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Consensus Statement: Brachycephalic obstructive airway syndrome (BOAS) February, 2021

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This document is intended as part of a series of guidelines to help practitioners (and owners) to appreciate the current understanding of the treatment of BOAS and to make sensible and informed treatment decisions for brachycephalic dogs. It has been prepared by a group of veterinary specialists with extensive expertise in the management of breeds affected by BOAS.

 BOAS occurs in a high proportion of dogs from the extreme brachycephalic breeds (e.g. Bulldog, French bulldog and Pug). BOAS is a progressive disease where often owners do not recognise the clinical signs or, if they do, they may consider them 'normal for the breed'. Dogs from these breeds should be evaluated yearly by a veterinary surgeon for the development or progression of clinical signs which may

- include any or all of the following noisy breathing, exercise intolerance, regurgitation or eating problems, heat intolerance, sleep disorders, collapse.
- Prior to treatment for BOAS, dogs should be thoroughly assessed clinically. This
 should include historical information, full physical examination, an exercise test,
 and further diagnostic investigations as appropriate. Any subsequent treatment plan
 should be based on this clinical assessment and be tailored for that specific dog as
 there are differences both between the breeds and also within individuals of a single
 breed.
- The secondary changes associated with BOAS progress with time. Clinical signs may, therefore, be worse in older animals due to this progression and secondary changes are harder to treat successfully. Surgery is recommended soon after diagnosis for those individuals showing clinical signs.
- At present, there is no evidence which justifies the preventative/ prophylactic surgical management of skeletally immature Bulldogs, French bulldogs and or Pugs in the absence of clinical signs.
- Gastroesophageal reflux and regurgitation are linked to BOAS and can be associated
 with postoperative complications. It is likely that there is a benefit to treating BOAS
 affected dogs, particularly those that suffer with frequent regurgitation, with
 medical treatment, including antacids and diet, prior to surgery or any anaesthetic.
- Duration of anaesthesia is associated with an increase in post-operative complications (mainly regurgitation). Operating on the airway first and as the sole procedure should shorten anaesthetic time and therefore reduce post-operative complications.
- Obesity is linked to reduced airway function, with all obese dogs having a decrease in tidal volume. Pugs in particular have an increase in BOAS severity with obesity. In all brachycephalic dogs, the importance of a lean body condition score should be emphasised.
- Most dogs with BOAS are significantly improved but not cured by surgery. Owners should be fully informed of this prior to surgery and also of the risks of anaesthesia and surgery.
- Any dog that does not benefit from initial surgery may require advanced imaging and further treatment. Some components of the condition (e.g. sleep disorders, frequent regurgitation, nasal obstruction) are difficult to resolve and may require more specialist treatment.
- Conformational changing surgery, including airway surgery, should always be reported to the Kennel Club: https://www.thekennelclub.org.uk/dog-breeding/first-time-breeders/whelping-your-first-litter/reporting-c-sections-and-surgeries/

- There is a licensed respiratory functional grading (RFG) scheme which was developed to grade BOAS in Bulldogs, French bulldogs and Pugs:
 https://www.thekennelclub.org.uk/health-and-dog-care/health/getting-started-with-health-testing-and-screening/respiratory-function-grading-scheme/.

 This scheme is for breeders but is also suitable to screen pet dogs for BOAS and audit treated cases.
- As BOAS is a polygenic inherited condition, we should advise owners and breeders not to breed from dogs that have severe BOAS (respiratory functional grade 3). Dogs with moderate (respiratory functional grade 2) BOAS should only be bred with dogs with no or minimal signs of BOAS.

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