

Contents

1 Visual Disturbances, Seeing Colors, Optical Phenomena not Produced by Objects in Space, Visual Flashes, Photopsias			1
Congenital Amaurosis (Primary)		Malingering and Aggravation	4
Without Visible Ocular Changes	1	Congenital or Acquired Dyslexia,	
Sudden Decrease of Vision	1	Visual Agnosia	4
Decrease in Vision Without Irritation		Decrease or Loss of Vision in a Child	5
of the Eye or Ocular Pain	1	Chromatopsia	5
Sudden Decrease in Vision with		Scintillating Vision, Photopsias	6
Irritation of the Eye and Ocular Pain	2	Scintillation Without an Organic	
Gradual Loss of Vision	2	Disease	6
Gradual Loss of Vision Without		Scintillation With Organic Eye	
Irritation of the Eye or Ocular Pain	2	Diseases	6
Gradual Loss of Vision With Injection		Mechanical Trauma	8
and Pain in the Eyes	3	References	8
Functional Loss of Vision and			
Malingering	3		
2 Disturbances of Color Vision			9
Congenital Color Vision Defects	9	Acquired Red-Green Defects With	
Total Color Blindness and Total Cone		Shortened Spectrum for Colors of	
Blindness	9	Long Wavelengths	11
Anomalous Trichromatic Vision	10	Acquired Blue Defect With Normal	
Prevalence of Congenital Color		Brightness Sensitivity	11
Defects	10	Acquired Blue Defect With Shortening	
Color Asthenopia	10	of the Spectrum for Colors of Long	
Color Amblyopia	10	Wavelengths	11
Acquired Color Vision Defects	10	Examination Methods	12
Acquired Red-Green Defects With		References	13
Normal Brightness Sensitivity	11		
3 Visual Field Defects			14
Central Scotoma	14	Heteronymous Hemianopia	18
Concentric Constriction of the Visual		Bitemporal Hemianopia	19
Field	15	Binasal Hemianopia	22
Ring Scotoma	15	Homonymous Hemianopia	
Eccentric Constriction of the Visual Field	16	(Quadrantanopia)	22
Pathologic Processes of the Retina, the		Homonymous Right or Left	
Choroid, and the Optic Nerve	16	Hemianopia (Quadrantanopia)	22
Field Defects Produced by Refractive		Superior and Inferior Hemianopia	25
Errors	16	Pseudodeficits of the Visual Fields and	
Visual Field Defects Due to Spectacles	16	Functional Defects	25
Enlargement of the Blind Spot	16	References	26

4 Refraction and Accommodation			27
Refraction	27	Accommodation, Changes in the	
Emmetropia	27	Amplitude of Accommodation	31
Astigmatism	27	Presbyopia	31
Hyperopia, Hypermetropia	28	Paresis of Accommodation	31
Myopia	28	Spasm of Accommodation	32
Transitory Changes of Refraction	29	Tonic Accommodation	32
Symptoms Due to Changes in		Optical Illusions Concerning the Size	
Refraction	30	of Objects	32
Aniseikonia	31	References	33
5 Glare, Photophobia, Night Blindness, and Day Blindness			34
Glare	34	Testing the Light Sense	35
Photophobia	34	Day Blindness	36
Night Blindness	34	References	36
6 Injection of the Eye or of the Adjacent Area			37
Injection of the Eye Without		Hemorrhages Under the Conjunctiva	
Inflammation	37	or the Lid Skin	37
Dilation of the Conjunctival Vessels		Injection of the Eye With or Subsequent	
Without or With Minimal Symptoms	37	to an Inflammation	37
Dilation of the Conjunctival Vessels		Ciliary Injection	37
with Symptoms	37	Conjunctival Injection	37
		Mixed Injection	37
7 Edema in the Area of the Eye and the Adjacent Tissues			38
Noninflammatory Edema or Edema		Edema Produced by Medications	39
Combined With Minimal Inflammation	38	Inflammatory Edema	39
Dermatochalasis	38	Hordeolum, Chalazion	39
Trauma	38	Allergic Eczema, Contact Dermatitis,	
Graves' Disease	38	Dermatosis Produced by Light	39
Myxedema	38	Urticaria	39
Pachydermoperiostosis, Progressive		Herpes Simplex	40
Scleroderma	38	Zoster Ophthalmicus	40
Heart and Kidney Diseases,		Vaccination, Chickenpox	40
(Infectious) Systemic Diseases	38	Erysipelas	40
Elephantiasis, Melkersson-Rosenthal		Anthrax	40
Syndrome	38	Mycoses	40
Tumors and Pseudotumors	39	Dacryoadenitis	40
Parasitoses	39	Other Lid Edemas	40
Oculonasal Reflex Neurosis (Charlin's			
Syndrome)	39		
8 Motor and Sensory Disturbances			41
Type of Strabismus	41	Strabismus, Manifest Squint,	
Differential Diagnosis of Abnormal Eye		Heterotropia	43
Positions	41	Esotropia	44
The Cover Test	41	Exotropia	47
The Transillumination Test	42	Hypertropia	47
Intermittent Change in the Position of the		Elevation of the Adducted Eye	47
Eyes	42	Dissociated Vertical Divergence	48
Heterophoria (Latent Strabismus,		Pseudostrabismus	48
Anomalous Position of Rest)	42	Sensory Adaptation	48
Changes of the Near Reflex	43	Fixation	48

