

## Retrobulbar Orbital Cyst in a Goat Kid: A Probable Case of Ocular Coenuriosis and its Surgical Management

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### ABSTRACT

A 3 month old female goat kid with the history of unilateral progressive protrusion of the left eye ball, congestion of the conjunctival membrane and loss of vision since a month, was presented at District Veterinary Complex, Ganderbal, Jammu and Kashmir, India. Clinical and ultrasonographic examination revealed it to be a case of parasitic retrobulbar cyst. Surgical extirpation of eyeball was performed under local anaesthesia and the animal recovered uneventfully.

**Keywords:** Female goat kid, Parasitic retrobulbar cyst, Anaesthesia, Ultrasonographic

### INTRODUCTION

The different causes which may lead to exophthalmia include retro-bulbar abscess, cellulitis, haematoma, glaucoma, tumors, cysts, eosinophilic myositis, lacrimal gland affections, foreign body granuloma and trauma (Boydell 1991; & Haridy et al., 2014). Exorbitism has also been reported to occur due to exophthalmic goiter, enzootic nasal adenocarcinoma (Delas et al., 2003) and conidiobolomycosis (Silva et al., 2007).

Retrobulbar parasitic cysts can rarely affect animals and may occur due to hydatidosis and cysticercosis (Holmberg et al., 2007; & O'Reilly et al., 2002). Coenuriosis is a major parasitic disease in small ruminants throughout the world (Oryan et al., 2010) and has commonly been reported to affect shoulder, thigh (Madhu et al., 2014), neck, diaphragm, heart, spleen, kidney, rectum, uterus, urinary bladder, lumbar region (Oge et al., 2012) and lower eyelid (Raidurg & Reddy 2009).

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Extra-cerebral coenurosis have been reported to affect large number of goats (Rao et al., 2018). Ocular coenurosis has been found to be very common in humans (Ibechukwu & Onwukemr, 1991). Coenurosis has been diagnosed by ultrasonographic and x-ray studies followed by surgical management (Ahmed & Haque 1975; & Biswas, 2013). The present study describes a case of retrobulbar cyst in a goat kid and its surgical management.

### CASE HISTORY AND DIAGNOSIS

A 3 month old female goat kid with the history of unilateral progressive protrusion of the left eye ball and congestion of the conjunctival membrane since a month was presented at District Veterinary Complex, Ganderbal, Jammu and Kashmir, India. Clinical examination of the animal revealed chemosis, enlargement and protrusion of the left eye ball (Fig. 1). The cornea of the eye was opaque, necrosed and covered with faecal matter, with complete loss of vision. The kid was restrained properly and ultrasonographic examination was performed using a 5 MHz convex transducer. The probe was applied gently over the eyelid after application of coupling gel. Ultrasonography of the affected eye revealed the presence of a fluid filled structure (hypochoeic cavity) with highly echogenic (hyperechoeic) structures floating (Fig. 2). Based on observations and clinical findings it was diagnosed to be a case of retrobulbar cyst. Keeping in view the future prognosis of the case it was decided to go for surgical extirpation of the eyeball.

### TREATMENT AND DISCUSSION

Pre-operatively, Ceftriaxone (Monocef @10 mg/kg b.wt.) and Meloxicam (Melonex @0.2 mg/kg b.wt.) were administered intravenously. The animal was restrained properly in right lateral recumbency with the affected eye uppermost. Since the eye ball was excessively bulged it was decided to attempt local infiltration anaesthesia by using using 2%

