

DOGS WITH SPECIAL FACES

Most people are not familiar with the term "Brachycephalic," but if you own a Pug, Boston Terrier, Pekingese, Boxer, Bulldog, Shih tzu or any one of the other breeds with "pushed in" faces, you should become familiar with this word. The word comes from Greek roots "Brachy," meaning short and "cephalic," meaning head.

Brachycephalic dogs have been bred so as to possess a normal lower jaw, that is, one in proportion to their body size, and a compressed upper jaw. In producing this cosmetic appearance, we have compromised these animals in many important ways and you, as an owner, must be familiar with the special needs of your pet.

THE RESPIRATORY SYSTEM

Brachycephalic breeds are characterized by "brachycephalic respiratory syndrome," which affects the different areas of the respiratory tract. Fortunately, most dogs do not suffer from all aspects of the syndrome but you should be aware of which your particular pet may have.

STENOTIC NARES - This is a fancy name for narrowed nostrils. The brachycephalic dogs begins by having very small nasal openings for breathing. If this is severe, surgical correction is possible.

ELONGATED SOFT PALATE - It is difficult to fit the soft tissues of the canine mouth and throat into the brachycephalic's short face. As a result, the soft palate, which separates nasal passage from oral cavity, flaps loosely down into the throat creating snorting sounds. Virtually all brachycephalics suffer from this but actual respiratory distress is rare except in English Bulldogs. The English Bulldog tends to have more severe symptoms in almost all aspects of brachycephalic syndrome. Excess barking or panting may lead to swelling in the throat which can, in turn, lead to trouble. Again, the soft palate can be surgically trimmed.

TRACHEAL STENOSIS - The brachycephalic dog's windpipe may be dangerously narrowed in places. This condition creates tremendous anesthetic risk and should be ruled out by chest radiographs prior to any surgical procedures.

EVERTED LARYNGEAL SACCULES - The normal larynx has two small pockets called *ventricles* or *sacculles.* When a dog has increased effort in breathing, over time these little pockets will actually turn inside out inside the throat. When this occurs, the protuberances

need to be surgically snipped. In fact, this finding indicates that surgery for the stenotic nares and elongated soft palate is also warranted lest it progress to a full laryngeal collapse.

HEAT STRESS - Because of all these upper respiratory obstructions, the brachycephalic dog is an inefficient panter. A dog with a more conventional face and throat is able to pass air quickly over the tongue through panting. Saliva evaporates from the tongue as air is passed across and the blood circulating through the tongue is efficiently cooled and circulated back to the rest of the body.

In the brachycephalic dog, so much extra work is required to move the same amount of air that the airways become inflamed and swollen. This leads to a more severe obstruction, distress, and further over-heating.

BRACHYCEPHALIC DOGS ARE THE MOST LIKELY CANDIDATES FOR HEAT STROKE.

Altogether, the upper airways of the brachycephalic dog compromises his or her ability to take in air. Under normal conditions the compromise is not great enough to cause a problem; however, an owner should take care not to let the dog become grossly overweight or get too hot in the summer months. Be aware of what degree of snorting and sputtering is usual for your individual pet plus, should your pet require general anesthesia or sedation, your vet may want to take extra precautions or take radiographs prior to assess the severity of the syndrome. Anesthetic risk is higher than usual in these breeds, though under most circumstances the necessary extra precautions are readily managed by most animal hospitals.

To be clear, brachycephalic syndrome can be progressive if it is not corrected at an early stage. Severely affected dogs can actually experience collapse of the larynx and require a permanent tracheostomy (a hole in the throat for breathing).

EYE PROBLEMS

With most of the nasal bones compacted, brachycephalic dogs tend to have trouble with the way their eyes seat in their heads.

First, recognize the prominence of the eyes on these dogs. The boney eye sockets are very shallow. This means that any blow to the back of the head, even a fairly minor one, can cause an eye to pop from its socket and require surgical replacement. This can happen also with too much pulling against the leash if the pet is wearing a collar. You may wish to consider a harness for your pet.

Sometimes, the eyes are so prominent that the lids cannot close all the way over the eyes. This will lead to irritation and drying of the center of the eye unless surgical correction is performed. If you cannot tell by watching your pet blink, watch as your pet sleeps. Dogs who sleep without closing their eyes all the way could do with surgical correction.

Eyelid problems are common in these breeds. Look for persistent wetness around the eyes. In some dogs, the shape of the eyelids prevents normal tear drainage and there is an overflow. This problem cannot be corrected surgically and is not uncomfortable for the pet; however, there is a more serious condition which looks similar. This second condition involves the rolling inward of the eyelids such that the lashes rub on the eye. Surgery may be needed to correct this problem.

Chronic irritation will show as a pigmented area on the eye surface, especially on the side nearest the nose. This is hard to see without a bright light but if it is noted, a search for the cause is warranted. Depending on the location of the pigmentation, surgery may be recommended.

