

# ECVP/ESVP Summer School in Veterinary Pathology

## Summer School 2010 – Eye Case 4

### Tissue from a dog

- The section of globe is collapsed and distorted (atrophia bulbi/early phthisis bulbi) [1] with increased basophilia around the lens, increased eosinophilia (increased protein) in the vitreous body (plasmoid vitreous)[2] and detachment of the retina.[3]
- Corneal changes include infiltration of the stroma by vessels (neovascularization) and neutrophils (keratitis) [4], especially along Descemet's membrane and into the adjacent stroma.
- The anterior chamber is collapsed and contains proteinaceous fluid in the stroma (plasmoid aqueous/aqueous flare). [5]
- The iris is anteriorly displaced, adhered to the cornea (diffuse anterior synechia) [6] and contains numerous neutrophils. The iris, ciliary body and choroid all contain numerous lymphocytes and plasma cells (panuveitis). [7]
- The lens capsule is ruptured [8] and the multifocally degenerate cortex contains numerous neutrophils and foamy macrophages infiltrating around lens fibers (phacoclastic uveitis). [9] A fibrous membrane extends between the lens and the posterior iris [10] and the ciliary body is distorted.
- Plump, spherical melanin-containing cells (melanophages) are present in the anterior uvea. [11]
- A fibrinous coagulum is present in the anterior vitreous chamber, containing neutrophils and foamy macrophages. [12]
- The sensory retina is detached. Blood, serous fluid and fibrin is present in the subretinal space. [13] The retinal pigment epithelium has a domed appearance in the area of sensory retinal detachment. [14] There is diffuse blunting of the inner and outer segments of photoreceptors (secondary to retinal detachment). [15] The sensory retina is infiltrated by lymphocytes and plasma cells, especially around vessels (retinitis). [16] The cellularity of the inner aspect of the inferior (nontapetal) sensory retina was decreased in comparison to the cellularity of the inner aspect of the superior retina.

**Morphologic Diagnosis(es):** Atrophia bulbi (early phthisis bulbi), cataract, lens capsule rupture, neutrophilic keratitis, plasmoid aqueous (aqueous flare), pyogranulomatous anterior uveitis, fibrinoserohemorrhagic retinal detachment, lymphoplasmacytic retinitis [17-19]

**Name the condition:** Phacoclastic uveitis (Inflammatory response to lens proteins secondary to rupture of the lens capsule) [20]