

ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2010 – Mock Exam Case 4

Tissue from a Llama

Liver

Liver: Up to 70 % of the parenchyma is replaced by multifocal to coalescing granulomas characterized by central homogeneous, eosinophilic necrotic material surrounded by a smaller layer of elongated, sometimes palisading macrophages with light eosinophilic cytoplasm, a centrally located oval nucleus and indistinct cell borders (epithelioid cells). There are smaller numbers of large cells with eosinophilic cytoplasm and numerous peripheral nuclei (multinucleated histiocytic giant cells, Langhans-type), more peripherally there are several layers of lymphocytes, plasma cells, macrophages, fibroblasts embedded in small amount of collagen fibers (fibrosis) and occasional neutrophils. Multifocally, necrotic areas contain dark basophilic granular material (dystrophic calcification).

The remainder of the hepatic parenchyma is diffusely infiltrated by moderate numbers of lymphocytes and neutrophils, with randomly distributed small granulomas. Portal tracts are markedly enlarged by increased amounts of fibrous tissue with infiltrates of lymphocytes and plasma cells.

Morphologic diagnosis / diagnoses

Liver, **granulomatous hepatitis**, multifocal to coalescing, severe, chronic, with central **caseous necrosis**.

Note: myriads of acid-fast intrahistiocytic rod-shaped bacteria were seen with a modified Ziehl-Neelsen stain.

Etiologic diagnosis / diagnoses

Mycobacterial hepatitis / Hepatic mycobacteriosis

Marks

Liver	1
Multifocal (to coalescing).....	1
Granulomas	1
Necrotic center: name.....	1
Necrotic center: description.....	1
Dystrophic calcification: name.....	0.5
Dystrophic calcification: description	0.5
Epithelioid cells: name	1
Palisading macrophages.....	1
Lymphocytes within granulomas.....	1
Fibrosis surrounding granulomas.....	1
Liver parenchyma	
neutrophils	1



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randomly distributed small granulomas.....	1
Portal tracts: fibrosis.....	1
Morphologic diagnosis.....	3
Etiologic diagnosis.....	2
Style	2