INCIDENCE OF OESOPHAGOSTOMOSIS IN GOATSOF MALWA REGION OF MADHYA PREDESH

J.S. Rajpoot, G.P. Jatav*, S. Shukla, A.K. Jayraw[1], N. Rajpoot[2], V. Agrawal[1] and M. Shakya[1]
Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Mhow-453 446, Madhya Pradesh
Nanaji Deshmukh Veterinary Science University, Jabalpur, Madhya Pradesh, India

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ABSTRACT

In order to note the incidence of oesophagostomosis in goats of Malwa region, 200 goats slaughtered at Cantonment Board slaughter house, Mhow were screened for pimply gut condition in the gastrointestinal tract of infected goats. The incidence of gastrointestinal lesions by *Oesophagustomum* spp. was found to be 65% (130/200) based on observations of gross lesions of infected intestine and ceaca. Mixed infection by internal parasites was identified on the basis of morphology of parasitic eggs using routine methods of faecal examination.The mixed parasitic infection was recorded as 29.5% (59/200). Out of 200 faecal samples, 11 (5.5%) samples were found negative for any parasitic infection.

Key words: Goats, gross lesions, intestine, Madhya Pradesh and oesophagostomosis

Introduction

Worldwide, the gastrointestinal (GI) nematodes are considered as one of the most important parasites responsible for continuous economic losses to animal owners due to its morbidity and mortality. The GI parasitism in goats caused the economic loss of Rs. 372.35/goat/annum (Das *et al*., 2013). Nematodes of the genus *Oesophagustomum* are intestinal parasites, which frequently infect goats, primates and domestic and wild pigs. These parasites cause uninodular and multinodular oesphagostomosis which causes heavy economic losses, reduced production, morbidity and mortality in infected goats. Developmentmof third stage larvae in the colon wall results in formation of inflammatory masses which cause severe abdominal pain, diarrhea and weight loss and occasionally may cause peritonitis and intestinal occlusion (Cibot *et al*., 2015). Oesophagostomosis being one of the most diseases of many livestock species, the survey was carried out to note the incidence of this disease in slaughtered goats of Malwa region.

Materials and Methods

The present study was conducted on randomly selected 200 slaughtered goats which were slaughtered at Cantonment Board Slaughter House, Mhow and target organs for *Oesophagostomum* infection, such as intestine and ceaca were thoroughly screened and categorized according to their location and number of nodules present. After examination of gross lesions of infected goat, faecal samples were collected from those animals which were showing lesions in the intestine in the form of nodules. The faecal samples were collected in an individually labeled clean and sterile PVC bags which were transported to the Pathology Department for detection of gastrointestinal parasites. The collected faecal samples were examined by faecal floatation and sedimentation techniques described by Soulsby (1982).

Results and Discussion

The present investigation revealed, 65% (130/200) incidence of oesphagostomosis in slaughtered goats, based on a survey carried out for a period of five months during winter season. Based on faecal sample examination, the incidence of mixed parasitic infection was found to be 29.5% (59/200) on the basis of morphology of parasitic eggs (Soulsby, 1982). The incidence of different internal parasitic infections is presented in Table 1.

Table 1: Incidence of different internal parasitic affections in slaughtered goats.

S. No.	Name of parasite	Number of animal infected	Incidence (%)
1	*Oesophagostomum sp.*	130	65
2	Mixed infection	59	29.5
3	Unaffected goats	11	5.5

On gross examination of affected intestine, hemorrhage and congestion on serosal surface (Fig. 1), cystic dilation and nodules (Fig. 2) in the intestinal lumen were observed. Nodules of varying size and number were present both in the distal parts of small and proximal parts of the caecal portion of the large intestine (Fig. 3). Nodules were extended from mucosa to subserosal surface, color of nodules was slightly yellow to grey and nodule revealed cheesy yellow inspissated exudate on its incision (Fig. 4 & 5). In the intestinal lumen several adult parasites were noticed in the exudate (Fig. 6).

Overall 65% incidence of oesphagostomosis recorded in slaughtered goats of Malwa region of Madhya Pradesh is in line with the observations of Nath *et al.* (2011) who noted 92% incidence of *Oesophagostomum* infection in Black Bengal goats of Chittagong of Bangladesh. The present study recorded 29.5% incidence of mixed parasitic infection. In the similar fashion, Singh *et al.* (2015) also recorded various gastrointestinal nematodes like strongyles, *Strongyloides* spp. and *Trichuris* spp. in goats of Balaghat, Narsinghpur and

*Corresponding author email: drgpjatavpath@gmail.com, Mobile: 9179835337; [1]Department of Veterinary Parasitology; [2]Department of Veterinary Pharmacology and Toxicology

Fig.1: Congestion and haemorrhages in infected intestine

Fig.2: Nodules in the wall of infected caecum

Fig.3: Nodules of various sizes in the wall of intestine (pimply gut condition)

Fig.4: Nodules of various sizes in the wall of caecum extended from mucosa to serosal surface (pimply gut condition)

Fig.5: Cheesy yellow inspissated exudate in incised nodule

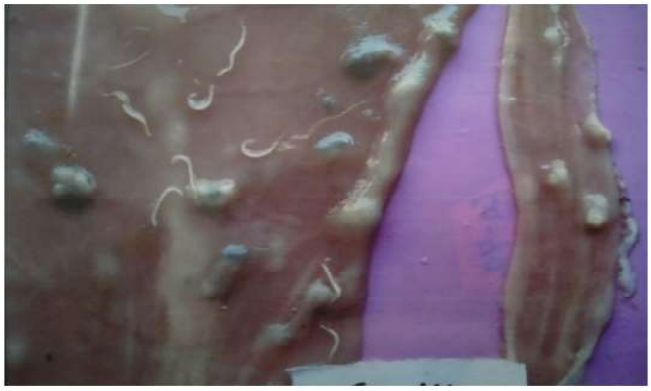

Fig.6: Worms in intestinal lumen

Chhindwara districts of Madhya Pradesh. In the similar study, Shakya *et al.* (2017)reported 38.33% infection of gastrointestinal nematodes in goats of Mhow, Madhya Pradesh during the winter season. The gastrointestinal nematodes were also observed in cattle and buffaloes of Nimar region of Madhya Pradesh (Jamra *et al.,* 2017a and b). Similarly, Satish *et al.* (2018) observed the gross intestinal lesions of oesophagostomosis as hard, slightly yellowish to green coloured nodules. They also observed cheesy pus in viable lesions. They also recorded several tiny and large, rounded irregular, solid, fibrotic, raised nodules.

Aknowlegdment

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