Objective Angle of Deviation	49	Palsies of the Extraocular Muscles	53
Subjective Angle of Deviation	49	Paralytic Strabismus	53
Normal Retinal Correspondence	49	Congenital Defects of Ocular Motility	66
Anomalous and Sliding Correspondence	49	Gaze Palsies	67
Testing for Correspondence	50	Palsies of Extraocular Muscles in Various Syndromes	69
Dominance	51	Nystagmus	72
Fusion	51	Pendular Nystagmus	73
Horror Fusionis	52	Jerk Nystagmus	73
Binocular Vision	52	Involuntary Ocular Movements	75
Testing Binocular Vision	52	References	76
Depth Perception	53		
9 Pain and Aches Originating in the Eye or Localized to the Eye			79
Asthenopia	79	Vasomotor Headaches	85
Accommodative Asthenopia	79	Inflammations of the Paranasal Sinuses	88
Muscular Asthenopia	81	Trigeminal Neuralgia	88
Asthenopia Produced by Glare	82	Cerebral Diseases and Intracranial Pressure	88
Headaches and Other Symptoms with Diseases of the Eye or Its Adnexa	83	References	88
Diseases of the Interior of the Eye	84		
Headaches With Ocular Pain Independent of the Eye	85		
10 The Lids			90
Disturbances of Lid Motion	90	Infectious Exanthema	108
Dilatation of the Palpebral Fissure	91	Telangiectasia	108
Narrowing of the Palpebral Fissure	92	Lack of Pigmentation	108
Congenital Anomalies and Adhesions of the Lids	94	Increased Pigmentation	109
Disturbances in the Position of the Lids	98	Atrophy of the Lid Skin	110
Inflammatory Lid Edema	99	Cysts and Pseudotumors of the Lids	110
Vesicle-Forming Inflammations of the Lids	103	Lid Tumors	112
Noninflammatory Lid Swelling	106	Mechanical and Chemical Injuries, Burns, Occupational Diseases	116
Passive Hyperemia	108	Blepharitis	116
Lid Hematoma and Hemangioma	108	The Lashes	117
Discoloration of the Lid Skin	108	The Eyebrows	118
		References	119
11 The Lacrimal System			122
The Lacrimal Gland	122	Excretory Lacrimal Pathways	125
Hyopsecretion (Dry Eye)	122	Diseases of the Excretory Lacrimal System	126
Hypersecretion	123	References	128
Swelling in the Area of the Lacrimal Gland	124		
12 The Conjunctiva			129
Discoloration	129	Blue Discoloration	132
Hematoma (Subconjunctival Bleeding)	129	Conjunctivitis	132
Yellow Color	129	Signs of Conjunctivitis	133
Gray (Black) Discoloration	129	Chronic Conjunctivitis	145
Brown Discoloration	130	Nodular Keratoconjunctivitis	149

Conjunctivitis Associated With Swollen Preauricular Lymph Nodes . . .	151	X-Ray and Radium Radiation	155
Telangiectasia and Vascular Aneurysms . . .	152	Conjunctival Scars With Shrinkage of the Conjunctival Sac	155
Physical Damage to the Conjunctiva . . .	154	Pseudotumors of the Conjunctiva	156
Mechanical Injuries	154	Conjunctival Cysts	157
Chemical Injuries, Burns	154	Conjunctival Tumors	158
Photoelectric Ophthalmia	154	References	161
Light Dermatoses	154		

