Slide Recognition

Day 1
Q. Abnormalities
A. Optic disc coloboma, chorioretinal hypoplasia
Q. Describe gross abnormalities.

A. Retinal detachment, optic nerve coloboma
Q. Describe any abnormalities. What is the pathogenesis of this abnormality?

A. Two foci or peripapillary hyporeflectivity (retinal detachment), 0.5 of lateral disc has grey, depressed foci (coloboma), Rhegmatogenous retinal detachment from poor attachment of neural retina to coloboma margin.
Q. Abnormality; anatomic location of abnormality
A. Two, 0.25 disc diameter, hypo or depigmented foci; RPE (RPE “coloboma”)
Q. Most likely etiologic diagnosis; genus causing lesions

A. Ophthalmomyiasis interna; diptera spp.
Q. Etiologic diagnosis; preferred treatment
A. Dirofilaria in anterior chamber; surgical removal under dim light
Q. Conjunctival biopsy from a horse. Etiologic diagnosis? What ocular conditions may this etiology cause in the horse?
A. *Onchocerca cervicalis* microfilaria; sclerosis, pigmentary keratitis, anterior uveitis, +/- peripapillary chorioretinitis.
Q. Appearance of the eye and forelimb in a horse. Most likely etiologic diagnosis? Life cycle of the causative agent? A biopsy of the affected area would demonstrate what abnormalities? Preferred treatment?

A. Habronemiasis; Adult in stomach, eggs passed in feces, face fly, aberrant deposition of larva in medial canthal region or limbs; PMNS, eosinophils, macrophages and other MNCs if chronic; systemic ivermectin, systemic NSAIDs, topical therapy as needed.
Q. Appeared in the conjunctival sac of a horse following flushing of the nasolacrimal system. Scale is in millimeters. Etiologic diagnosis?

A. Thelazia lacrymalis
Q. Appearance of the eye of a budgie. Most likely etiologic diagnosis? Preferred treatment?

A. Knemidokoptes pilae; oral or parenteral ivermectin
Q. Species?

A. Goat; Sheep
Q. Abnormalities? Pathogenesis?
A. Peripapillary pale area with pigment clumping; retinal or chorioretinal degeneration, post inflammatory or ischemic
Q. Abnormalities? Pathogenesis and significance of findings?

A. Multifocal pale area with central pigmented foci (depigmentation/hyperpigmentation); post inflammatory or vascular retinal degeneration; common incidental finding
Slide Recognition

Day 2
Q. Young goat. What are the abnormalities. What is the etiologic diagnosis. What is the prognosis and treatment. If this were a sheep, what would the most likely etiologic diagnosis be?

A. Deep corneal vascularization, stromal WBC, edema; mycoplasma spp.; sheep=chlamydial spp.
Q. 7 year old Holstein cow. What is the most likely etiologic diagnosis? What other organs might be involved.

A. Lymphosarcoma (bovine leukemia virus); uterus, spinal cord, heart
Q. Abnormalities?

A. Cataract, deep AC (resorption of lens)
Q. Funduscopic abnormalities? Most likely etiology?
A. Pale foci, pigment clumping, lucent foci adjacent to disc (chorioretinal degeneration/focal detachment); trauma
Q. Cuban Tree Frog. Describe the abnormality. What is the most likely etiologic diagnosis? What are the possible pathogenic mechanisms of the disease? What is the prognosis?

A. bilateral, yellow-gold medial stromal opacity; xanthomatosis; dietary or abnormal lipid metabolism; poor prognosis as other organs involved.
Q. NZW rabbit. What is the abnormality? List two possible etiologic diagnosis

A. Hypopyon; encephalatozoon; pasteurella
Q. Turkey with blindness. An epidemic of blindness exists in this farm production. List 4 possible etiologic diagnosis.

A. Marek’s disease, Vitamin E deficiency, Avian Encephalomyelitis, Genetic
Q. Clinical appearance and conjunctival cytology from a group of blue-fronted Amazon parrots. What are the clinical abnormalities? What is the cytologic findings? What is the etiologic diagnosis?

