Tissues, Pathology, and Diagnostic Microscopy

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Histopathological and ultrastructural studies on cases of enzootic bovine leukosis in Upper Egypt

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Enzootic bovine leukosis is a naturally occurring lymphoid cancer of cattle caused by bovine leukaemia virus. A limited outbreak EBL was reported for the first time in Assiut ,Egypt in an imported Holstein Friesian(Zaghawa et al.1998) .The proviral DNA was detected by reverse transcryptase polymerase chain reaction (Zaghawa et al.1998) .Viral particles were demonstrated by transmission electron microscopy in the peripheral blood leukocytes of affected cows(Abd Elrahim and Elballal1999).This report aimed to describe the histopathological and ultrastructural features of lymphoma in the lymph nodes and other organs of the affected cattle. Tissue samples were collected from supramammary, prescapular, mesenteric and retropharngeal lymph nodes as well as spleen and Peyers patches.Tissues were fixed in 10% neutral buffered formalin and 5% cacodylate buffered glutaraldehydefor light and transmission electron microscope respectively. The histologic determinations included lymphoma with diffuse or follicular architecture, presence of sclerosis, and cell type according to the National Cancer Institute Working Formulation(NCIWF) for classification of human non Hodgkins lymphoma (Vernau et al.,1992).Light microscopy of the involved lymph nodes revealed that the majority of the tumors had a diffuse pattern .The predominating cell types were diffuse large cell and diffuse large cleaved cell. Transmission electron microscope further demonstrated the ultrastructural features of the different cell types seen by light microscopy. Fibrillogranular bodies were observed in the nuclei of many neoplastic cells. Apoptotic cells were frequently observed in these tumours lesions. The significance of these results will be discussed.