

Eye disorders of the **BULLMASTIFF**

By Nicky Robertson

“Why was the sight to such a tender orb as the eye confined” - MILTON

Eye disorders in the Bullmastiff can be divided into two categories: those acquired and those inherited. Acquired disease is usually due to an accident or infection, and whereas it is not always preventable, it can at least be treated with a fair degree of success. Inherited eye disease, which can be either present at birth or develop gradually, is however not always treatable. Fortunately it is avoidable.

In 1996 The American College of Veterinary Ophthalmologists recorded four known hereditary eye conditions in the Bullmastiff. Now in 2011 there are ten recorded.

These are: Distichiasis

- Entropion
- Ectropion
- Eury/ macroblepharon
- Glaucoma
- Persistent pupillary membranes – iris to iris
– and all other forms
- Cataract
- Retinal dysplasia folds
- Optic nerve hypoplasia
- Micropapilla

Distichiasis: This inherited eye condition is characterized by a double row of eye lashes causing corneal irritation and ulceration. Treatment is by electrolysis and involves permanent removal of the hair roots. According to Dr Antony Goodhead of the Johannesburg Animal Eye Hospital this condition may be on the increase amongst South African bred Bullmastiffs. Removal of the dog from any breeding programme is recommended.

Entropion: This is a “conformational defect resulting in an ‘in-rolling’ of one or both eyelids which may cause ocular irritation. It is likely that entropion is influenced by several genes (polygenic) defining the skin and other structures that make up the eyelids, the amount and weight of the skin covering the head and face, the orbital contents and the conformation of the skull. In this breed the palpebral fissures may become vertical and / or shaped like a ‘pagoda’. Entropion in the Bullmastiff if severe may require multiple surgical corrections”.

Signs and symptoms

1. As described above – a particular eye shape. According to David Hancock the Bullmastiff’s eye should be almond shaped.
2. The condition can be unilateral or bilateral.
3. The eyes water continuously.
4. The dog may paw at his eyes due to the pain.

5. The dog may blink excessively, especially in bright sunlight which he will tend to avoid.
6. Eventually the cornea will be so damaged that the dog may lose its sight.
7. The condition may be seen within the first few months of life.

Treatment

1. Prescribed eye ointments to alleviate the pain and / or the infection.
2. Surgery to correct the defect.
3. Removal of the dog from any breeding programme is recommended.



This photo shows the loose and now unnaturally shaped eye in a Bullmastiff following surgery for bilateral Entropion. The surgeon was unable to maintain the almond shape due to the severity of the defect. The welfare and comfort of the dog was of a greater importance.

Ectropian: This is the ‘out-rolling’ or sagging of one or both of the eye lids – predominately the bottom eye lid thus destroying the correct (almond) shape of the eye. Like Entropion it is also thought to be polygenic and has the similar symptoms of a watery, discharging eye with a normally bright red infected looking conjunctiva. Dirt and debris are commonly noted around the eye. The treatments and recommendations are the same.

Eury/macroblepharon: Described as abnormally large eyelid openings this condition can lead to secondary issues such as corneal irritation with its concomitant discomfort. If left untreated the dog will eventually become blind. The American College of Veterinary Ophthalmologists suggests a responsible breeding programme that steers away from such exaggeration of facial features.

Glaucoma: Glaucoma is a very serious condition that occurs when the fluid pressure in the eye increases above the normal limits causing the affected eye to appear prominent and / or enlarged and if allowed to progress unchecked will cause irreversible damage to the retina and optic nerve and eventual blindness can result. A gonioscopy examination of the contralateral eye would be highly recommended as a defect in the drainage angle in the eye could result in elective prophylactic treatment or at least would alert the owner to be very vigilant for any ocular problem in the eye.

Signs and symptoms

1. Initially the eye may only be slightly inflamed with a slight discharge.
2. As the pressure increases, a bulging effect will become noticeable.
3. Signs of pain.
4. Partially closed eyelids.
5. Dilated pupil with no light reflex.
6. Eventually the cornea becomes opaque.
7. Eyesight fails due to the pressure on the optic nerve.

