A-33 Histopathology of the abomasum in naturally - occurring haemonchosis of goats

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Gastrointestinal parasitism in goats is recognized as one of the major constraints to the development and expansion of goat farming in Sri Lanka as in many other countries of the tropical and sub tropical regions. Recent field and abattoir based studies have revealed that the most common pathogenic nematode species affecting goats is the abomasal parasite, *Haemonchus contortus*. This is a blood-sucking parasite, which also affects sheep, causing anaemia and protein losing gastroenteropathy. Despite the importance of *Haemonchus contortus* in goats, very little is known of its pathogenic effects. Therefore this work on abomasal responses to naturally-acquired *Haemonchus* infection was undertaken as the first step to understand the effect of this parasite.

A total of 248 goat abomasa were collected at slaughter from the Colombo Municipal abattoir. Each abomasum was opened along its greater curvature, contents were emptied and 1 sq cm portions of abomasal wall from the fundic and pyloric regions were excised, fixed in 10% neutral buffered formalin. 15 abomasa each with high (>3000), medium (500-1000), low (<500) and no *Haemonchus* infections were collected, processed and paraffin-embedded sections were stained with haematoxylin and eosin and abomasal histopathology was observed. The contents of the abomasal lumen and the mucosa of the abomasa were examined for parasites and counted using a standard procedure.

Of the 15 abomasa examined, the worm burden in each abomasum varied between zero worm burden (0) and 3750 (mean value - 292). The mucosa of abomasums with a high worm burden, revealed evidence of a chronic gastritis characterized by accumulation of mononuclear cells consisting of varying proportions of plasma cells and lymphocytes. These mononuclear cells were present as focal collections or as sheets of cells along the lower parts of the gastric glands, adjacent to the muscle layer and between the gastric pits of the pyloric region. Variable numbers of mononuclear cells were also present on the mucosal surface. In animals with a low worm burden, there was a lesser degree of mononuclear cell infiltration. The fundic region of the stomach also showed similar cellular responses but to a much lesser intensity. The appearance of the gastric glands, muscularis mucosa and serosa were unremarkable.

The mononuclear cell response in the abomasum in naturally-acquired haemonchosis, in goats, may resemble a chronic inflammatory reaction or immune response to the parasite.

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