A. Caseous lesion upper lid, severe blepharoadema and loss of filoplumes, heterophils and inclusion bodies; pox virus
Q. Reticulated python. What is the diagnosis? What other non-ocular disease process might this animal exhibit (that is related to the ocular disease)? What is the preferred treatment?

A. Subspecular infection; stomatitis; systemic antimicrobials and excise small wedge from spectacle to allow drainage.
Q. Domestic ferret, Acute onset of blepharospasm and lethargy. The eyelids and appearance of the footpads are shown. What is the most likely etiology. What is the prognosis?

A. Canine distemper virus; grave
Q. 3 year old cat. Fine needle aspirate of the lesion stained with Dif Quik showed macrophages (giant cells) lymphocytes and plasma cells. Clinical diagnosis? Preferred treatment?

A. Lipogranulomatous conjunctivitis; surgical excision.
Q. 3 year old Chow-Chow. List 6 autoimmune diseases that could cause these abnormalities.

A. P. vulgaris, P. foliaceous, E.multiforme, SLE, DLE, TEN
Q. Abnormalities? Breed?

A. Iris hyperpigmentation, pigment dispersion on ACL, lens membrane dorsally, dyscoria/posterior synechiae, cataract; Golden Retriever
Slide Recognition

Day 3
Q. List and describe 7 methods of surgically treating this abnormality.

A. Robert’s technique, Dziezyc modification, Collagen injections, cryosurgery, lateral canthal transposition (Blogg), Lip to lid, oral mucosal grafts, Cross-lid flap
Q. List and describe 6 surgical procedures that could be used to treat this neoplasm of the eyelid.

A. Sliding H graft, rotational graft from medial region, bucket handle, lateral transpositional graft (Pellicanne review article), oral mucosal graft, lip to lid.
Q. What surgical procedure has been performed in this Chow-Chow?

A. Brow-lift procedure
Q. Abnormalities? Most likely neoplastic diagnosis?

A. Lobulated, cobblestone, pink mass on bulbar surface of nictitans; adenocarcinoma
Q. Most likely diagnosis?
A. Diffuse episleritis/scleritis
Q. abnormalities; 2 differential diagnoses

A. Blue discoloration to sclera (scleral thinning); congenital staphyloma, post-inflammatory scleral thinning

A. Upper lid trichiasis/entropion; Stades procedure, incision near lid margin, second elliptical incision 15-25mm dorsal, excise skin; undermine dorsal incision slightly, pull dorsal incision line ventrally and suture 5mm from ventral incision.
Q. Two most likely clinical diagnoses?
A. Meibiomitis (staph spp); chalazion
Q. Describe the abnormalities. Possible etiologic diagnoses? What name has been given to this syndrome?

A. Massive bullous lesion in central cornea with rim of adjacent edema, vasculization; spontaneous, FHV-1, chemical injury, bacterial keratitis, endothelial decompensation; Eruptive Bullous Keratopathy
Q. 2 year old mixed breed dog imported from Central America. The eye is not painful. What is the most likely diagnosis? What is the prognosis?

A. Florida Spots (Florida keratopathy), good prognosis (non-progressive)
Q. 8 year old dog. Most likely diagnosis? Preferred treatment?
A. Inclusion cyst; keratectomy
Q. Appearance of the cornea following a intracameral tPA injection. Abnormality and how did it occur?
A. Intrastromal air from hypodermic in stroma
Q. Two examples of a 4 week old puppy, examined for a non-painful eye. Corneal abnormality and most likely diagnosis? Prognosis?

A. Translucent, geographic lesion; “Infantile corneal dystrophy”; self-resolving.
Q. What is the abnormality and etiologic diagnosis

A. Dendritic corneal lesions, FHV-1
Q. Most likely diagnosis?
A. Eosinophilic keratoconjunctivitis
Slide Recognition

Day 4
Q. 3 year old feline. What is the most likely diagnosis? What would cytology from this lesion demonstrate.