Treatment

1. The fluid pressure in the eye must be reduced as quickly as possible by either drugs or surgery.
2. If blindness has occurred and the eye remains painful in spite of medications then as a last resort to make the dog comfortable, the eye could be removed and if desired an intraocular prosthesis can be fitted. However this is not always possible due to the pain and specific post surgery nursing care required if cosmetic surgery was also performed.
3. Whether the treatment is successful or not, the dog should be removed from any breeding programme.

Persistent Pupillary Membranes: Persistent Pupillary Membranes (or PPM's) are strands of tissue remaining in the eye from the blood vessels supplying nutrients to the eye during the foetal stages of development. They are supposed to dissolve and disappear 15 to 17 days before the birth of the puppy but some may still atrophy within the first few weeks of life (up to six weeks). The breeding of dogs affected with the iris to iris condition is left to breeder choice but with the condition in all other forms it is recommended to remove the dog from any breeding programmes.

Cataract: Cataracts come in many different forms and can affect all sorts of dogs but are known to be more frequent in certain breeds – of which the Bullmastiff is one.

They can be small or large, and can grow rapidly or slowly over the years. The owner will usually notice that the eye / s (the lens) becomes cloudy and dull. The dog may show signs of blindness as the vision is lost.

Causes

1. Inheritance is the main reason.
2. Diabetes Mellitus.
3. Toxic Reaction.
4. Trauma.
5. Nutritional deficiencies.
6. Geriatric dogs.
7. Radiation for cancer.

The treatment is surgery which is very expensive and very delicate and should be done by a Specialist in Ophthalmology. If applicable an intraocular lens can be implanted to help restore sight.

Because of the intricate nature of the surgery, good post surgery nursing care is vital.

Dogs with the inherited form of cataracts should not be bred from.

Retinal Dysplasia Folds: This eye disorder is characterised by multiple folding of the retina, which can progress to non-attachment of the retina to the underlying structures.

The Retinal Dysplasia Folds can cause total blindness in one extreme to no apparent defect in the other extreme. According to the American College of Veterinary Ophthalmologists, breeders are given the choice as to breed with the dog or not.

Optic Nerve Hypoplasia: This eye disease is very uncommon but very serious as blindness is the end result. The optic nerve does not develop properly in the developing foetus and after birth, on examination, is found to be small and underdeveloped. There are also usually signs of inflammation and swelling or degeneration.

It may be unilateral or bilateral and if one sided may go undetected as the dog may compensate with his other eye.

The American College of Veterinary Ophthalmologists recommends removal of the dog from any breeding programme.

Micro papilla: This refers to the condition when the optic disc is smaller than it should be. There may not be blindness and breeder discretion is advised.

Advice to Breeders

The National Eye Scheme was launched in 1995 under the auspices of the South African Veterinary Association. One of its objectives is to screen dogs for all eye abnormalities whether inherent or acquired. Results can then be recorded and documented on an official certificate and given to the owner. (Send SAVA eye certificates to KUSA to record on database. No charge & health certificates can be requested from KUSA).

As some breeders are unaware of these problems and / or do not realise the dangers – it is recommended to have the eyes tested by SAVA annually.

However the onus is on the breeder / owner to make the approach, thus making the breeder / owner responsible for the elimination of genetic eye faults and the promotion of sound breeding stock.

Some Breed Clubs have gone as far as to arrange for an examiner to be present at their breed shows. Alternatively arrangements can be made through one's own veterinarian or the Johannesburg Animal Hospital.

All dogs must have some form of identification i.e.: tattoo or microchip.



The SAVA certified eye clearance test with a numbered certificate is painless and easy and is done in a short consultation

Acknowledgements and References

The American College of Veterinary Ophthalmologists 2nd and 5th editions 1996 and 2007 Bullmastiff 1.

Dr Antony Goodhead Johannesburg Animal Eye Hospital who checked the article for correctness and who gave me advice and support.

All photos are South African dogs and are used with the written permission of the owners.

This article is written with the objective of helping Bullmastiff owners / breeders and exhibitors to know their breed and its problems. It is not intended to be a replacement for veterinary practise / care.

Some of these conditions also apply to other breeds of dogs such as the Neapolitan Mastiff, (English) Mastiff, Boerboel, Great Dane and GSD.