

Table of contents

Preface

List of abbreviations

Glossary

Section I Atlas

1 Orbit

Figure 1.1 Clinical signs associated with orbital mass effect (neoplasia)

Figure 1.2 a Clinical signs associated with orbital mass effect (cellulitis)

Figure 1.2 b Clinical signs associated with orbital mass effect (cellulitis)

Figure 1.3 Clinical signs associated with orbital mass effect (cellulitis)

Figure 1.4 Clinical signs associated with orbital mass effect (neoplasia)

Figure 1.5 Clinical signs associated with orbital mass effect (neoplasia)

Figure 1.6 Enophthalmos

Figure 1.7 Brachycephalic ocular syndrome

Figure 1.8 Brachycephalic ocular syndrome

Figure 1.9 Ventromedial entropion associated with brachycephalic ocular syndrome

Figure 1.10 Ventromedial entropion associated with brachycephalic ocular syndrome

Figure 1.11 Clinical signs associated with Horner's syndrome

Figure 1.12 a Clinical signs associated with Horner's syndrome

Figure 1.12 b Appearance of Horner's syndrome following application of a sympathomimetic drug

Figure 1.13 Clinical signs associated with Horner's syndrome

Figure 1.13 b Appearance of Horner's syndrome following application of a sympathomimetic drug

Figure 1.14 Clinical signs associated with proptosis

Figure 1.15 Proptosis

2 Eyelids

Figure 2.1 Normal appearance of punctum

Figure 2.2 Normal appearance of punctum

Figure 2.3 Ectopic cilia

Figure 2.4 Ectopic cilia

Figure 2.5 Distichiae

Figure 2.6 Distichiae

Figure 2.7 Distichiae

Figure 2.8 Distichiae

Figure 2.9 Distichiae

Figure 2.10 Ectopic cilia and chalazion

Figure 2.11 Facial trichiasis

Figure 2.12 Lower eyelid entropion

Figure 2.13 Lower eyelid entropion

Figure 2.14 Upper eyelid entropion

Figure 2.15 Lower eyelid entropion

Figure 2.16 Lower eyelid entropion

Figure 2.17 Appearance of entropion after temporary correction using tacking sutures

Figure 2.18 Lower eyelid ectropion

Figure 2.19 Lower eyelid ectropion

Figure 2.20 Eyelid agenesis

Figure 2.21 a Eyelid agenesis

Figure 2.21 b Eyelid agenesis

Figure 2.22 Eyelid agenesis

Figure 2.23 Eyelid mass

Figure 2.24 Eyelid mass (Meibomian adenoma)

Figure 2.25 Eyelid mass (Meibomian adenoma)

Figure 2.26 Eyelid mass suspected to be Meibomian adenoma

Figure 2.27 Eyelid mass suspected to be melanoma

Figure 2.28 Eyelid mass (Meibomian adenoma)

Figure 2.29 Eyelid mass (plasmacytoma)

Figure 2.30 Eyelid melanocytoma

Figure 2.31 Chalazion

Figure 2.32 Chalazion

Figure 2.33 Chalazion

Figure 2.34 Blepharitis

Figure 2.35 Blepharitis

Figure 2.36 Blepharitis

Figure 2.37 Blepharitis

Figure 2.38 Blepharitis

Figure 2.39 Blepharitis

Figure 2.40 Blepharitis

Figure 2.41 Eyelid laceration

Figure 2.42 Eyelid laceration

3 Third eyelid, nasolacrimal system, and precorneal tear film

Figure 3.1 Normal third eyelid

Figure 3.2 Jones test (mouth)

Figure 3.3 Jones test (nares)

Figure 3.4 Scrolled third eyelid cartilage

Figure 3.5 Scrolled third eyelid cartilage

Figure 3.6 Scrolled third eyelid cartilage

Figure 3.7 Prolapsed third eyelid gland (“cherry eye”)

Figure 3.8 Prolapsed third eyelid gland (“cherry eye”)

Figure 3.9 Prolapsed third eyelid gland (“cherry eye”)

Figure 3.10 Prolapsed third eyelid gland (“cherry eye”)

Figure 3.11 Prolapsed third eyelid gland (“cherry eye”)

Figure 3.12 Prolapsed third eyelid gland (“cherry eye”)

