Nebulised epinephrine in the postoperative management of brachycephalic obstructive airway syndrome: short-term outcomes in 90 cases (2014 – 2020)

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Objectives

The objective of this study was to retrospectively assess the feasibility of administration of nebulized epinephrine in the postoperative management of brachycephalic dogs. In particular we report on the resting respiratory rates, rates of regurgitation and rates of tracheostomy tube placement in the 24 hours following surgery.

Methods

This is a retrospective study involving client-owned brachycephalic dogs referred for surgical management of brachycephalic obstructive airway syndrome at a single UK institution. Brachycephalic dogs undergoing corrective surgery that were nebulised with adrenaline in the post-operative period were identified. Patients were excluded where medical records were incomplete or if the patient died within 24 hours of surgery, where cause of death was not deemed to be directly related to nebulization. The clinical records were specifically searched for incidences of tachycardia, palor, tremors, nausea, or excitement.

Results

Following exclusions 90 cases were available for analysis. Nebulisation was considered to be well tolerated in 86 out of 90 dogs in this study (96%). Median respiratory rates and heart rates at the time of nebulisation and one hour following were not significantly different (P = 0.125 and P = 0.502 respectively). Two dogs experienced tachycardia, which did not appear to be related to nebulisation with adrenaline. Complications reported in the 24 hours postoperatively included regurgitation (36), increased respiratory noise and effort (10), aspiration pneumonia (4), and inappetence (3). A temporary tracheostomy was placed in 13 (14.4%) dogs.

Statement (conclusions)

Nebulisation with adrenaline is feasible and associated with a low complication rate for the management of postoperative BOAS patients.