A. Eosinophilic keratitis; lymphocytes, PCs, pockets of eosinophils, mast cells, PMNs if necrotic or acute
Q. Abnormalities?
Clinical diagnosis?
Breed?

A. White, crystalline, speculated central corneal opacity; lipid dystrophy; S. Husky.
Q.: Describe the abnormalities. What is the most likely diagnosis.

A. Extensive corneal vascularization, diffuse edema, multifocal superficial ulceration; superficial punctate keratitis
Q. What is the histologic diagnosis?

A. Corneal sequestrum
Q. Dog with chronic anterior uveitis. Describe the abnormalities. What is the pathogenesis of the lesions?

A. white, granular infiltrate in peripheral (arcus) and central cornea, associated vascularization. Alteration in corneal lipid metabolism, corneal vascularization, extracellular lipid deposition, need to rule out systemic hyperlipidemia
Q. Dog with hypothyroidism. Describe the abnormalities. What is the common term for this ocular condition. What is the pathogenesis.

A. White granular, arc-shaped corneal infiltrate in temporal, peripheral cornea. Arcus lipidosis; increased lipid levels, lipid diffuses from conjunctival vessels, deposited in avascular peripheral cornea.
Q. What surgical procedure has been performed.
A. thermokeratoplasty
Q. What procedure has been performed on this dog?

A. Cyanoacrylate glue application for corneal ulcer
Q. Describe the abnormalities. What is the most likely etiologic diagnosis? What is the preferred treatment.

A. raised, red mass in peripheral cornea and temporal conjunctival, corneal edema. hemangioma/hemangiosarcoma; surgical excision(keratoconjunctivectomy) +/- ancillary therapy
Q. What surgical procedure was performed in this dog, and what postoperative complication is seen?

A. Parotid duct transposition. Calcium deposits from saliva.
Q. 8 year old cat with change in appearance of eye. Most likely diagnosis? Suggested diagnostic or follow-up plan?

A. Open, rule out iris melanosis or melanoma; Plan is controversial, could include monitoring, cytology, biopsy, or enucleation.
Q. 6 year old cat. Most likely diagnosis? Treatment options?

A. Iris melanoma (note dyscoria); iridectomy, laser, monitor for progression
Q. Prognosis?

A. Guarded?, lesion does not appear to have reached ICA, but may involve deeper layers of iris stroma
Q. 6 year old Labrador retriever. Most likely diagnosis? Treatment options?

A. Iris melanoma (melanocytoma); iridectomy, laser ablation, monitor
Slide Recognition

Day 5
Q. Fixed specimen from a 8 year old dog. What is the gross pathologic abnormality?
A. Nodular mass in region of ciliary body, lens displacement
Q. What is the gross pathologic abnormality. What is the most likely diagnosis. What is the prognosis (biologic behavior) of this condition

A. Pigmented mass on posterior pole of globe; choroidal melanomocytoma; locally invasive, but benign, not metastatic
Q. 14 year old cat, appearance of eye 14 months following an evisceration. What is the abnormality. What is the most likely diagnosis.

A. Pink mass in ventral corneal region; recurrence of intraocular neoplasia for which globe eviscerated, here a ciliary body adenocarcinoma
Q. Feline eye. What is the most likely clinical diagnosis. What cell layers contribute to this lesion.

A. Uveal cysts; posterior iris epithelium and/or ciliary epithelium
Q. Slit-lamp photograph. What is the abnormality?
A. Keratic precipitates
Q. Abnormalities, pathogenesis?

A. Turbid, milky appearance to aqueous; hyperlipidemia + uveitis
Q. Equine eye. The eye is non painful and the abnormality was noted incidentally. What is the most likely, non-neoplastic clinical diagnosis?

A. Iris stromal cyst (stromal hypoplasia)
Q. Most likely etiologic diagnosis?
A. Diabetes mellitus
Q. Abnormalities?

A. Microphakia, aphakic crescent, elongated ciliary processes
Q. Canine 7 years old. Camera is focussed on the lens. What is the most likely etiologic diagnosis?
A. Hypocalcemia
Q. Biomicroscopic abnormalities?

