inclusion.

### **RESULTS:**

Palatoplasty with rhinoplasty was the most common surgical correction (88.5 per cent). The mortality rate in the perioperative period was 3.3 per cent. Minor complications accounted for 26.2 per cent of cases. No aspiration pneumonia was encountered. A sufficient follow-up was obtained in 51 dogs. The improvement was judged by the owners as excellent or good in 88.3 per cent of the respiratory disorders and in 91.4 per cent of the gastrointestinal disorders. Clinically, a statistically significant improvement was obtained for both respiratory and gastrointestinal disorders.

### **CLINICAL SIGNIFICANCE:**

In comparison with other studies, digestive tract medical treatment combined with upper respiratory surgery seems to decrease the complication rate and improve the prognosis of dogs presented for upper respiratory syndrome.

[Vet Clin North Am Small Anim Pract.](#) 2011 Sep;41(5):969-80, vi-vii.

# **Complications of upper airway surgery in companion animals.**

[Mercurio A.](#)

## **Source**

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## **Abstract**

Surgery of the upper airway is performed in dogs for the correction of brachycephalic airway syndrome and laryngeal paralysis and for temporary or permanent tracheostomy. Although

technically simple to perform, upper airway surgeries can lead to the development of significant postoperative complications. This article reviews complications associated with common surgical conditions of the upper airway. It involves a discussion of brachycephalic airway syndrome and associated respiratory and gastrointestinal complications. It also covers laryngeal paralysis with a focus on unilateral arytenoid lateralization and the complication of aspiration pneumonia. The condition of acquired laryngeal webbing/stenosis and potential treatment options is also discussed. Finally, tracheostomies and associated complications in dogs and cats are reviewed.