Case Report

VAGINAL CYSTICERCOSIS IN A PATTANAM EWE

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ABSTRACT

A 2.5 years old Pattanam ewe(pregnant around 45 days) was brought with a history of mass protruding from vulva for past 24 hours. On external genital examination, the animal was having a soft and fluctuating ball like protruding mass measuring about 6×6.5cm from vulval region. The vaginal mass was further explored by aspiration and surgical incision which revealed the presence of colorless fluid filled thin membrane like structure. Based on microscopic examination where a single invaginated scolex with 4 unarmed suckers were viewed, then this case was confirmatively diagnosed as "A vaginal cyst due to Cysticercus tenuicollis". The animal was dewormed with susp. Fenbendazole and Praziquantel. The antibiotic, anti-inflammatory and anti-histamine therapy along with topical antiseptic ointment were followed for next 5 days and the ewe recovered uneventfully.

Keywords: Ewe, Vaginal cyst, *Cysticercustenuicollis*.

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INTRODUCTION

Cysticercosisis a parasitic disease caused by *Cysticercus tenuicollis* – the metacestodal stage of tapeworm *Taenia hydatigena*. The definitive hosts of this parasite are primarily canids and intermediate hosts that include are sheep, goats, cattle and pig. Cysticercosis has acute and chronic forms. Acute form is rare and it mostly results in death due to parasitic hepatitis. Chronic form is more common and it is usually asymptomatic (Taylor *et al.,* 2015). The parasitic cyst found attached with organs like omentum, rumen, mesentery, lungs, diaphragm kidney, spleen, brain, heart, gall bladder, urinary bladder, ovaries, uterus, cervix and vagina (Peyman *et al.,* 2023). Although *C.tenuicollis* is not zoonotic as like other *Taenia spp.*, it causes high economic losses in meat industries of poor and developing countries (Hama *et al.,*

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2018). The prevalence of *Taenia hydatigena* recorded in goats was 4.83% and 2.23% in sheep (Singh *et al.,* 2013). This is the first report of occurrence of vaginal *Cysticercus tenuicollis* in sheep in Tamil Nadu.

CASE HISTORY AND DIAGNOSIS

A 2.5 years old, pregnant Pattanam ewe was brought with the history of prolapse from vagina for past 24 hours. External genital examination revealed a soft, fluctuating, ball like mass protruding from the vulva measuring around of 6×6.5cm (Fig.1.). Ultrasonography revealed fuctional placentomes (Fig.2.) and the fetal skull measured about 2cm (Fig.3.). Thus, suggesting the fetal age around 7 weeks. The animal doesn't exhibit any clinical signs.

Further the mass was non-reducible and tentatively considered to be Bartholin cyst (Roberts, 1971). Upon aspiration of the cyst, a clearwatery and transparent fluid was obtained. A small incision was made on the vaginal wall, and two intact cysts were encountered and carefully removed (Fig.4 and 5). Further the vaginal mass was cleaned with normal saline and flushed with 15ml of povidone iodine antiseptic solution.

On gross examination, the parasitic cyst appeared to be a fluid filled thin membranous structure with a single scolex. On microscopic examination, two rows of penknife shaped rostellar hooks with four unarmed suckers were observed (Fig.7).

Biochemical profile of cystic fluid

Parameters	Values
Sodium	122 mmol/L
Potassium	7.5 mmol/L
BUN	20 mg/dL
Creatinine	0.5 mg/dL
Glucose	104 mg/dL
Chlorine	107 mmol/L
Ionized calcium (iCa)	2.13 mmol/L

TREATMENT AND CASE DISCUSSION

The drug of choice for treating cestode (*Taenia spp*.) infection is Praziquantel (2-5mg/kg BW). Initially the animal was dewormed with suspension. Fentas plus (Fenbendazole and Praziquantel). It was then treated with antibiotic – inj.ceftriaxone tazobactam (10mg/kg BW, I/M, SID), anti-inflammatory – Inj.Meloxicam (0.5mg/kg BW, I/M, SID) and antihistamine – inj. chlorpheniramine maleate 0.5mg/kg BW, I/M, SID). Antiseptic ointment was applied topically. The entire treatment regimen was followed for the next 5 days. The animal recovered uneventfully by the end of treatment regimen.

In definitive hosts (dogs, cats, wolves and foxes) - *Taenia spp*. predilects in the intestine and its faeces contain the gravid proglottids or eggs. The intermediate hosts (sheep, goat, cow, pig and horse) gets infection by ingestion of the contaminated

feed and water with the eggs (Mostafa *et al.,* 2023). The oncosphere hatch from eggs in the small intestine and penetrates the intestinal wall to reach portal circulation. These oncospheres mostly reach liver and are found in liver parenchyma (Hamzawi and Mayali, 2020). Later, they leave the liver and develop into a larval cyst with a long neck and transparent wall- *C.tenuicollis* in various organs.

In the concurrent case the infected the infected animal doesn't show any pathognomic clinical signs. If the cyst persists and enlarges in vagina, it would have hindered urination. As like other parasitic infection, it also reduces the meat quality as it feeds on host. Mostly when these parasitic cysts occurred in the vaginal region, it will be confused to that of vaginal prolapse, bartholin cyst, prolapse of bladder or prolapse of perivaginal fat. So, it must be examined carefully. This condition can be prevented and controlled by proper disposal of infected carcass, treatment of infected animal, periodic deworming of both sheep and dog and control of stray dogs (definitive host).

Fig.1. Soft, fluctuating prolapsed mass from vagina

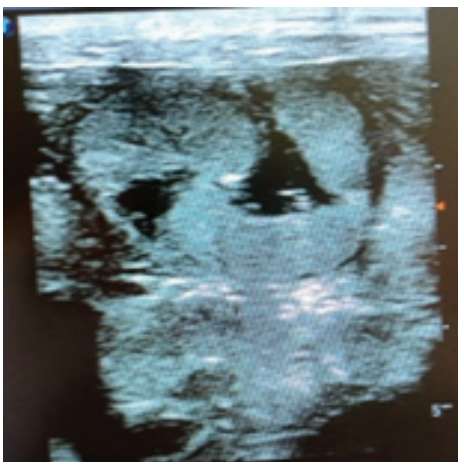

Fig.2. Ultrasonographic image showing placentomes

Fig.3.Ultrasonographic image showing fetal skull

Fig.4. Intact cyst of *C.tenuicollis*

Fig.5. *Cysticercus tenuicollis*

Fig.6. *Cysticercus tenuicollis*

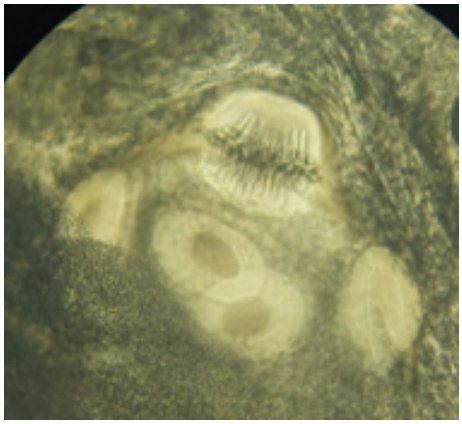

Fig.7. Two rows of penknife shaped rostellar hooks with 4 unarmed suckers

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