

A conjunctival graft was necessary to prevent the eye from rupturing

Pain is not always apparent in descemetocoele as there are fewer sensory nerves in the deeper layers of the cornea than in the superficial layers. Brachycephalic breeds have less sensitive corneas than other dogs and may display minimal signs of ocular pain (Thomson, 2007).

Intraocular pain occurs with glaucoma or uveitis. This patient was depressed and lethargic which are signs consistent with intraocular pain. Systemic non-steroidal anti-inflammatory drugs (NSAIDs) and opioids were administered immediately to provide

Extended care report after graft surgery for a descemetocoele

Abstract

This article describes the nursing care provided to a pug treated with a conjunctival graft for a descemetocoele. A descemetocoele is a deep corneal lesion in which the corneal epithelium and stroma are destroyed, leaving a lesion lined only by Descemet's membrane and corneal endothelium. They are commonly seen in brachycephalic breeds and, if not treated with caution rapidly, can lead to a ruptured globe. Nursing care and restraint of these patients are important considerations for a successful outcome.

Key words: descemetocoele, restraint, ocular surgery, conjunctival graft, intraocular pressure (IOP)

Species: canine
Breed: pug
Age: 9 years
Sex: male (neutered)
Weight: 5.4 kg

History

The patient was presented to the surgery with a 3 day history of a corneal ulcer in his left eye. His owners reported him to be inappetent, depressed and lethargic.

Assessment and initial management

On examination the patient was very depressed and lethargic.

Visible exudates of red blood cells (hyphaema) and corneal endothelium (Featherstone and Stanley, 2002).

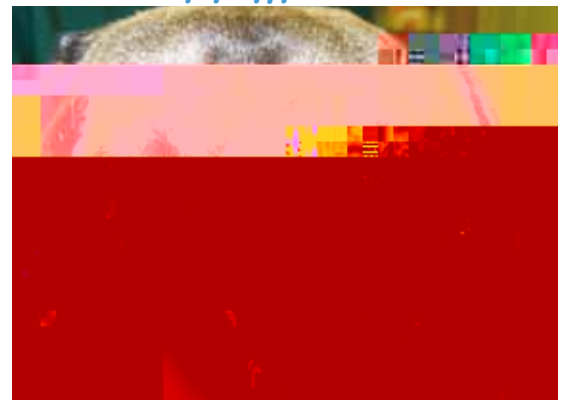
Restraint

Restraining patients can be challenging. The best method of restraint for any situation varies with the species involved, the patient's temperament, and the effect desired.

Generally, for ophthalmic examinations, it is best to use as little restraint as possible. As the patient was a brachycephalic breed, great care was taken to prevent struggling and potential protopsis of the globe which can occur because of the breed's shallow orbits and large eyelid openings.

(Bowcott, 2009)

Figure 1: A photograph showing the eye of a patient with a descemetocoele, characterized by a deep, crater-like lesion on the cornea.



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Veterinary investigations

A preanaesthetic blood sample was taken because of the patient's age. This revealed a mild elevation in blood urea nitrogen (15 mmol/l, reference 2-9 mmol/l) and creatinine (185 µmol/l, reference 27 to 124 µmol/l).

An intravenous catheter was placed in the cephalic vein for an infusion of Hartmann's solution (compound sodium lactate, Aquapharm No 11, Animalcare Ltd) to commence at 4 ml/kg/hour before placing the patient under anaesthetic.

Intravenous analgesia of buprenorphine at 0.02 mg/kg and meloxicam 0.2 mg/kg (Metacam, made by Boehringer Ingelheim) was given. A loading dose of a topical antibiotic was administered to his affected eye every 15 minutes for the first four doses and then continued at one drop six times daily. Topical antibiotics were started as soon as the patient came into hospital and were continued post surgery (Exocin was used). Oral synulox was started after surgery and metacam continued orally. The patient

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strong tissue containing many blood vessels and this makes it a useful graft material to treat deep corneal ulcers. Under a general anaesthesia, a pedicle of conjunctival tissue is taken from the white of the eye and rotated so that it covers the ulcer. This is stitched in place with very fine dissolvable sutures.

Nursing considerations

The induction of general anaesthesia should be smooth and quiet to keep stress at a minimum. With intravenous access already obtained, the patient could be anaesthetized with minimal restraint.

Intubation was performed when he was sufficiently anaesthetized to avoid coughing or gagging. Topical anaesthesia to the larynx and trachea with 4% lignocaine was used to reduce the likelihood of coughing.

The nurse to this patient (the author) secured his endotracheal tube around his lower jaw, rather than around the back of his head. This helped to prevent distortion of the eye area and kept the tube tie well away from the surgical site.

Preparing the eye for surgery and positioning of the patient are important considerations for corneal surgery. Once the patient had been transferred into theatre, he was positioned in sternal recumbency and used a vacuum surgical pillow to place his head in a way that was comfortable for him, that would not lead to discomfort on recovery, and in the best position for the veterinary surgeon to operate, while ensuring a patent airway. The air was drawn out of the

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Recovery

The patient had a smooth recovery. He was placed in a quiet kennel and fitted with an Elizabethan collar to prevent self trauma.

For the 3 days the patient was in hospital, he was walked using a harness rather than a collar and lead to avoid putting unnecessary pressure on his neck. He required regular topical medication so it was important to minimize his stress as much as possible. His Elizabethan collar was replaced after medication was applied to prevent him from causing further trauma to his eye.

Ofloxacin (Exocin, made by Allergan) antibiotic therapy was continued at one drop six times daily. An antibiotic preparation, clavulanic acid and amoxicillin antibiotics (Synulox, made by Pfizer), and an NSAID, meloxicam (Metacam, made by Boehringer Ingelheim), were prescribed for him; these were started the day after surgery.

His pain status was assessed regularly to ensure he was comfortable. The Glasgow Composite Measure Pain Scale (Orskov, 2010) was used as a pain assessment score system to allow a more objective assessment of the patient, which proved very beneficial, especially when it came to a change of nursing shift.

Training clinical staff to recognize the signs of pain and encouraging the use of pain scales helps to improve everyone's observation skills in this area and