Available online at www.ijpab.com

DOI: http://dx.doi.org/10.18782/2320-7051.5146

ISSN: 2320 – 7051

Int. J. Pure App. Biosci. **6 (1):** 1379-1382 (2018)

Research Article

International Journal of Pure & Applied Bioscience

OPEN ACCESS

A Rare Case of Coenurus Gaigeri Cysts in a Kid and Its Successful Management

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Received: 6.07.2017 | Revised: 26.08.2017 | Accepted: 1.09.2017

ABSTRACT

A 3 month old non descript female kid was presented to Veterinary clinical complex, College of Veterinary Science , Korutla with history of swelling located posterior to supraorbital process and at left mandibular region. Physical examination revealed a large fluctuating fluid filled sac with distinct dimension. Exploratory puncture of the swelling at the posterior aspect of supraorbital process and left lateral aspect of the mandible revealed colourless transparent fluid confirming it as a cyst. On incision on the cyst a transparent sac like structure with rice grain like particles attached to the sac came out. Parasitological examination of the sac revealed it as a Coenurus gaigeri, the intermediate stage of T. multiceps gaigeri. The animal recovered completely by 15th postoperative day without any complications. This is being described in detail as under.

Key words: *Coenurus gaigeri cyst, Kid*

INTRODUCTION

The parasitic nature of gid caused by *Coenurus cerebralis*, the larval form of the cestode *Multiceps multiceps* was recognised[4,6] for the first time by describing multiple buds with four suckers and a double circle of hooks at the inner surface of the bladder removed from sheep brains. Gaiger[3] examined coenuri in the connective tissues of two goats in India. Wrongly, he determined his findings as larval stage of *Multiceps serialis*. A further case of Coenurosis in intra-muscular connective tissues of a goat in India was detected two years later[2]. Hall[5] decided that these cysts differ from those of *M. serialis* and described a new species, naming it *M. gaigeri* in honour to Dr. Gaiger. In the following time till recent years numerous cases of extra-cerebral coenurosis in goats have been reported. This article presents a case of *C. gaigeri* cysts at unusual sites like posterior aspect of supraorbital process and at left mandible region of a non-descript kid and its successful surgical management.

Cite this article: Rao, J,R.K., Bora, S., Gopalakrishna M.V. and Srikanth, K., A Rare Case of Coenurus Gaigeri Cysts in a Kid and Its Successful Management, *Int. J. Pure App. Biosci.* **6(1):** 1379-1382 (2018). doi: http://dx.doi.org/10.18782/2320-7051.5146

Case History & Observations

A 3month old non descript female kid was presented to the Veterinary clinical complex, College of Veterinary Science, Korutla with history of swelling posterior to lateral aspect of supraorbital process causing pressure on the eyeball resulted in bulging of eyeball (Fig.1). Blepharitis and congestion of the conjunctiva were also seen. Similar type of swelling was also noticed at the left lateral aspect of the mandible (Fig.2). The kid had normal temperature, respiration and pulse. Physical examination of the swellings revealed soft structure which fluctuated on palpation. Based on the history and physical examination it was tentatively diagnosed as Cyst.

RESULTS

Exploratory puncture of the swellings at the posterior aspect of lateral aspect of supraorbital process and lateral mandible revealed colourless transparent fluid confirming them as a cysts (Fig.1). Same procedure was applied on the other cyst too. Incision on the cysts at its dependent portion revealed small fluid filled bag like structure with white granules (rice grain like) on it (Fig.2). The cavities of the cysts were flushed with betadine and setons with tincture iodine were placed. The animal was given Inj. AC vet 100mg intramuscularly and Liq. Fentas plus @ 1 ml/kg body weight orally. The setons were removed on the next day and the cavities of the cysts were again cleaned and new setons with betadine were applied. This procedure was followed on alternate days till the cavity of the cysts were obliterated (15 days). The Inj. AC vet was given for five days only to check secondary bacterial invasion. The animal was recovered uneventfully by 15^{th} post operative day.The cyst was removed in intact and it was bladder like having 4 cm dimensions containing colourless transparent fluid with numerous macroscopic invaginated protoscolices in clusters attached to the internal surface of its wall(Fig. 3). Microscopic view of single scolex showed four suckers and one rostellum armed with a double crown of 30–32 hooks with hooklets (Figure 4). Typical taenid hooks were characteristic of those of coenurus, and being extra cranial, the cysts were identified as *C. gaigeri*, the intermediate stage of *T. multiceps gaigeri*.

DISCUSSION

Coenurosis (gid or sturdy) has been principally a fatal disease of ungulates, especially sheep, caused by larval forms of Taenia multiceps. The cystic larvae (*C. cerebralis*) essentially develop in the brain or spinal cord and predominantly affect normal functioning of the central nervous system (CNS) of the parasitized host including man[1,13]. Contrary to above, occasionally aberrant sites of prediction of the metacestode including neck muscle[11], eyelid[9], skin[10,15], thigh muscles[7], abdominal muscles[12], heart[17], kidney[8] and lymphnodes[16] especially in goats, with an alternate name (*C. gaigeri*), have been documented. In a majority of coenurie affected goats, the cysts anchor, develop, mature and cause asymptomatic focal lesions in extra cranial aberrant sites. The lesions often persist throughout the life span of the host[13]. This seems to be governed by multiple factors, including the quantum and periodicity of infection intake, subsequent in situ ongoing events of the hostparasite interaction, age and acquired immune status of the goat, etc. Chronic infections are more prevalent in the goats, aged between one to two years, as reported herein[14]. Poor awareness about proper disposal of contaminated carcass leftovers further aggravates the situation in a majority of South Asian countries. Goats, being intermediate host usually get the infection from the dog's excreta therefore the treatment of dogs in and around the farms for tapeworm should be made. Entry of street dogs to goat peddocks should be prevented for control of this ailment. In conclusion, being the disease is concerned to zoonotic importance, periodical deworming, proper disposal of faecal material, examination of carcass and appropriate cooking of meat can prevent the acquiring disease by human.

Fig. 1: Bulged right eye and lateral left mandible

Fig. 2: Gaigeri cyst coming from the incision on cyst at mandibular region

Fig. 3: Cyst of coenurus gaigeri

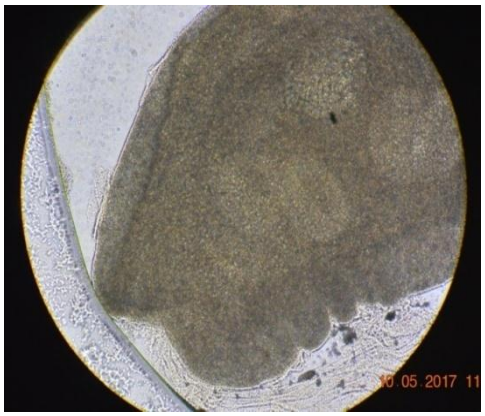

Fig. 4: Microscopic picture of protoscolex of coenurus gaigeri showing extra cranial hooks

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