

Proceedings of the World Small Animal Veterinary Association Mexico City, Mexico – 2005



Hosted by:





Proceedings

Ophthalmology

SURGERY OF THE EYELIDS



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The upper and lower eyelids are two structures which protect the globe by closing the orbit during blinking. Anatomically, they consisted of an external layer of skin, an internal layer of conjunctiva which contacts with the globe, and a central content of muscles, glands and connective tissue. In the free margin, mainly in the upper eyelid, can be found the eyelashes. There are several eyelid diseases which requires surgical treatment and they can affect some of the structures mentioned above or all of them. Those eyelid diseases such as dermal blepharitis will not be mentioned here.

One of the most common adnexal affections in the dog is the **entropion**, which is the inversion of the free margin of the eyelid. There are different types of entropion but, regarding their surgical treatment, two major groups with different mechanisms of production and, therefore, different treatments can be considered; they are related to different breeds. One of them is the *entropion of the large and giant breeds (like Great Dane), and the other, the entropion of the droopy ear dogs (like Cocker Spaniel).*

In large and giant breeds, the ligament of the lateral canthus has a sort of weakness or laxity which also involves the orbicular muscle in its lower and temporal aspect. It is associated in some cases with disproportion between the size of the globe and the orbit. The most predisposed breeds are the Great Dane, the Rottweiler, the Golden and Labrador Retriever, the Dalmatian, the Weimaraner, etc. This kind of entropion shows up by 5 or 6 months to 12 or 15 months of age, and the surgical resolution should involve the correction of the lateral canthus by different techniques such as Y to V plasty or the arrowhead procedure with or without correction of the orbicular muscle.

In the droopy ear dogs like Cocker and Basset, the problem consists of the laxity of the head skin which is displaced to the face due to the weight of the large and droopy ears. It usually produces entropion (sometime trichiasis) in the upper eyelid and ectropion in the lower one. This affection is often observed after the 5 years of age and is commonly associated with diseases of the eyelashes and keratoconjunctivitis sicca, producing a combined irritative condition. In this case, the surgical correction is made by using a technique called **Ritidectomy**, which consists of the

resection of a large fold of skin around the frontal and the occipital areas tearing the facial skin caudally.

There also are different kinds of entropion in some particular breeds such as the *Saint Bernard*, the *Neapolitan Mastiff*, the *Chow Chow*, the *Bull Dog* and the *Shar Pei* which represent examples of non easy entropion to resolve. In some of these cases exist a combination of entropion and ectropion in the same eyelid, and in some others like the Shar Pei, a degenerative skin is associated with large facial folds. In these cases combined techniques should be made in order to obtain a good result.

The entropion is also seen in young cats, although with no affection of the lateral canthus.

The eversion of the lower eyelid margin is called **ectropion** but it is not a dangerous affection by itself although mild keratoconjunctivitis can be observed in some cases. Surgical correction is not necessary most of the times. Regarding eyelid **wounds**, those that involve the margin should be always apposed by sutures in order to avoid chronic irritation due to the scar. To reestablish the normal function of the eyelid must be the main objective.

Tumors can be found in the eyelids as well and they should be excised with reconstructive and plastic criteria. In some cases like the squamous cell carcinoma in the cat, cryosurgery or chemotherapy can be used added to surgical procedures.

The eyelash affections (trichiasis, districhiasis and ectopic cilia) are other eyelid diseases with surgical treatment. The **trichiasis** is common in dogs with droopy ears and, as mentioned above, many cases are corrected by using ritidectomy. Regarding the **districhiasis**, the treatment of choice is the electro epilation, and it is seen in young dogs as a cause of active epiphora. The **ectopic cilia** are observed more frequently in the middle of the inner aspect of the upper eyelid, usually as an unique follicle with one or more cilia. It is usually diagnosed at 2 to 5 years of age and the treatment consists of the surgical resection of the abnormal follicles.

The **third eyelid or nictitating membrane** is a conjunctival fold with a hyaline T-shaped cartilage plate inside. The arms of this cartilage are immediately under the free margin. The most important diseases are the prolapse of the nictitans gland, the eversion of the cartilage, and follicular conjunctivitis. The **prolapsed gland** is common in the Pekingese, the Bull Dog, the Cocker Spaniel, the Basset Hound, the Beagle and the Neapolitan Mastiff; it is usually more frequent in young dogs and called "cherry eye". The first treatment to try is the replacement of the gland by using different techniques. A recurrence of the prolapse may occur and the removal of the gland could be performed, although there is not agreement about the effects of this technique on tear production.

The **eversion** of the cartilage is a congenital condition which can exist associated to a prolapsed gland or as an unique affection. The treatment is the resection of the affected portion of the cartilage. Finally, **follicular conjunctivitis** is an irritative chronic inflammation located in the posterior surface of the nictitans due to lymphoid hyperplasia. Usually produces mild chronic conjunctivitis and the treatment is the mechanical debridement of the excessive lymphoid follicles.

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