



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2006 – Eye 06RD0302

Research No.: 06RD0302
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Animal: Kitari (#86953)

The tissue submitted is the formalin-fixed left globe from an 8-year-old neutered male Shiba Inu dog. Grossly and histologically, there is extensive hemorrhage in the vitreous. Histologically, there is stromal corneal vascularization extending from the limbus. The epithelium of the axial cornea is lifted away. The lifted epithelium shows disorganized differentiation with keratinization on both sides suggesting a failure and epithelial attachment. Subtending the detached epithelium, there is a thin hypereosinophilic acellular zone. The acellular zone is subtended by a zone of vascular ingrowth and disorganized spindle cells. Centrally, a pannus of granulation tissue fed by large branching blood vessels bulges outward, breaking through the acellular zone. The anterior chamber is distorted due the presence of a thick preiridal fibrovascular membrane. The rest of the fibrovascular tissue wraps around the pupillary margin distorting and traversing the posterior chamber. There is a thick avascular spindle cell membrane on the posterior aspect of the cornea (retrocorneal membrane). Over much of the posterior aspect, there is doubling of Descemet's membrane suggesting prior trauma. There is broad posterior synechia. There is complete retinal detachment with hemorrhage within the vitreous with relatively little hemorrhage in the subretinal space. There is profound retinal atrophy. There is a cell-poor remnant of a vascular structure extending in the middle of the vitreous. The structure is intermittently sectioned but branches out over the posterior aspect of the lens. The retina is detached and gliotic with remnant disorganized retinal elements. Retinal blood vessels are flattened and cell-poor. There is a small amount hemorrhage in the subretinal space and there is inconspicuous hypertrophy of the retinal pigment epithelial cells indicating a pathologic retinal detachment. The optic nerve is gliotic, atrophied, and pushed backwards (cupped).

Diagnosis:

1. Persistent hyaloid artery/persistent hyperplastic primary vitreous
2. Corneal stromal vascular infiltrate
3. Corneal recurrent erosion with poor epithelial attachment subtended by granulation tissue axially
4. Exuberant preiridal fibrovascular membrane with broad anterior synechia
5. Cyclitic membrane
6. Chronic retinal detachment with gliotic retinal atrophy
7. Chronic secondary glaucoma
8. Extensive intraocular hemorrhage
9. Retrocorneal membrane with doubling of Descemet's membrane