lignocaine hydrochloride solution. After aseptic preparation of the affected eye, incisions were made from the eyelid margins and were connected at the level of the medial and lateral canthi. Blunt dissection was continued until the eye ball came free from the orbital cavity and was totally extirpated (Fig. 3). The orbital cavity was packed with sterile gauze. The skin margins of the orbital cavity were apposed in simple interrupted pattern using silk suture material leaving an opening at the medial canthus for daily antiseptic guaze change. During enucleation of the eye, a cyst filled with a translucent sandy fluid was observed in the periorbital fat, after cutting the retractor bulbar muscles. The cyst measuring 10 cm x 6 cm was loosely located between the retractor bulbar muscles and the orbital fat and contained a large number of white clusters of scolices. White scolices were protruding from the inner wall of the cyst which is suggestive of a case of coenurosis (Fig. 4). Post-operatively, ceftriaxone (Monocef @10 mg/kg b.wt.) for five days and Meloxicam (Melonex @0.2mg/kg b.wt.) for three days were administered intramuscularly. Local antiseptic dressing for surgical wound with dilute liquid povidone iodine was done for 10 days followed by suture removal. Coenurosis has emerged as a major parasitic disease of zoonotic importance in developing nations due to inadequate measures for proper disposal of contaminated carcasses (Kheirandish et al., 2012). The feeding of sheep and goat carcasses and offal to the dogs should be restricted and regulated. Surgical removal and management of cyst from various sites has been reported by a number of authors but it is not a feasible and practical method in endemic regions (Gahlot & Purohit 2005). In endemic areas proper hygienic disposal of carcass and offal should be carried out by incineration or deep burial. Further, small ruminants should be provided prophylactic anthelmintic therapy at regular intervals.



Fig. 1: Kid with exophthalmos

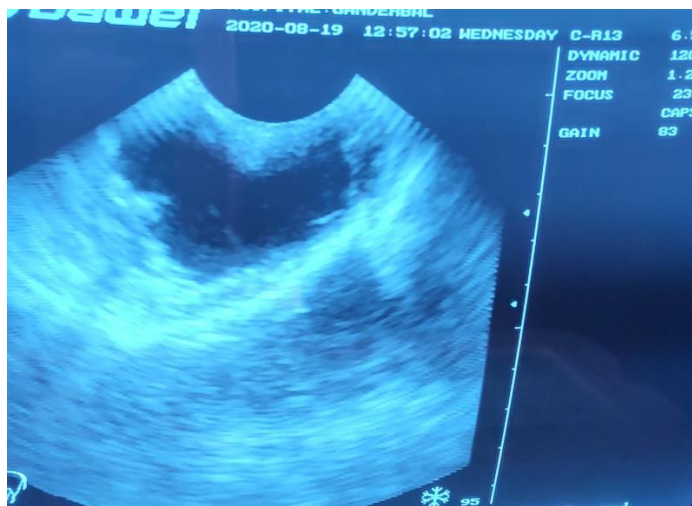


Fig. 2: Fluid filled cavity with highly echogenic (hyperechoic) floating contents

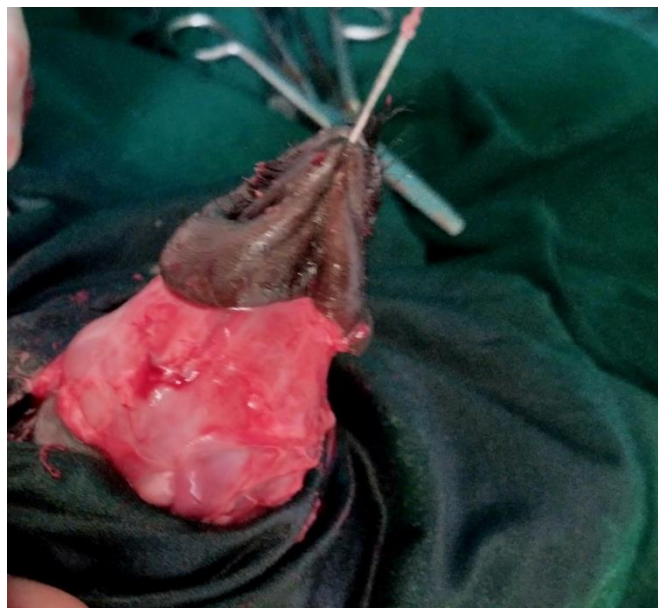
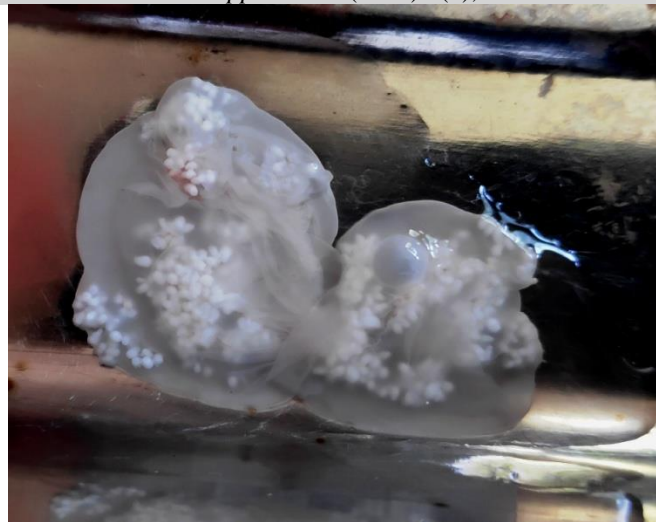