Figure 3.13 Superficial neoplasia of the third eyelid

Figure 3.14 Superficial neoplasia of the third eyelid

Figure 3.15 Neoplasia of the third eyelid gland

Figure 3.16 Neoplasia of the third eyelid gland

Figure 3.17 Pathologic changes to the third eyelid associated with pannus

Figure 3.18 Pathologic changes to the third eyelid associated with pannus

Figure 3.19 Pathologic changes to the third eyelid associated with pannus

4 Conjunctiva

Figure 4.1 Normal appearance of the conjunctiva

Figure 4.2 Conjunctival hyperemia

Figure 4.3 Chemosis and conjunctival hyperemia

Figure 4.4 Chemosis and conjunctival hyperemia

Figure 4.5 Chemosis, conjunctival hyperemia, conjunctival follicles

Figure 4.6 Chemosis

Figure 4.7 Chemosis

Figure 4.8 Subconjunctival hemorrhage

Figure 4.9 Subconjunctival hemorrhage

Figure 4.10 Conjunctival follicles

Figure 4.11 Conjunctival follicles

Figure 4.12 Conjunctival follicles

Figure 4.13 Conjunctival follicles

Figure 4.14 Conjunctival thickening associated with infiltrative neoplasia

Figure 4.15 Superficial conjunctival neoplasia

Figure 4.16 Superficial conjunctival neoplasia

Figure 4.17 Superficial conjunctival neoplasia (squamous papilloma)

Figure 4.18 Superficial conjunctival neoplasia

Figure 4.19 Superficial conjunctival neoplasia (squamous papilloma)

Figure 4.20 Conjunctival neoplasia (mast cell tumor)

5 Cornea

Figure 5.1 Superficial corneal vascularization associated with KCS

Figure 5.2 Appearance of a dry cornea due to KCS and concurrent anterior uveitis

Figure 5.3 Appearance of a dry cornea associated with KCS

Figure 5.4 Typical appearance of superficial corneal vessels

Figure 5.5 Typical appearance of superficial corneal vessels

Figure 5.6 Typical appearance of superficial corneal vessels

Figure 5.7 Typical appearance of superficial corneal vessels

Figure 5.8 Superficial corneal vascularization and corneal fibrosis

Figure 5.9 Typical appearance of deep corneal vessels

Figure 5.10 Typical appearance of corneal edema

Figure 5.11 Typical appearance of corneal edema

Figure 5.12 Typical appearance of corneal edema and corneal bullae

Figure 5.13 Corneal melanosis

Figure 5.14 Corneal melanosis associated with pigmentary keratitis

Figure 5.15 Corneal melanosis associated with pigmentary keratitis

Figure 5.16 Corneal melanosis associated with pigmentary keratitis

Figure 5.17 Typical appearance of corneal fibrosis with concurrent corneal vascularization

Figure 5.18 Corneal melanosis and corneal fibrosis

Figure 5.19 Corneal white cell infiltrate with concurrent corneal vascularization and edema

Figure 5.20 Corneal stromal white blood cell infiltrate

Figure 5.21 Stromal corneal ulcer

Figure 5.22 Corneal deposits associated with corneal dystrophy

Figure 5.23 Corneal deposits associated with corneal dystrophy

Figure 5.24 Corneal deposits associated with corneal dystrophy

Figure 5.25 Corneal deposits associated with corneal dystrophy

Figure 5.26 Corneal mineral deposits and keratitis

Figure 5.27 Corneal mineral deposits

Figure 5.28 Corneal mineral deposits and keratitis

Figure 5.29 Corneal mineral deposits and keratitis

Figure 5.30 Predominantly melanotic corneal changes associated with pannus

Figure 5.31 Predominantly melanotic corneal changes associated with pannus

Figure 5.32 Predominantly fibrovascular corneal changes associated with pannus

Figure 5.33 Corneal changes associated with pannus, mixture of melanosis and fibrovascular changes

