



ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2015 – Eye

Case MI1

DOG

HD: eye

Severe distortion of globe normal architecture with locally extensive inflammatory infiltration of the anterior segment (cornea, iris, ciliary bodies, sclera and anterior/posterior chambers) and large collection of blood material in vitreal chamber (hemovitreous).

Peripheral cornea, limbal sclera, filtration angle, iris and ciliary bodies are diffusely infiltrated and expanded by a mixed inflammatory cell population, mainly composed of plasmacells, macrophages and neutrophils. Macrophages contain innumerable intracytoplasmic 3-4 um, round to oval protozoa, which are characterized by a 1-2 um diameter, basophilic nucleus and an occasionally visible adjacent perpendicular basophilic kinetoplast (amastigotes).

Corneal epithelium is diffusely and severely hyperplastic and keratotic, lying on irregular and segmentally mineralized basement membrane (band keratopathy). Superficial corneal stromal fibrosis and neovascularization and deep peripheral stromal mixed inflammatory infiltration are also visible.

Filtration angle is closed and collapsed. Normal iris and ciliary bodies architecture is barely recognizable, substituted by granulomatous/pyogranulomatous inflammation. Multiple anterior synechiae are recognizable (Multifocally, the anterior margin of the iris is adhered to the cornea).

Thick fibrovascular membranes are visible lining posterior iris surface and spanning posterior chamber (cyclitic membranes) where hemosiderin and hematoidin deposition is also recognizable.

Lens capsule is diffusely wrinkled, with thick subcapsular fibrous membranes, lens fibers liquefaction and multifocal cortical mineralization (cataract).

Multiple, variably sized, lightly basophilic round amorphous bodies are recognizable in anterior vitreous (asteroid bodies, asteroid hyalosis)

Complete retinal detachment with diffuse RPE tomb stoning (hypertrophy) and full thickness retinal atrophy are also present.

Mild, multifocal choroidal inflammatory cell infiltration, mainly composed of plasmacells and fewer lymphocytes, is visible (choroiditis)

MD: Severe pyogranulomatous panophtalmitis with intralesional protozoal amastigotes. Retinal detachment and retinal atrophy. Cataract, hypermature.

Etiology: *Leishmania infantum*

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Histologic Description	Points
Style	1
Severe distortion of globe normal architecture (0.5) by locally extensive inflammatory infiltration of the anterior segment (cornea, iris, ciliary bodies, sclera and anterior/posterior chambers) (0.5) and large collection of blood material in vitreal chamber (hemovitreous). (0.5 + 0.5)	2
Peripheral cornea, limbal sclera, filtration angle, iris and ciliary bodies (0.5) are diffusely infiltrated and expanded by a mixed inflammatory cell population, mainly composed of plasmacells, macrophages and neutrophils. (0.5)	1
Macrophages contain innumerable intracytoplasmic 3-4 um, round to oval protozoa (0,5), which are characterized by a 1-2 um diameter, basophilic nucleus and an occasionally visible adjacent perpendicular basophilic kinetoplast (amastigotes). (1)	1.5
Corneal epithelium is diffusely and severely hyperplastic and keratotic (0.5), lying on irregular and segmentally mineralized basement membrane (band keratopathy) (0.5). Superficial corneal stromal fibrosis and neovascularization (0.5) and deep peripheral stromal mixed inflammatory infiltration are also visible.	1.5
Filtration angle is closed and collapsed.	0,5
Multiple anterior synechiae are recognizable (Multifocally, the anterior margin of the iris is adhered to the cornea).	1
Thick fibrovascular membranes are visible lining posterior iris surface and spanning posterior chamber (cyclitic membranes). Hematoidin and hemosiderin deposits	2
Lens capsule is diffusely wrinkled, with thick subcapsular fibrous membranes (0.5), lens fibers liquefaction and multifocal mineralization (cataract) (0.5).	1,5
Multiple, variably sized, lightly basophilic round amorphous bodies (0.5) are recognizable in anterior vitreous (asteroid bodies, asteroid hyalosis) (0.5)	1
Complete retinal detachment (0.5) with diffuse RPE tomb stoning (hypertrophy) and full thickness retinal atrophy (0.5) are also present.	1
Mild, multifocal choroidal inflammatory cell infiltration, mainly composed of plasmacells and fewer lymphocytes (0.5), is visible (choroiditis) (0.5)	1
MD: Severe pyogranulomatous (0.5) panophthalmitis (1) with intralesional protozoal amastigotes (1). Retinal detachment (o.5) and retinal atrophy (0.5). Cataract (0.5)	4
E <i>Leishmania infantum</i>	1
	20