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152. HAEMOCHROMATOSIS IN THE BLACK RHINOCEROS (*DICEROS BICORNIS MICHAELI*), ACQUIRED OR CONGENITAL?

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Introduction

Haemosiderosis in the captive African black rhinoceros (*Diceros bicornis*) is relatively common although the pathogenesis remains obscure.

Materials and methods

Four African black rhinos aged between 23 and 39 years from the Zürich Zoo were admitted to necropsy due to poor body condition, old age, or recumbency.

Results

From one animal a total of 17 blood samples were taken for biochemistry. Serum iron was high compared to values of free-ranging animals, mean transferrin saturation – 90% (normal 28%), and mean ferritin – 6046 ng/mL (normal 133ng/mL). Macroscopically, the animals were almost cachectic with several decubitus skin ulcers overlying prominent bone structures. In one animal, the small intestine was diffusely blackened. The liver was friable and red to dark brown. Histologically, the animals had heavy haemosiderin deposits in macrophages and parenchymal cells of the spleen, liver, bone marrow, and lungs. The liver had extensive haemosiderin deposition in Kupffer cells, hepatocytes, and biliary epithelium, and there was moderate bile duct proliferation but only minimal fibrosis. Aside from haemosiderin deposits, the bone marrow was hypocellular. In one animal, massive phagocytosed deposits in the lamina propria and villus tips of the small intestine were seen.

Discussion

The distribution of histological lesions together with the clinical data is indicative of an enteric origin of excess iron, rather than recurring haemolytic anaemia or hereditary haemochromatosis.