

## Management of traumatic injury in goat (extirpation) - a case study

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### Abstract

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Non-descript goat, weighing 26 kg was presented to the Veterinary Hospital Dadra and Nagar Haveli, Silvassa with clinical observations of excessive lacrimation, purulent discharge and bulging of the right eye due to some penetration 13 days ago. Extirpation of the eye ball with tarsorrhaphy was undertaken after retro bulbar nerve block. The goat showed an eventful recovery with no complications. Clinically animal was dehydrated and there was complete loss of cornea, purulent exudation, bulging of eyeball and oedema

**Keywords:** Goat, eye, irreparable injury, extirpation, transfixation

### Introduction

Goats have prominent eyes, a panoramic field of 320°–340° and a binocular vision of 20°–60°. Tests have been done on male goats to determine their capacity for colour vision and they have been found to distinguish yellow, orange, blue, violet and green from grey shades of similar brightness. Injury to an eye can take place during browsing as thorns or pointed grass may cause trauma. Corneal edema is a common clinical sign of corneal ulceration, keratitis, anterior uveitis, and many systemic diseases, and precludes the direct visualization of intraocular structures by ophthalmoscopy (Whittaker *et al.*, 2007). Severe corneal edema, corneal lacerations or ulcerations, cataracts or ocular masses may preclude visualization of deeper structures with traditional ophthalmoscopic methods. Another common indication for ocular ultrasound is disparity in globe size or an exophthalmic globe. Ultrasound is important to differentiate between enophthalmos, buphthalmus, or exophthalmus due to the presence of retrobulbar masses (Whitcomb, 2010).

### Clinical Examination

Clinical manifestations revealed excessive lacrimation, purulent discharge and bulging of the right eye due to some penetration 13 days ago. Detailed history could not be ascertained. The goat was examined in detail. Goat was dehydrated and the right eye showed complete loss of cornea, purulent exudation, exophthalmos and edematous swelling of the periorbital region (Fig 1). Rectal temperature, heart rate and pulse were within the normal range. However complete blood examination showed mild leukocytosis and increased packed cell volume

### Diagnosis

Present case was diagnosed as irreparable injury of right eye with severe exophthalmos. Extirpation of the eye with tarsorrhaphy provided the best mean of treatment with no post-surgical complications and successful recovery of the goat.



Fig 1

### Treatment

The animal was stabilized with prophylactic antibiotics Chloramphenicol 1g I/V daily for three days, NSAIDS Meloxicam at 0.2 mg/kg and Fluid therapy- RL followed by 25% glucose and Methyl-prednisolone before surgical intervention. Extirpation of the eye ball with tarsorrhaphy (Fig 2) was undertaken after retro bulbar nerve block with 2% lignocaine (8 ml total) at four points. Eye lid margins of the affected eye were sutured with continuous silk sutures for traction and the incision was started 1 cm away from the suture line encircling the complete eye. Orbital fat and the globe were separated by blunt dissection after cutting

all the muscles. Optic cord was served after Transfixation suture with Catgut No1 (Fig 3). Orbital cavity was packed with sterile bandage impregnated with povidine Iodine, leaving the small end towards the medial canthus for removal after 48 hrs (Fig 4). Skin was sutured by interrupted pattern using silk (Fig 5).



Fig 2



Fig 3



Fig 4



Fig 5

Post operatively animals was given inj.Terramycin at 10 mg/kg body weight intravenously, further animals was kept of fluids for three days. After 17 day the skin sutures were removed. The goat showed an eventful recovery with no complications.

### Result and Discussion

Irreparable injuries of eye or severe orbital and eye ball injuries, neoplastic growth in small ruminants need Enucleation or Extripation of the eye depending upon the nature of malady and surgeon's choice (Tyagi and Singh, 2010). Acquired traumatic injuries of eye occur at higher incidence than the congenital diseases (Das *et al.*, 2008; Ahmed and Hassanein, 2012; Venugopalan, 2000). Present case was diagnosed as irreparable injury of right eye with severe exophthalmos. Extripation of the eye with tarsorrhaphy provided the best mean of treatment with no post-surgical complications and successful recovery of the goat (Chawla *et al.*, 1996).

### Conclusion

Most of the eye injuries are caused by foreign objects like thorns, bushes, stings and other pointed object. Sharp traumas are caused by grass tips, bamboos etc.Goats do encounter such injuries while browsing or grazing. A similar irreparable injury of right eye with severe exophthalmos was corrected and Extripation of the eye with tarsorrhaphy was done which provided the best mean of treatment with no post-surgical complications and successful recovery of the goat.

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