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Success Story

## Mixed Infection of Fascioliasis and Haemonchosis in Sheep and Its Successful Treatment

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Fascioliasis is an important parasitic disease that causes morbidity and mortality in many domestic ruminant including sheep, goat, and cattle. In Fascioliasis species mainly *Fasciola hepatica* and *F. gigantica*, responsible for morbidity and mortality in these species. Haemonchosis is considered as an important cause of anaemia in sheep, especially reared on pasture-based system.

Present study describes the occurrence of mixed infections of fascioliasis and haemonchosis in sheep and their successful treatment in the flock. Farmers from the locality of Aurangabad district of Bihar had a complained of diarrhoea, emaciation and regular mortality in the sheep of their flock. The faecal samples examination of affected animals were indicated heavy infestations with eggs of *Fasciola hepatica* and *Haemonchus* sp. Post-mortem of dead animals were showed the morphological and histopathological changes in the liver and abomasum of sheep for fascioliasis and haemonchus infestation, respectively. Livers of affected sheep were grossly investigated for infection of *Fasciola hepatica*, whereas, in rumen and abomasum, haemonchus infestation was observed.

The affected liver was showed hepatomegaly, thickened capsule and discoloration with necrosis, fibrosis, dilation of the bile duct, engorgement of the gallbladder and enlargement of the portal lymph nodes. Grossly, the mucosal membrane of abomasum was with multiple haemorrhages and congestion of blood vessels. Microscopic examination was showed fibrotic thickening, calcification and hyperplasia of the bile ducts filled with debris, as well as massive haemorrhagic foci in liver. Infected liver was showed a central vein region with disturbed

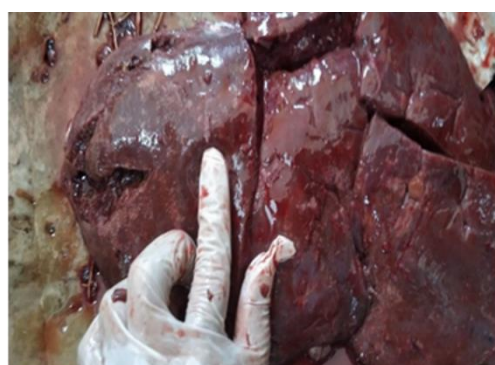
parenchyma cells, focal lymphocytic infiltration, eosinophil infiltration, proliferating fibroblast with thickening of hepatic artery and arteriolar walls. Microscopically, abomasum was showed loss of surface mucous, hyperplasia of mucous producing cells, and infiltration of eosinophils in lamina propria of abomasum. We found comparatively uncommon infection of fascioliasis along with *Haemonchus contortus* in the sheep during the necropsy examination. The identified histopathological changes in the liver and abomasum of infected sheep reflected extensive tissue damage. The sheep farmer had a nature of nomadic pastoralism, due to which these sheep had a greater risk of parasitic infestations and mortality leading to significant economic losses.



**Fig. 1:** Post-mortem examination of affected animal



**Fig. 2:** Enlarged and pale coloured Lungs



**Fig. 3:** Liver damage caused by fluke infestation



**Fig. 4:** Adult flukes recovered from liver

Based on the disease manifestation, fecal examination, gross lesions and histopathological examinations, animals were treated with closantel @ 15 mg/kg body weight orally and advice repeat after 21 days. Animals were also treated with supportive medicines like hepato-protectant, Iron supplementation for control of anaemia were suggested for rest of the flock. The sheep flocks were monitored regularly and absorbed successful recovery in health status without further mortality.

On the basis of fecal and postmortem examination, confirmatory diagnosis of fasciola and haemonchus can be done. Mix infection of fasciola and haemonchus can be controlled with oral medication of closantel in the field condition.