A. Complete (intumescent, hypermature) cataract, shallow AC, capsular or subcapsular plaques
Q. 9 year old cat with intermittent anisocoria. What is the most likely etiologic diagnosis? What is the anatomic location of the lesion. What is the proposed pathogenesis?

A. Spastic pupil syndrome; FeLV; ciliary ganglion; SPS is risk factor for future lymphosarcoma development
Q Most likely diagnosis? Other clinical signs this patient might exhibit? Most likely location for lesion? 7 Differential diagnosis

A. Total ophthalmoplegia, efferent pupillomotor dysfunction; ocular movement paralysis (check VOR) ventrolateral strabismus, neurologic (brainstem) signs; incranial (not orbital) lesion; ddx = causes of menigoencephalitis (GME, infectious) diabetic neuropathy, trauma, vascular (i.e. hypertension, hemorrhage, ischemia)
Q. Diagnosis?

A. Facial n. paralysis with “pseudoproptosis”
Q. Present since birth……Pathogenesis?

A. Misrouting of optic nerve fibers with some temporal fibers crossing over; creating visual ambiguity and binasal hemianopia; esotropia may be attempt to compensate for visual ambiguity
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Day 6
Q. What are the abnormalities. Most likely diagnosis? What is the pathogenesis or mechanism of the lesion.

A. Lobular mass in dorsal conjunctiva (orbital fat prolapse); disruption of orbital septum (age-related, trauma)
Q. 2 year old Golden Retriever. What is the most likely diagnosis. What is the pathogenesis of this condition. What is the prognosis and preferred treatment.

A. EOM myositis; lymphocytic/plasmacytic (immune-mediate) inflammation of EOM; good prognosis with immunsuppressive therapy although recurrence possible
Q. 1 year old SharPei. What are the abnormalities? What tissue is affected pathologically. Other breed affected?
A. Fibrosing EOM myositis; fibrosis of medial, ventral rectii, ventral oblique muscle belly; Iris Wolfhound
Q. Ultrasound from a dog with acute onset exophthalmos. What are the ultrasonographic abnormalities? What is the most likely diagnosis?

A. Hyperechoic lesion adjacent to posterior pole, acoustic shadow; foreign body
Q. : List the abnormalities. List possible etiologic diagnosis.

A. Pink, cellular subretinal mass (5-6 o.d.d) with adjacent retinal detachment; hyporeflective foci in fellow eye; 1. any metstatic neoplasia (LSA, sarcoma, carcinoma) 2. Inflammatory esp. fungal but much less likely
Q. Abnormalities?

A. None, normal fundus
Q. Diagnosis?

A. Lipemia retinalis
Q. abnormalities? clinical diagnosis? stage?

A. Hyperreflective foci in area centralis, visual streak, "conus"; stage 4 taurine deficiency retinopathy
Q. Fundus photograph, fluorescien angiographic appearance (15 seconds post injection) of a 12 year old cat with unilateral blindness. Describe the funduscopic abnormalities. Describe the angiographic abnormalities.

A. tan-discolaration to tapetal fundus, retinal vascular attenuation, peripapillary edema; hypofluoroscensce of tapetal fundus (non-perfusion), retinal vascular non-filling, peripapillary hyperfluoroscence (leakage)
Q. Describe the histopathologic abnormalities. What is the most likely etiologic diagnosis?

A. Neoplastic thrombi in choroidal vessel, one marginating or colonizing wall, panretinal necrosis, RPE migration; angioinvasive pulmonary carcinoma with choroidal metastasis causing posterior pole ischemia
Q. What are the funduscopic abnormalities. What is the most likely neoplastic etiologic diagnosis?
A. Diffuse hyporeflectivity to tapetal fundus (flat retinal detachment); lymphosarcoma
Q. English bulldog with unilateral blindness. Describe the abnormalities. List the most likely non-metastatic neoplastic etiologic diagnosis.

