



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2007 – Avian Q2

Slide Q2: Tissue from a Chicken

Tissue: Bursa of Fabricius

Description of the histologic findings:

Two sections of bursae of Fabricius are observed showing diffuse atrophy (moderate for one section to marked for the second) due to generalized follicular atrophy. Bursal follicles display lymphocytic depletion, associated either with multifocal to diffuse pyknosis of lymphoid cells predominantly in the medulla for one section, or total medullary lymphoid aplasia for the other. Follicular atrophy is associated with prominence of corticomedullary epithelium and follicular stroma cells and presence of intraepithelial cysts.

The interstitium is prominent due to lymphocytic and histiocytic infiltration and increase in connective tissue (fibroplasia and fibrosis).

Furthermore the superficial epithelium displays multifocal to diffuse epithelial hyperplasia with stratification associated with granulocytic exocytosis. There is also a moderate multifocal to diffuse infiltration by heterophilic granulocyte admixed with lymphocytes, plasma cells and histiocytes in the sub-epithelial connective tissue. Associated with the apical membrane of the superficial epithelium are observed myriads of small (2 to 4 μm), round in shape, micro-organisms, morphology consistent with cryptosporidial trophozoites and oocysts.

Morphologic diagnoses:

- Bursae of Fabricius, diffuse (subacute) bursitis with follicular atrophy, lymphoid cells depletion by pyknosis, and mild interstitial lymphohistiocytic inflammation and fibroplasia.
- Bursae of Fabricius, diffuse (subacute) (mild) superficial heterophilic et lymphocytic bursitis with intraepithelial leukocytic exocytosis and apical colonisation of bursal epithelium by numerous protozoans, morphology consistent with zoites and oocysts of *Cryptosporidium* sp.

Etiologic diagnosis/diagnoses: Birnaviral bursitis and bursal cryptosporidiosis

Etiologies: Infectious Bursal Disease Virus and *Cryptosporidium baileyi*

Key words and marks:

Tissue	1
Design	2
Description	
Follicular/lobular atrophy	1
Follicular/lobular lymphoid depletion	1
Lymphocytic pyknosis	1
Fibroplasia/fibrosis of interstitium	1
Epithelial cysts	1
Superficial epithelial hyperplasia	1
Heterophilic intraepithelial exocytosis	1
Interstitial leukocytic (heterophils/lymphocytes/plasma cells) infiltration	1
Epithelial apical colonisation	1
Protozoans	1
Description of protozoans : 2 to 4 μm in size (0.5), round in shape (0.5)	1
Trophozoites (0.5) and oocysts (0.5)	1
Morphologic diagnoses	4
Follicular atrophy (1) with lymphocytic depletion (1)	
Superficial heterophilic bursitis (1) with apical colonisation by protozoans (1)	
Etiologic diagnoses	1