SUCEESFUL SURGICAL MANAGEMENT OF TRAUMATIC PROPTOSIS IN A DOG WITH RESTORATION OF FUNCTIONAL VISION

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A three year old Spitz was presented with the history of automobile accident. Clinical examination revealed proptosis which was surgically managed by lateral canthotomy followed by temporary tarsorrhaphy.On first ppostoperative day, ophthalmic examination revealed positive menace and positive PLR reflexes with absence of ocular discharges and eyeball remained well within the socket. Animal has shown shown functional visual outcome with clear fundic reflection without any further complications, within one month period.
Keywords: Spitz, Traumatic Proptosis, Temporary tarsorrhaphy.

Proptosis is the term for the forward displacement of the globe following any head trauma (Mandel, 2000). Due to their shallow orbit, prominent eye and poor eyelid closure, brachycephalic breeds such as the Shih Tzu, Pekingese, Spitz and Pugs are more prone to the issue. Therefore, even minor injuries can result in prolapse. Depending on the survival of the extraocular tissues and the eye, enucleation, evisceration, or repositioning with tarsorrhaphy are the available treatments for proptosis.Prognosis depends on pupil size and reflexes, duration of exposure, other globe or orbital damage, breed and other systemic trauma (Parmar *et al*. 2016).

Case history and Observations

A three year old Spitz was presented to the Veterinary Clinical Complex, College of Veterinary Science, Proddatur with a complaint of impaired vision and protruded right eye ball (OD) on account of trauma due to auto mobile accident (Fig.1). Clinical and detailed ophthalmic examination of the right eye revealed ~~that~~severe periorbital swelling with haemorrhage negative menace and pupillary light reflex (PLR), congested sclera and conjunctiva with purulent discharges were observed in OD. Fracture of the skull was ruled out and the condition was diagnosed as traumatic proptosis. After clinical examination, repositioning of the eye ball was resorted to reduce further complications and to restore functional vision.

Treatment

The region around the eye was cleaned with gauze pads soaked in normal saline to remove dirt and debris. The dog was prepared for aseptic surgery and premedicated with atropine sulphate and xylazine hydrochloride at the dose rate of 0.02mg/kg and 1.0 mg/kg body weight intramuscularly. Analgesia was maintained with tramadol at the dose rate of 4.0 mg/kg of body weight intravenouslyand general anaesthesia was inducedwith diazepam and propofolat the dose rate of 0.5 mg/kg and 5.0 mg/kg of body weight respectively by intravenous route. General anaesthesia was maintained with inhalation of isofluraneat the rate of 2%. After lubricating the cornea with Tobramycin eye ointment, the proptosed globe were manually repositioned and temporary tarsorrhaphywas done as per standard surgical procedures (Fig.2). Post-operatively, antibiotic coverage with Promicef Tazo (ceftriaxone and tazobactum) at the dose rate of 15mg/ kg and corticosteroid (dexamethasone) at the dose rate of 1mg/ kg were administered for five days. The dog was given topical anti-inflammatory with Penfen (0.3%

Flurbiprofen), Hicool Eye Drops (HPMC) and antibiotic with Higati (Gatifloxacin 0.3%) eye drops for 10 days.

Fig. 1: Protruded eye ball

Fig. 2 : Tarsorrhaphy

Fig. 3: Resorption of eye ball and fundic reflection

Results and Discussion

On 12th postoperative day, sutures were removed which were intact and the swelling has reduced. On first postoperative day, ophthalmic examination revealed positive menace and positive PLR reflexes with absence of ocular discharges and eyeball remained well within the socket. Animal had an uneventful recovery and functional visual outcome with clear fundic reflection (Fig.3).

Any type of head trauma can result in proptosis, or the globe shifting forward. Traumatic proptosis can result from blunt trauma from a car accident or an animal fight. The available treatments for proptosis include enucleation, evisceration or repositioning with tarsorrhaphy, depending on the survival of extraocular structures and the eye. Timing of the event has little bearing on how quickly a patient seeks treatment to reduce oedema and inflammation in dogs. The most effective course of treatment for proptosis depends on the type, severity and nature of the globe damage. The most common side effects of traumatic proptosis were third eyelid prolapse, corneal ulceration, strabismus, hyphema, chemosis, hyperemia and facial bone fractures as also reported by Brando *et al*., 2005. Similar findings were reported by Kushawaha *et al.* 2014 in non-descript and

Pekingese dogs; while Joy *et al*. (2009) performed tarsorrhaphy in pug for 10 days The dog was given parenteral antibiotics with topical medications to prevent further complications. Proptosis is amedical emergency of the globe which requires immediate surgical treatment to save vision of the animal.

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