A. Disc protrusion, hemorrhage, cellular infiltrate ventralateral to disc, bullous retinal detachment; optic nerve menigioma
Q. H/E stained section. What tissue is being depicted? What are the microscopic abnormalities? What was the likely etiologic diagnosis? What would have been the preferred treatment in this animal? What is the term used to describe this set of lesions?

A. Lens; capsular rupture, intralenticular PMN, Morgagnian globules; phacoclastic uveitis
Q. Canine eye. What are the microscopic abnormalities?

A. Closed iridocorneal angle (ciliary cleft), “false” angle formation
Q. What species is represented. What are the characteristic features of the iridocorneal angle in this species?

A. Equine; prominent pectinate fibers; rudimentary scleral venous system; large cilary cleft
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Day 7
Q. What surgical procedure has been performed in this patient? What are the two postoperative complications seen in this slit lamp photograph? What error in surgical technique is evident.

A. gonioimplant; shallow AC (hypotony), endothelial damage; tubing cut excessively long
Q. Equine eye. What are the abnormalities? What is the clinical diagnosis? What is the most likely etiologic diagnosis?

A. Corneal edema, vascularization, stria; glaucoma; anterior uveitis
Q. Abnormalities? Most likely diagnosis

A. Corneal vascularization, multifocal punctate cellular infiltrate, conjunctival hyperemia; Immune Mediated Keratitis (IMMK)
Q. Slitlamp micrograph of a dog following extracapsular cataract extraction. The IOP is 55mm Hg. What postoperative complication is seen. What is the likely pathogenesis of this complication. What is the preferred surgical treatment of this complication.

A. Pupillary block glaucoma (synechia) or aqueous diversion glaucoma (aqueous flow posterior to capsule); disrupt synechia, reestablish normal aqueous flow (capsulotomy or pars plana vitrectomy
Q. Canine labrador retriever? What are the funduscopic abnormalities? What is the clinical diagnosis?

A. Hyporeflective foci, with multifocal pigment; geographic retinal dysplasia
Q. Diagnosis?
A. Geographic retinal dysplasia
Q. Canine, Cocker Spaniel. What is the funduscopic abnormalities. What are the possible pathogenic mechanisms for this animal’s lesion.

A. Retinal folds; genetic vs. imbalance of scleral and chorioretinal development
Q. Photomicrograph. What is the species (or class of animal)? What are the microscopic abnormalities. What is the morphologic diagnosis? What is the most likely etiologic diagnosis?

A. Ruminant (prominent retinal blood vessels protruding into vitreous + fibrous tapetum); retinal folds, rosettes; BVD
Q. Abnormalities?

A. Extensive diffuse alterations in tapetal reflectivity (tapetal atrophy/necrosis), multiple foci of hypopigmentation in nontapetal fundus
Q. Canine. What are the funduscopic abnormalities? What is the breed of dog?

A. Retinal folds, geographic area of hyporeflectivity with area of central hyperreflectivity, tapetal color alteration; geographic retinal dysplasia typical of that seen in English Springer Spaniel
Q. abnormalities?
A. Multiple retinal folds, chorioretinal hypoplasia, optic disc coloboma
Q. What are the abnormalities. In what breed might you see this disorder as a familial trait?

A. PHPV; Doberman, Staff. Bull Terrier, Bouvier
Q. Camera is focused posterior to the lens. What is the diagnosis (es)? What is the composition of these lesions?

A. Astroid hyalosis, nuclear sclerosis; calcium-lipid complexes
Q. Slitlamp photograph of an 8 year old, male cat. What is the biomicroscopic abnormality? What is the clinical diagnosis? What infection pathogen has been suggested to be associated with this lesion?

A. Relucent bodies/cells in anterior vitreous; cyclitis or pars planitis; FIV
Q. Breed? Pathogenesis?

A. Pug. Adnexal conformational abnormalities, primary melanocytic proliferative disorder?