Figure 5.34 Superficial corneal ulcer

Figure 5.35 Indolent corneal ulcer with fluorescein stain applied

Figure 5.36 a Indolent corneal ulcer prior to fluorescein stain

Figure 5.36 b Indolent corneal ulcer after fluorescein stain

Figure 5.37 Indolent corneal ulcer

Figure 5.38 Indolent corneal ulcer after fluorescein stain

Figure 5.39 Indolent corneal ulcer after fluorescein stain

Figure 5.40 Deep corneal ulcer

Figure 5.41 Deep corneal ulcer

Figure 5.42 Deep corneal ulcer

Figure 5.43 Deep corneal ulcer

Figure 5.44 Deep corneal ulcer

Figure 5.45 Deep corneal ulcer

Figure 5.46 Descemetocele after application of fluorescein stain

Figure 5.47 a Descemetocele prior to application of fluorescein stain

Figure 5.47 b Descemetocele after application of fluorescein stain

Figure 5.48 Descemetocele

Figure 5.49 Corneal perforation with iris prolapse

Figure 5.50 Corneal perforation with iris prolapse

Figure 5.51 Corneal perforation with iris prolapse

Figure 5.52 Corneal perforation with iris prolapse

Figure 5.53 Corneal perforation with iris prolapse

Figure 5.54 Corneal perforation with iris prolapse

Figure 5.55 Corneal perforation with iris prolapse

Figure 5.56 Melting corneal ulcer

Figure 5.57 Perforated melting corneal ulcer

Figure 5.58 Melting ulcer with stromal loss and hypopyon

Figure 5.59 Perforated melting corneal ulcer

Figure 5.60 Dendritic corneal ulcers

Figure 5.61 Dendritic corneal ulcers

Figure 5.62 Symblepharon

Figure 5.63 Symblepharon

Figure 5.64 Symblepharon

Figure 5.65 Eosinophilic keratoconjunctivitis

Figure 5.66 Eosinophilic keratoconjunctivitis

Figure 5.67 Eosinophilic keratoconjunctivitis

Figure 5.68 Eosinophilic keratoconjunctivitis

Figure 5.69 Corneal sequestrum

Figure 5.70 Corneal sequestrum

Figure 5.71 Corneal sequestrum

Figure 5.72 Corneal sequestrum

Figure 5.73 Corneal sequestrum

Figure 5.74 Corneal sequestrum

6 Anterior uvea

Figure 6.1 Normal blue iris (feline)

Figure 6.2 Normal brown iris (canine)

Figure 6.3 Iris-to-cornea persistent pupillary membranes

Figure 6.4 Iris-to-cornea persistent pupillary membranes

Figure 6.5 Iris-to-iris persistent pupillary membranes

Figure 6.6 Iris-to-iris persistent pupillary membranes

Figure 6.7 Iris-to-lens persistent pupillary membranes

Figure 6.8 Anterior chamber uveal cysts

Figure 6.9 Anterior chamber uveal cyst

Figure 6.10 Anterior chamber uveal cyst

Figure 6.11 Uveal cyst adhered to pupillary margin

Figure 6.12 Uveal cyst adhered to pupillary margin

Figure 6.13 Transillumination of posterior chamber uveal cysts

Figure 6.14 Iris atrophy

Figure 6.15 Iris atrophy

Figure 6.16 Iris atrophy

Figure 6.17 Iris atrophy

Figure 6.18 Iris atrophy

Figure 6.19 Focal iris hyperpigmentation

Figure 6.20 Focal iris hyperpigmentation confirmed as melanoma

Figure 6.21 Feline diffuse iris melanoma

Figure 6.22 Suspected feline diffuse iris melanoma

Figure 6.23 Suspected feline diffuse iris melanoma

Figure 6.24 Feline diffuse iris melanoma

Figure 6.25 Feline diffuse iris melanoma

Figure 6.26 Canine melanocytoma

Figure 6.27 Canine melanocytoma

Figure 6.28 Melanocytic iris mass

Figure 6.29 Melanocytic iris mass

Figure 6.30 Canine ciliary body adenoma

Figure 6.31 Canine ciliary body adenoma

Figure 6.32 Classic clinical signs of uveitis

Figure 6.33 Uveitis with lipid aqueous

Figure 6.34 Clinical signs of uveitis: inflammatory debris in aqueous, hypopyon

Figure 6.35 Normal appearance of reflections during ophthalmic examination

Figure 6.36 Aqueous flare

Figure 6.37 Keratic precipitates

Figure 6.38 Hypopyon with concurrent corneal ulceration

Figure 6.39 Keratic precipitates

Figure 6.40 Hyphema

Figure 6.41 Hyphema

Figure 6.42 Hyphema and iris bombé

Figure 6.43 Hyphema

Figure 6.44 Rubeosis iridis

Figure 6.45 Iris thickening and focal rubeosis iridis

Figure 6.46 Rubeosis iridis

Figure 6.47 Rubeosis iridis and keratic precipitates

Figure 6.48 Rubeosis iridis, anterior chamber fibrin, and keratic precipitates

Figure 6.49 Iris hemorrhage

Figure 6.50 Anterior synechia

Figure 6.51 Posterior synechia

Figure 6.52 Posterior synechia

Figure 6.53 Posterior synechia, preiridal fibrovascular membrane, and complete cataract

