

ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2010 – Eye Case 8

Tissue from a cat

- The section of the globe with attached conjunctival tissue has an accumulation of cells that distort the uvea and results in changes in the vitreous chamber, aqueous chamber, and lens. [1]
- The choroid is congested, with large dilated blood vessels, and is markedly effaced by a sheet of macrophages that form a mass extending into the vitreous cavity. [2]
- There are areas of necrosis that are characterized by scattered nuclear debris and eosinophilic acellular material within the vitreous cavity. [3]
- Macrophages extend into the sclera, ciliary body, iris and trabecular meshwork. [4]
- The macrophages are intermixed with lymphocytes, plasma cells and some neutrophils [5] and contain numerous, spherical, intracellular organisms that are approximately 2-4 microns in diameter and consistent with yeasts of *Histoplasma capsulatum*. [6-7] No central basophilic body is present, indicating dead organisms.
- The vitreous body is liquefied and shrunken.
- The lens capsule is intact but thrown into multiple folds at the posterior pole [8] and is accompanied by a fibrous plaque composed of metaplastic lenticular epithelial cells. [9] A similar focus of fibrous metaplasia of lens epithelial cells is present near the equator. [10] Large areas of liquefaction in the anterior and posterior cortex dissect between lens fibers (cataract).
- Proteinaceous fluid is present in the anterior chamber (plasmoid aqueous or aqueous flare). [11]
- Additional findings include multifocal areas of mononuclear cell (lymphocytes, macrophages) infiltration into extraocular skeletal muscle [12] and slight infiltration of lymphocytes and plasma cells within the episclera. [13]

Morphologic Diagnosis(es): Severe granulomatous endophthalmitis with intracellular yeasts, scleritis, cataract, and minimal multifocal lymphohistiocytic extraocular myositis [14-18]

Etiology: *Histoplasma capsulatum* [19]

Differential Diagnosis: *Leishmania* sp. [20]