

## Linguatulosus: Pathologic and epidemiologic aspects in livestock in Bangladesh

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Food-borne parasitic zoonoses are major threats to human health and only next to the 'big three' such as AIDS, tuberculosis, and malaria. *Linguatula serrata* is a food-borne zoonotic pentastomid that affects a wide range of animals including humans. Dogs and other carnivores are the final hosts while most herbivores, including domestic ruminants, serve as intermediate hosts. Here, the study was conducted on some epidemiologic and pathologic aspects of *L. serrata* infection in cattle and goats through a slaughterhouse based survey. A total of 302 samples, consisting of 257 mesenteric, 26 hepatic and 19 pulmonary lymph nodes (LNs) of cattle and goats were collected. Out of 302 LNs, 136(45.0%) were infected with the nymphal stage of *L. serrata* (50.7% of cattle and 31.0% of goats). Significantly, a higher ( $P=0.002$ ) rate of infection was detected in cattle sex, but not seasons, is a prominent determinant of the infection. The

infection was mostly detected in the mesenteric LNs (MLNs) (50.9%) but the parasite was also detected in the hepatic (3.9%) and pulmonary (21.1%) LNs. Grossly, the affected LNs were enlarged, edematous and soft. The cut surface of the LNs showed spongy appearance, and sometimes nymphs were found to crawl out. Histopathological studies revealed severe damage in the parenchyma of LNs, characterized by the loss of the typical pattern of lymphatic follicles and trabeculae. Massive infiltration with eosinophils was detected. Collectively, the data suggest that *L. serrata* infection is endemic in food animals and has significant pathological impacts on livestock, and people of the country are at high risk to linguatulosus.

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