Figure 6.54 Iris bombé

7 Lens

Figure 7.1 Nuclear sclerosis

Figure 7.2 Nuclear sclerosis

Figure 7.3 Nuclear sclerosis

Figure 7.4 Nuclear sclerosis

Figure 7.5 Incipient cataract

Figure 7.6 Incipient cataract

Figure 7.7 a Incipient cataract

Figure 7.7 b Incipient cataract

Figure 7.8 Incomplete cataract

Figure 7.9 Incomplete cataract

Figure 7.10 Incomplete cataract

Figure 7.11 Incomplete cataract

Figure 7.12 Incomplete cataract

Figure 7.13 a Incomplete cataract

Figure 7.13 b Incomplete cataract

Figure 7.14 a Incomplete cataract

Figure 7.14 b Incomplete cataract

Figure 7.15 Complete cataract

Figure 7.16 Complete cataract

Figure 7.17 Complete cataract

Figure 7.18 Complete, resorbing cataract

Figure 7.19 Incomplete, resorbing cataract

Figure 7.20 Incomplete, resorbing cataract

Figure 7.21 Complete, resorbing cataract

Figure 7.22 Complete, resorbing cataract

Figure 7.23 Complete, resorbing cataract

Figure 7.24 Complete, resorbing cataract

Figure 7.25 Lens subluxation

Figure 7.26 Lens subluxation

Figure 7.27 Anterior lens luxation and complete cataract

Figure 7.28 Anterior lens luxation and microphakia

Figure 7.29 Anterior lens luxation

Figure 7.30 Anterior lens luxation

Figure 7.31 Posterior lens luxation and complete cataract

Figure 7.32 Posterior lens luxation and complete cataract

Figure 7.33 Posterior lens luxation and complete, resorbing cataract

Figure 7.34 Posterior lens luxation and complete cataract

8 Posterior segment

Figure 8.1 Normal canine fundus

Figure 8.2 Normal canine fundus

Figure 8.3 Normal canine fundus

Figure 8.4 Normal canine fundus

Figure 8.5 Normal feline fundus

Figure 8.6 Normal feline fundus

Figure 8.7 Normal feline fundus

Figure 8.8 Subalbinotic, atapetal canine fundus

Figure 8.9 Subalbinotic feline fundus

Figure 8.10 Tapetal hyperreflectivity and retinal vascular attenuation in a cat

Figure 8.11 Tapetal hyperreflectivity and retinal vascular attenuation in a cat

Figure 8.12 Tapetal hyperreflectivity and retinal vascular attenuation in a cat

Figure 8.13 Tapetal hyperreflectivity and retinal vascular attenuation in a dog

Figure 8.14 Tapetal hyperreflectivity and retinal vascular attenuation in a dog

Figure 8.15 Tapetal hyperreflectivity and retinal vascular attenuation in a dog

Figure 8.16 Focal retinal degeneration/chorioretinal scar

Figure 8.17 Focal retinal degeneration/chorioretinal scar

Figure 8.18 Focal retinal degeneration/chorioretinal scar

Figure 8.19 Tapetal hyporefectivity due to hypertensive chorioretinopathy

Figure 8.20 Tapetal hyporeflectivity due to hypertensive chorioretinopathy

Figure 8.21 Tapetal hyporeflectivity and peripapillary hemorrhage

Figure 8.22 Peripapillary tapetal hyporeflectivity

Figure 8.23 Tapetal hyporeflectivity (retinal dysplasia)

Figure 8.24 Tapetal hyporeflectivity (choroidal melanoma)

Figure 8.25 Tapetal hyporeflectivity (chorioretinitis secondary to blastomycosis)

Figure 8.26 Tapetal hyporeflectivity (chorioretinitis secondary to blastomycosis)

Figure 8.27 Fluid and white cell infiltrate in the nontapetal fundus (chorioretinitis)

Figure 8.28 Focal white cell infiltrate (chorioretinitis) and retinal degeneration in the nontapetal fundus