Fig. 3: Extirpation of eyeball out of orbit



**Fig. 4: Fluid filled cyst with scolices inside**

### REFERENCES

- Ahmed, J. U., & Haque, M. A. (1975). Surgical treatment of coenuriasis of goats. *Bangladesh Vet. J.* 9, 31–34.
- Biswas, D. (2013). Ultrasound diagnosis and surgical treatment of coenurosis (gid) in Bengal goat (*capra hircus*) at Chittagong metropolitan area, Chittagong, Bangladesh. *Sci. J. Vet. Adv.* 2, 68–75.
- Boydell, P. (1991). Fine needle aspiration biopsy in the diagnosis of exophthalmos, *J Small Anim Practice*, 32, 542–546.
- De las, H. M., Ortn, A., Cousens, C., Minguignon, E., & Sharp, J. M. (2003). Enzootic nasal adenocarcinoma of sheep and goats, *Curr. Top, Microbiol. Immunol.* 275, 201–223.
- Gahlot, T. K., & Purohit, S. (2005). Surgical management of gid (coenurosis) in goat: case report. *Intas Polivet*, 6, 297–298.
- Haridy, M., Sadan, M., Omar, M., Sakai, H., & Yanai, T. (2014). *Coenurus cerebralis* cyst in the orbit of a ewe: research communication, *Onderstepoort J. Vet. Res.* 81, 1–4.
- Holmberg, B. J., Hollingsworth, S. R., Osofsky, A., & Tell, L. A. (2007). *Taenia coenurus* in the orbit of a chinchilla. *Vet. Ophthalmol.* 10, 53–59.
- Ibechukwu, B. I., & Onwukeme, K. E. (1991). Intraocular coenurosis: a case report. *Br. J. Ophthalmol.* 75, 430–431.
- Kheirandish, R., Sami, M., Azizi, S., & Mirzae, M. (2012). Prevalence, predilection sites and pathological findings of *Taenia multiceps coenuri* in slaughtered goats from south-east Iran. *Onderstepoort J. Vet. Res.* 79, 1–5.
- Madhu, D. N., Mahan, T., Sudhakar, N. R., Maurya, P. S., Banerjee, P. S., Sahu, S., & Pawde, A. M. (2014). *Coenurus gaigeri* cyst in the thigh of a goat and its successful management. *J. Parasit. Dis.* 38(3), 286–288.
- O'Reilly, A., McCowan, C., Hardman, C., & Stanley, R. (2002). *Taenia serialis* causing exophthalmos in a pet rabbit. *Vet. Ophthalmol.* 5, 227–230.
- Oge, H., Oge, S., Gonenc, B., Ozbakis, G., & Asti, C. (2012). Coenurosis in the lumbar region of a goat: a case report. *Vet. Med-Czech*, 57, 308–313.
- Oryan, A., Nazifi, S., Sharifiyazdi, H., & Ahmadnia, S. (2010). Pathological, molecular, and biochemical characterization of *Coenurus gaigeri* in Iranian native goats. *J. Parasitol.* 96, 961–967.
- Raidurg, R., & Reddy, P. M. T. (2009). Parasitic cyst (*Coenurus gaigeri*) in the lower eyelid of a kid—a case report. *Intas Polivet*, 10, 302–303.

Rao, J. R. K., Bora, S., Gopalakrishna, M. V., & Srikanth, K. (2018). A Rare Case of Coenurus Gaigeri Cysts in a Kid and Its Successful Management. *Int. J. Pure App. Biosci.* 6(1), 1379-1382.

Silva, S. M., Castro, R. S., Costa, F. A., Vasconcelos, A. C., Batista, M. C., RietCorrea, F., & Carvalho, E. M. S. (2007). Conidiobolomycosis in sheep in Brazil, *Vet. Pathol.* 44, 314–319.