Coenurusis and its Surgical management in a Kid

A. Velavan, H. Pushkinraj and B. Justin William
Department of Clinics
Madras Veterinary College
Tamil Nadu Veterinary and Animal Sciences University
Chennai - 600007 (Tamil Nadu)

Abstract
A kid was reported with tumors growth all over the body (a total of nine) which were diagnosed as coenurus cysts. Under general anaesthesia, the kid was operated for the coenurus cysts and all the cysts were exteriorized surgically and tincture iodine instilled into the cavity sutured. Skin sutures removed after seven days. No recurrence of cysts was observed up to one year.

Keywords: Coenurus gaigeri; Coenuriosis; Cyst; Kid

Introduction
Coenurosis is one of the important zoonotic diseases among the parasitic diseases. It is caused by larval stage of dog tapeworm mostly Taenia multiceps. The adult of these worms live in the intestine of dogs and pass eggs which are then ingested by intermediate hosts like sheep, goat, cow and horse. Human are considered as accidental intermediate host. Upon ingestion of eggs, oncospheres escape from the eggs, penetrate the gut wall and enters the circulation and form fluid filled bladder like cysts in various tissues called coenurus. Most commonly the cyst develops in the brain and spinal cord of the animals and affects the central nervous system (Moghaddar, 2007). Rarely the cyst also reaches other sites like subcutaneous space and muscular tissues and matures (Ghosh et al., 2005; Islam et al., 2005). There are few reports available about the occurrence of the coenuurus cyst in other sites apart from CNS. Maity and Bandopadhyaya (1991) reported the Multiceps gaigeri cysts in masseter, lion and other muscles. Because of the uncommon occurrence of Coenurus gaigeri very few records exists of its biology, pathogenesis and pathology (Oryan et al., 2010). This paper describes the occurrence and surgical removal of Coenurus gaigeri in the subcutaneous and muscular areas in a kid.

History and Diagnosis
Five months old female non-descript kid was brought with the complaint of developing tumors all over the body. History revealed that the kid was maintained along with a non-descript dog, near a slaughter house area. Physical examination revealed soft fluctuating cyst like structure in the prescapular, medial thigh regions and lateral thorax regions. Ultrasound ruled out that the cystic structures were not lymph node enlargements. To diagnose the cystic content, one cyst was exteriorized after sedation with Inj. Diazepam 1mg/kg bodywt i/v and local infiltration with lignocaine hcl 2%. The collected cyst (Fig.1) was a 5 cm diameter, white translucent structure, filled with clear watery fluid and many protoscolices on its internal surface. The cyst was sent for Parasitology diagnosis. The result revealed that it was bladder worm stage of dog tapeworm Coenurus gaigeri. Faecal examination of the pet dog was positive for tenid eggs.

Fig.1: 5 cm diameter Coenurus gaigeri cystic structure immediately after exteriorization in a glass petri dish with visible protoscolices on its internal surface.

Treatment
The only recognized treatment for coenurosis is surgical removal of coenurus cysts (Stanford University, 2010). Under general anesthesia
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using Inj. Diazepam @ 1mg/kg bodywt i/v and Inj. Ketamine hcl @ 4 mg/kg bodywt i/v (Flecknill, 2009) cysts found all over the body of the goat (total of nine cysts) exteriorized and Tincture Iodine instilled into the cavity and skin closed by using silk material. Inj. Streptopenicillin @ 250mg i/m was administered for seven days. Skin sutures were removed after seven days. No recurrence of cyst was reported upto one year.

Discussion
The history and diagnosis of cyst correlated with the findings of Moghaddar (2007a) that the owner maintained a kid along with a dog. From the dog, the kid might have got the infestation and the dog might have got the infestation from the slaughter house uncooked offal. Here pet dog acted as definitive host and kid acted as intermediate host. Since the pet dog is positive for the Taenia eggs we can correlate these findings.

The Taenia sps causing coenuriosis typically have a remarkable affinity towards CNS. The mechanism by which migrating larva identifies the neural tissue is unknown (Stanford University, 2010). In very few cases coenurus cyst develops in the subcutaneous and muscular areas. Our case is one such type. If the owner accidentally ingested the egg via oral fecal route he would be a victim to the coenuriosis. So, pet dogs should be periodically dewormed and should not be fed uncooked offals to avoid these transmissions.

Summary
This paper describes about the occurrence, clinical manifestation and lifecycle pattern of Coenurus gaigeri in a kid. Anesthetic protocol, diagnosis and surgical management of the condition are explained. Pet dog accompanied the kid probably served as a source of infection and hence pet owners are advised to deworm their pets periodically.

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Department of Parasitology, Madras Veterinary College, Chennai.

References


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