OTHER CONCERNS

The normal dog has 42 teeth in its mouth. The brachycephalic dog also has 42 teeth but a lot less space to fit them in. This means that the teeth will be crowded and growing in at odd angles which, in turn, traps food debris and leads to periodontal disease at a far younger age than in non-brachycephalics. The earlier you begin using home care dental products, the longer you will be able to postpone full dentistry under general anesthesia.

Skin fold infections are common amid the facial folds of the brachycephalic breeds. Be sure to examine these areas periodically for redness. The broad headed nature of these breeds makes reproduction a tricky matter as Caesarean section is frequently needed. Difficult labor is common and, as surgical assistance is often necessary, it is important not to breed females with tracheal stenosis (see above). Breeding is best left to the experts.

Altogether, the brachycephalic breeds show plenty of personality and intelligence just as all dogs do but because of their special needs, they require some extra knowledge of their owners. If you have any questions about your brachycephalic dog, please do not hesitate to call your veterinarian if you have further questions.

PROLAPSE OF THE TEAR GLAND OF THE THIRD EYELID, AKA "Cherry Eye"

The normal canine eye receives its tear film from two lacrimal (tear-producing) glands. One gland is located above the eye and the other is found within the animal's third eyelid. The gland of the third eyelid contributes a significant portion of secretion to the tear film.

In the smaller breeds -- especially Boston terriers, Cocker spaniels, bulldogs and beagles -- the gland of the third eyelid is not strongly held in place. The gland prolapses out to where the owner notices it as a reddened mass. Out of its normal position, the gland does not circulate blood properly and may swell.

TREATMENT - REMOVAL OF THE GLAND

In older times, the prolapsed gland was treated like a small tumor; it was simply removed. This was before the full significance of the gland was realized.

If the third eyelid's tear gland is removed, it cannot be put back in place. If the other tear gland (the one above the eye) cannot supply adequate tears, not an uncommon phenomenon in older small breed dogs, then the eye becomes dry and uncomfortable. A thick yellow discharge results and the eye develops a blinding pigment covering for protection. This condition is called simply "dry eye" or more scientifically "keratoconjunctivitis sicca" and daily medical treatment is required to keep the eye both comfortable and visual. Not only is dry eye uncomfortable for the pet, its treatment is often frustrating and time-consuming and there is expense involved. We would like the dog to maintain the greatest amount of tear producing tissue possible thus removing the gland for cosmetic reasons is not an acceptable treatment method.

TREATMENT - REPLACING THE GLAND

The only acceptable treatment of "Cherry Eye" is replacement of the gland in its proper location. There are two techniques for doing this. The traditional *tucking* method is probably most commonly performed. Here, a single stitch is permanently placed drawing the gland back

where it belongs. Complications are uncommon but the owner should be aware of the following possibilities:

If the stitch unties, the surface of the eye could become scratched by the suture. If this occurs, the eye will become suddenly painful and the suture thread may be visible. The suture can be removed and the problem solved.

The tuck may not be anchored well enough to hold permanently. In fact, this surgery is notorious for this type of failure and frequently a second tuck is needed. If this occurs, we recommend that a board certified ophthalmologist perform the second surgery to maximize the chances of permanent resolution.

Sometimes Cherry Eye is accompanied by other eyelid problems which make the repair more difficult or less likely to succeed. In these cases, again, if the simple surgery is not adequate, we recommend that a veterinary ophthalmologist perform the second surgery to maximize the chances of a permanent resolution.

In a newer surgical technique a wedge of tissue is removed from directly over the actual gland. This technique is more challenging as it is not easy to determine how much tissue to remove. Tiny stitches which will eventually dissolve are used to close the gap so that the tightening of the incision margins pushes the gland back in place. Complications may include:

Inflammation or swelling as the stitches dissolve.

Inadequate tightening of the tissue gap may lead to recurrence of the cherry eye. As mentioned, if the surgery fails, a veterinary ophthalmologist should perform the second surgery.

Failure of the stitches to hold and associated discomfort. Loose stitches could injure the eye depending on the type of suture used.

Sometimes both surgical techniques are used in the same eye to achieve a good replacement. Harmful complications from cherry eye surgery are unusual but recurrence of the cherry eye is common. If a cherry eye recurs it is important to let your veterinarian know so that a second surgery either with your normal veterinarian or with an ophthalmology specialist can be planned. An owner should expect some postoperative swelling after cherry eye repair but this

should resolve and the eye should be comfortable and normal in appearance after about a week. If the eye appears suddenly painful or unusual in appearance, it is important that it be rechecked as soon as possible.

The American College of Veterinary Ophthalmologists also has a web site which includes an index of veterinary eye specialists. This site may be visited at:

www.acvo.com