

Short Communication

NASAL OESTROSIS IN JAMUNAPARI GOAT IN BARASAT, WEST BENGAL, INDIA: A CASE REPORT

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ABSTRACT: Nasal oestrosis, an obligatory cavitary myiasis of sheep and goats is caused by the larvae of *Oestrus ovis* commonly known as sheep nasal bot. A female Jamunapari goat aged about 1.5-year-old presented with a history and symptoms of Peste des Petits Ruminants (PPR) like the high rise of temperature (105°C), anorexia, abdominal cramps, nasal discharge, and shooting diarrhoea since last 5 days. Two nasal bots were expelled during violent sneezing by the goat. The present study reports its successful therapeutic and clinical management of PPR and oestrosis of the Jamunapari goat from Barasat, West Bengal, India.

Keywords: Nasal cavities, *Oestrus ovis* larva, Jamunapari goat, West Bengal.

Several oestrid flies causing myiasis in sheep and goats include the *Oestrus ovis*; sheep nasal bot flies are distributed worldwide. The nasal sheep bot is a cosmopolitan parasite that, in its larval stages, is generally found in the sinuses and nasal passages of sheep and goats causing the clinical condition known as oestrosis. Nasal bot larvae are mostly observed in the nasal cavities and or frontal sinuses sometimes in the maxillary sinuses. Primarily sheep are infested but goats, deer, reindeer, elk, camel, and ibex are also suffering from nasal oestrosis [1]. Animal owners are usually unaware of the infestation of maggots or larvae of the sheep nasal bot fly. Cavitary myiasis is expressed by the maggots as a seromucous and or purulent nasal discharge, frequent sneezing, sometimes incoordination, and dyspnea. False Gid is caused by the migratory larvae that penetrate and eat away at the dorsal turbinate bones, frontal sinuses, and occasionally the skull bones thereby entering into the cerebral cavity [2]. The present clinical communication reports the occurrence of some *O. ovis* larvae in the nasal cavity of a Jamunapari goat.

The study

A female Jamunapari goat aged about 1.5 years was brought to Block Animal Health Centre, Barasat I

Block, Chotojagulia, North 24 Parganas with the history of Peste des Petits Ruminants (PPR) like the high rise of temperature (105°C), anorexia, abdominal cramps, nasal discharge shooting diarrhoea since last 7 days. On external clinical examination, the goat was dull with unsteady gait, having blocked nostrils, tachypnoea with thick mucoid discharge, and husk sound observed in auscultation of lungs (Fig. 1). The animal owner had reported the nasal bots larvae were expelled on the previous days from the goat. The larvae were expelled due to violent sneezing. These bot larvae were collected and brought to the departmental laboratory for identification. The goat was treated with a single subcutaneous injection of Ivermectin @ 0.2 mg/kg body weight along with 7 days of supportive vitamin therapy. The goat recovered after 2 weeks of post-treatment without any technical hitches. Both gross and microscopic observations of the recovered live bot larvae from the goat were examined for morphological characteristics and features as described by Zumpt and Soulsby [3, 4].

Results and discussion

Parasitological examination based on the morphological features *i.e.*, dark bands on their dorsal surface, the anterior end was armed with minute

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Fig. 1. Photomicrographs of dorsal view of *Oestrus ovis* larva.



Fig. 2. Photomicrographs of ventral view of *Oestrus ovis* larva.

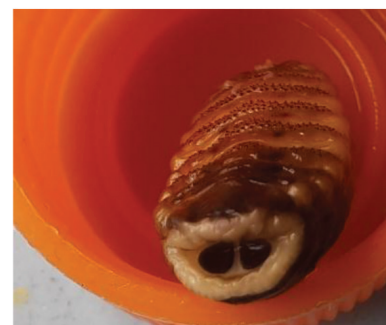


Fig. 3. Photomicrographs of closed 'D' shaped, deep seated stigmal plates of posterior spiracles of *Oestrus ovis* larva.

paired hooks, and roughly flattened and decorated with rows of small spines were observed in the ventral surface (Fig. 1, 2). The posterior spiracle appeared as characteristic closed 'D' shaped, black-colored, deep-seated stigma plates and respiratory spiracles (Fig. 3) that revealed as third stage larva of *O. ovis*. Irregular anthelmintic treatment of animals may be one of the responsible factors for the presence of sheep bot, and *O. ovis* infestation in goats. Infestation of nasal bots is generally unnoticed but animals show erratic behaviours when maggots are present. Farmers usually treat the animals only after severe clinical symptoms are expressed due to nasal bot-infested animals since the marked respiratory signs and symptoms are absent in early infections. The goat suffering from nasal oestrosis recovered by 2 weeks post-treatment without any complications by using systemic insecticides such as Ivermectin along with supportive vitamin therapy for 7 days.

Incidence and treatment of Jamunapari goat nasal oestrosis was reported from Izatnagar, Bareilly, UP [5] where the goat was treated with a single dose of Ivermectin and also reported from a Malabari goat of Pallakad Kerala [6]. About 48.3% prevalence of *O. ovis* has been reported in Karnataka [7]. Chhabra and Ruprah (1976) and Gupta (1982) [8, 9] reported 80.90 and 72.40% of small ruminants infested with *O. ovis* larvae in Hissar, Haryana, respectively. Occurrence of *O. ovis* larvae in goats is recorded from Jammu 88.9 % [10] where 99.16% and 89.16% of sheep and goats were infested with *O. ovis* maggots in Jammu [11]. Shahardar and Rashid [12] have also reported the occurrence of nasal botfly larvae in a goat in the Kashmir Valley. Shahardar *et al.* (2001)[13] recovered the larvae *O. ovis* from an abnormal site *i.e.*, the trachea and bronchi of sheep in Kashmir Valley. Nasal

oestrosis by *O. ovis* in sheep has been reported in different countries namely, 33.2-65 % in France [14, 15, 16], 71.1 % in Spain [17], and 55.8-91.0 % in Italy [18]. The present communication suggests a thorough evaluation of the economic losses due to the bot larvae infestation and suffering by the small ruminants and thereby formulation of the appropriate control strategy.

Conclusion

The article reports nasal myiasis due to *O. ovis* of a Jamunapari goat from Barasat, West Bengal, India and its control using Ivermectin. The occurrence points out the possibility of recurrence in the fly breeding seasons. Hence strict control measures should be advocated in such pockets to prevent fly infestation. Transport of animals from the region should also be done with extreme caution.

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