Adnexal Abnormalities and Surgery Tips

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Common adnexal abnormalities in small animals including distichiasis, ectopic cilia, entropion, ectropion, third eyelid gland prolapse, scrolled third eyelid cartilage, and eyelid masses will be reviewed. Specific procedure tips and guidelines for surgical correction of entropion, third eyelid gland prolapse, and eyelid margin mass excision will be presented.

Learning Objectives

- Review common adnexal abnormalities in small animals
- Review detailed surgical procedure for correction of lower eyelid entropion
- Review detailed surgical procedure for surgical correction of third eyelid gland prolapse
- Review detailed surgical procedure for resection of eyelid margin masses involving less than ¼ of eyelid margin
- Review of potential complications, strategies to optimize success and client communication regarding procedures and post-operative expectations

Distichiasis and Ectopic Cilia

Eyelid margins should be evaluated for presence of distichia or ectopic cilia in any canine patient with a history of epiphora, squinting, hyperemia, or recurrent ulceration. Observed distichia in patient that is otherwise comfortable with no signs of keratitis, irritation or previous ulceration may not need treatment. Ectopic cilia are most commonly associated with recurrent unilateral dorsal superficial ulceration with delayed healing pattern in young dogs (<5 years) for which there is a history of chronic epiphora and intermittent squinting. [**Practice Tip**—Recurrent ulcers in dogs less than 5 years old are not "indolent ulcers"/SCCEDs—debridement, linear grid keratectomy and diamond burr debridement/keratectomy are NOT indicated for these ulcers. Look for ectopic cilia, entropion, or tear film deficiency in patients with this signalment]. Removal of ectopic cilia associated with ulceration or irritation is indicated and is typically a combination of excision and cryoablation (or excision and adjunctive laser photoablation/electrocautery) with aide of magnification; this is usually effective to prevent recurrence.

Entropion

Entropion is one of the most common adnexal abnormalities for which surgical intervention is indicated in small animal patients. Any patient with a history of epiphora, squinting and/or hyperemia should be carefully evaluated for eyelid margin position before and after application of topical anesthetic. Ventral or ventrolateral corneal ulceration or keratitis, particularly if recurrent in a young animal (<5 years old) or senile/geriatric animal with weight loss, are also commonly associated with entropion. Anatomic, spastic, cicatricial and geriatric entropion can require temporary or permeant correction to alleviate pain, allow for ulcer healing or prevent secondary ulceration. Temporary eversion "tacking" sutures may be placed to alleviate entropion in the short term to allow for ulcer healing, growth or until definitive surgery can be performed. Temporary tacking sutures may be effective for 1-4 weeks, possibly longer, and may be left in place as long as they are effective with no signs of dermatitis or corneal contact. Bandage contact lens placement may also be helpful if superficial, noninfected ulceration is present, but should not be used if there is stromal ulceration or any evidence of corneal infection.

Hotz-Celsus procedure (or a variant of Hotz-Celsus) is the most common technique and can be used to correct most entropion cases encountered in small animals. Tips for success and variations of this technique to address common types of lower eyelid entropion will be discussed in detail.

Ectropion

Ectropion rarely requires surgical correction unless present centrally in combination with medial and lateral entropion. When present in conjunction with entropion, combination of lateral eyelid wedge resection and Hotz-Celsus can be helpful. Even if the area of ectropion area is central, shortening the eyelid via lateral wedge resection is preferred to minimize chance of central eyelid margin misalignment and optimize cosmesis.

Third Eyelid Gland Prolapse

Surgical correction technique that maintains the gland is recommended. Though there are minimal short-term risk of complications associated with removal of the third eyelid gland, removal increases risk of keratoconjunctivitis sicca in the long term. Though the impact may not be observed for months to years following the procedure, it can be severe with poorly controlled KCS and vision/globe threatening consequences. Surgical removal of the gland/third eyelid is only indicated in cases of highly suspected or confirmed neoplasia. Removal of the gland for any other reason (including multiple unsuccessful attempts at surgical correction of prolapsed gland) should have clear documentation of informed consent of associated risks compared to additional surgery to replace gland and/or retaining the prolapsed gland. Risks associated with medical management/monitoring of a prolapsed gland compared to surgical correction of gland position vary with degree of prolapse and conformation and discussion of those risks should also be documented in medical record if surgical repositioning is declined.

Prolapsed glands that result in impaired eyelid closure or poor axial distribution of tear film (more common with inflamed glands in brachycephalic dogs) have highest risk for axial tear film deficiency and secondary ulcerative keratitis. Frequent lubrication and more urgent surgical repositioning is recommended compared to prolapse of gland that is minimally inflamed with no significant secondary lagophthalmos.

Pocketing, anchoring or combination procedures can be performed to reposition the gland. Advantages and disadvantages of pocketing versus anchoring techniques will be discussed and detailed description of technique and practice tips for pocketing technique will be discussed.

Eyelid Margin Mass

Clinical appearance of chalazia and meibomian adenoma/epitheliomas will be reviewed. Technique for expression and curettage of chalazia and for excisional biopsy of eyelid masses involving <25% of eyelid margin will be discussed (wedge resection and 4-sided “house” techniques). Examples of surgical strategies for larger eyelid margin reconstruction will be included time permitting.

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