IMMUNOPATHOMORPHOLOGY OF BOVINE TUBERCULOSIS

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Summary. We have performed post mortem examination of 89 cattle, which had presumptive diagnosis of tuberculosis via delayed type hypersensitivity response to bovine tuberculin. The gross findings of tuberculosis were detected in 20 cattle (22%). Diagnosis of tuberculosis was confirmed by histopathological and bacteriological results, from tissues was isolated Mycobacterium bovis. Thorough gross examination granulomatous lesions were detected in bronchial lymph nodes (85% cases of tuberculosis), mediastinal lymph nodes (80%), retropharyngeal lymph nodes (30%), mesenteric lymph nodes (20%), submandibular lymph nodes (5%), lungs (45%), ileum (10%), liver (5%). Lymphocytes, epithelioid cells, and giant Langhans multinuclear cells surrounded necrosis in tissue. In 50% cases of tuberculosis granulomatous lesions in the center of necrosis had outspread mineralisation, in 35% cases mineralisation was minimal, in 15% cases mineralisation was not found. In 85% cases of tuberculosis granulomatous lesions were surrounded with capsule of fibro connective tissue, in 15% cases capsule was not formed. After examination of tissues with tuberculous lesions by methods of Ziehl-Neelsen, fluorescence microscopy and immunohistochemistry, it was found out, that fluorescence microscopy and immunohistochemical methods were more sensitive for M.bovis detection. M.bovis infection was confirmed by transmission electron microscopy.

Keywords: cattle, tuberculiosis, M.bovis, immunopathomorphology.