

THE OCCURRENCE OF *FASCIOLA GIGANTICA* IN THE LIVER OF AN INDIAN RHINOCEROS (*R. UNICORNIS*)

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This paper records the finding of liver lesions in an Indian rhinoceros calf infected with *Fasciola gigantica*. There are no previous records of such infection in the rhinoceros in India.

MATERIALS AND METHODS

A rhinoceros calf which died at the Assam State Zoo, Gauhati, India, from fascioliasis was submitted for autopsy. Pieces of liver tissue were examined histopathologically. The tissues were fixed in 10 per cent formol saline and processed and embedded in paraffin. The sections, of about 5 to 6 μm , were stained by haematoxylin and eosin and van Gieson methods.

RESULTS

Gross pathology

The liver was found to be moderately atrophied. Lesions of acute fibrinous perihepatitis and adhesions with the abdominal wall, stomach and diaphragm were also found. The liver parenchyma was bile-tinged, the bile ducts were markedly hypertrophied and filled with liver flukes. Multiple focal necrosis was also present. Zigzagging under the capsule of the liver, particularly on the parietal surface, were several depressed narrow tracks which ultimately penetrated into the liver parenchyma to form numerous cavities. These cavities were filled with viscous fluid or coagulated blood, and often contained immature flukes. Some mature flukes were also found in the first 10-15 cm of the small intestine.

HISTOPATHOLOGY

The mature flukes were located in the larger bile ducts, and the most characteristic lesions were found in this region. The bile duct epithelium was considerably enlarged and was undergoing degeneration, necrosis and desquamation associated with glandular hyperplasia. Considerable proliferation of the bile duct epithelium, 1-3 cells deep, was observed leading to the formation of many new bile capillaries. Cells simulating bile duct epithelium were found clumped together or in double-layered radial projections in unusual locations, and these cells were of an anaplastic nature. A tendency to form bile duct-like adenomatous structures was also revealed. Lesions of periarteritis and mes-

arteritis, marked connective tissue proliferation tending to hyalinization, and infiltration of leucocytes which were predominantly eosinophils and histiocytes were other characteristic changes. Focal parenchymal destruction of different degrees and ages was noticed. The lesion was characterized by lysis and total or partial disappearance of the hepatic cord cells, remnants of which were scattered within the foci and filled with cell debris, erythrocytes, numerous eosinophils, granulocytes, neutrophils and histiocytes. In the adjoining tissue the hepatic cells were undergoing degeneration and necrosis. Foreign-body giant cells were also present. The hepatic cells in general were atrophied and this was more marked around the involved Glisson's capsule. The sinusoidal spaces were dilated but devoid of blood. The interlobular space was distended with marked connective tissue proliferation.

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