Figure 8.29 Multifocal retinal degeneration in the nontapetal fundus

Figure 8.30 Pinpoint retinal hemorrhage

Figure 8.31 Hemorrhage in the nontapetal fundus

Figure 8.32 Hemorrhage in the tapetal fundus

Figure 8.33 Retinal and vitreous hemorrhage

Figure 8.34 Retinal hemorrhage and detachment

Figure 8.35 Serous retinal detachment and retinal hemorrhage due to hypertensive chorioretinopathy

Figure 8.36 Retinal and vitreous hemorrhage due to hypertensive chorioretinopathy

Figure 8.37 External view of serous retinal detachment

Figure 8.38 External view of retinal detachment

Figure 8.39 External view of serous retinal detachment

Figure 8.40 a External view of serous retinal detachment

Figure 8.40 b Serous retinal detachment

Figure 8.41 Serous retinal detachment

Figure 8.42 Rhegmatogenous retinal detachment

Figure 8.43 Rhegmatogenous retinal detachment

Figure 8.44 Optic nerve atrophy/degeneration

Figure 8.45 Optic nerve atrophy/degeneration

Figure 8.46 Optic disc cupping in a subalbinotic, atavetal fundus

Figure 8.47 Optic disc cupping

Figure 8.48 Optic neuritis

Figure 8.49 Optic neuritis

Figure 8.50 Asteroid hyalosis

Figure 8.51 Asteroid hyalosis

Figure 8.52 Choroidal hypoplasia (collie eye anomaly)

Figure 8.53 Posterior polar coloboma and choroidal hypoplasia (collie eye anomaly)

9 Glaucoma

Figure 9.1 Typical appearance of acute glaucoma

Figure 9.2 Typical appearance of acute glaucoma

Figure 9.3 Buphthalmos

Figure 9.4 Buphthalmos

Figure 9.5 Haab's stria

Figure 9.6 Haab's striae, posterior lens luxation

Figure 9.7 Haab's striae, corneal edema

Figure 9.8 Haab's stria, posterior lens luxation

Figure 9.9 Posterior lens luxation

Figure 9.10 Anterior lens luxation

Figure 9.11 Optic disc cupping

Section II Guide

10 Orbit

Diseases of the orbit

Brachycephalic ocular syndrome

Horner's syndrome

Orbital cellulitis and abscess

Orbital neoplasia

Proptosis

Further reading

References

11 Eyelids

Diseases of the eyelid

Distichiasis

Ectopic cilia

Trichiasis

Eyelid agenesis

Entropion

Ectropion

Eyelid neoplasia

Chalazion

Blepharitis

Eyelid laceration

Further reading

References

12 The third eyelid, nasolacrimal system, and precorneal tear film

Diseases of the third eyelid and lacrimal system

Third eyelid gland prolapse ("cherry eye")

Third eyelid neoplasia

Nasolacrimal duct obstruction

Tear film disorders—KCS

Qualitative tear film abnormality

References

13 Conjunctiva

Diseases of conjunctiva

Canine conjunctivitis

Feline conjunctivitis

Conjunctival neoplasia

Further reading

References

14 Cornea

Corneal diseases

Corneal dystrophy

Corneal endothelial dysfunction

Canine keratitis

Keratoconjunctivitis sicca (KCS)

Pigmentary keratitis

Pannus/chronic superficial keratitis

Corneal ulceration

Simple corneal ulceration

Indolent corneal ulceration

Deep and perforating corneal ulceration

Melting corneal ulceration

Feline keratitis, nonulcerative and ulcerative

Feline eosinophilic keratoconjunctivitis (EK)

Corneal sequestrum

Further reading

References

15 Anterior uvea

Anterior uveal diseases

Persistent pupillary membranes (PPMs)

Uveal cysts

Iris atrophy

Feline diffuse iris melanoma

Canine anterior uveal melanocytic neoplasia

Iridociliary neoplasia

Anterior uveitis

Further reading

References

16 Lens

Diseases of the lens

Nuclear sclerosis

Cataract

Lens subluxation and luxation

Further reading

References

17 Posterior segment

Diseases of the posterior segment

Asteroid hyalosis

Collie eye anomaly

Progressive retinal atrophy (PRA)

Sudden acquired retinal degeneration syndrome (SARDS)

Retinal degeneration (excluding PRA and SARDS)

Chorioretinitis

Retinal detachment

Hypertensive chorioretinopathy

Optic neuritis

Further reading

References

18 Glaucoma

Glaucoma

Further reading

References

Index