13 The Cornea 166

Pathologic Changes of Corneal Size and Curvature	166	Fuchs' Epithelial Dystrophy	183
Large Cornea	166	Vitreous Touch, Absolute Glaucoma	183
Small Cornea	166	Interstitial Keratitis	183
Keratoconus	166	Viral Interstitial Keratitis	183
Keratoglobus	168	Interstitial Keratitis in Congenital Syphilis	185
Peripheral Corneal Degenerations (With Marginal Ectasia)	168	Nonsyphilitic Interstitial Keratitis	186
Posterior Keratoconus	169	Interstitial Keratitis and Corneal Ulcer Keratitis Pustuliformis Profunda or Keratitis Punctata Profunda	187
Katoptric Images of the Cornea	169	Sclerosing Keratitis	187
Changes in Corneal Transparency	170	Interstitial Keratitis With Skin Diseases	187
Congenital Corneal Opacities	170	Corneal Opacities After Forceps Delivery	187
Infiltration, Scars	171	Ring Abscess of the Cornea	188
Corneal Edema	172	Chemical Injuries and Burns	188
Epithelial Downgrowth	172	Corneal Ulcer	188
Striate Keratopathy	172	Location of the Most Frequent Corneal Ulcers	188
Tears in Descemet's Membrane	172	Catarrhal or Marginal Corneal Ulcer	188
Keratic Precipitates	172	Marginal Keratitis or Marginal Ectasia of the Cornea	189
Posterior Embryontoxon	173	Mooren's Ulcer	190
Senile Arcus	173	Autoimmune Diseases	190
The White Limbus Girdle	173	Serpiginous Corneal Ulcer	190
Corneal Nerves	173	Corneal Ulcer in Gonoblenorrhoea	191
Corneal Sensation	173	Deep Corneal Abscess	191
Ciliary Injection	173	Purulent Marginal Keratitis	191
Vascularization of the Cornea	174	Mycotic Infections of the Cornea	191
Deep Vascularization	174	Corneal Damage by Anesthetic and Corticosteroid Drops	192
Superficial Vascularization (Pannus)	174	Impetigo (Ecthyma) Gangrenosum	192
Corneal Abrasion	174	Lagophthalmic Keratitis	193
Corneal Abrasion Due to Physical or Chemical Trauma	175	Phlyctenular Keratitis	193
Recurrent Erosion	175	Acne Rosacea Keratitis	193
Corneal Contusion	175	Metaherpetic Disciform Keratitis	194
Fuchs' Dellen	176	Neuroparalytic Keratitis, Congenital Anesthesia	194
Viral and Chlamydial Infections	178	Xerophthalmia	194
Filiform Keratitis	180	Keratomalacia	195
Superficial Herpetic Keratitis	180	Trachoma	195
Nummular Keratitis	181	Perforating Injuries	195
Epidemic Keratoconjunctivitis	181	Congenital Corneal Opacities (Leukoma)	195
Nummular Keratitis (Dimmer)	181	Corneal Dystrophies and Degenerations	195
Nummular Keratitis-Like Picture	182	Hereditary Corneal Dystrophies	196
Bullous and Membranous Keratitis	182		
Erythema Multiforme Exudativum	182		
Pemphigus, Ocular Pemphigoid	182		
Epidermolysis Bullosa	183		
Light Dermatoses	183		
Diffuse Vesicular Keratopathy	183		

Dystrophies of the Corneal Stroma	199	Chloroquine, Indomethacin, Phenothiazine, and Amiodarone Deposits	210
Corneal Dystrophies of the Posterior Limiting Membranes	202	Epinephrine Compounds	210
Corneal Dystrophies in Inborn Metabolic Defects	203	Metallic Depositions in the Cornea	210
Corneal Degenerations	205	Pigment Deposits on the Posterior Surface of the Cornea	211
Pigmentation of the Cornea	209	Pterygium	211
Pigment Deposits	209	Primary Pterygium	211
Blood Staining of the Cornea	209	Secondary Pterygium	211
The Kayser-Fleischer Ring	209	Tumors	211
Endogenous Ochronosis	209	References	212
Phenol, Aniline, Quinone	209		
14 The Sclera			218
Size and Shape of the Eyeball	218	Granulomatous Scleritis	220
Myopia, Hyperopia	218	Causes of Scleritis	221
Hydrophthalmus, Buphthalmus	218	Collagen Diseases	221
Scleral Staphyloma	218	Tuberculosis, Syphilis, Hansen's Disease, Zoster	222
The Color of the Sclera	218	Porphyria	222
Melanosis	218	Metastatic Purulent Scleritis	222
Ochronosis	218	Tendonitis	222
Xeroderma Pigmentosum	219	Dilation of the Episcleral Vessels	222
Scleral Scars	219	Cysts	223
Blue Sclera	219	Tumors	223
Inflammations	220	Injuries	223
Episcleritis	220	References	223
Scleritis	220		
Sclerosing Keratitis	220		
15 Anterior Chamber			224
Depth	224	Increased Protein and Cells in the Aqueous	224
Deep Anterior Chamber	224	Precipitates on the Posterior Corneal Surface	225
Shallow Anterior Chamber (with narrow chamber angle)	224	References	225
16 Iris			226
Uvea	226	Color and Discoloration of the Iris	231
Iris Defects	226	Lack of Pigment, Albinism	231
Congenital Aniridia	226	Heterochromia	232
Congenital Iris Coloboma, Hypoplasia of the Iris	226	Diabetic Changes	234
Acquired Iris Coloboma	227	Senile Changes	234
Sphincter Tears	227	Vascularized Membranes on the Iris	234
Iridodialysis	227	Iritis and Iridocyclitis (Anterior Uveitis)	234
Acquired Iris Defects	227	Signs and Symptoms of Iritis and Iridocyclitis	235
Iridoschisis	229	Complications of Iritis and Iridocyclitis	236
Essential Progressive Iris Atrophy	230	Types of Iritis	237
Mesodermal Dysgenesis of Iris and Cornea (Rieger)	230	Iridocyclitis	246
Dislocation and Distortion of the Pupil	230	Differential Diagnosis of Iridocyclitis	246
Polykoria	230	Iris Cysts	247
Ectropia of the Pupil	231	Trauma	248
Ectropion, Entropion Uveae	231	Perforating Injuries	248
Persisting Pupillary Membrane	231	Blunt Trauma	248
		Tumors	248

Nevi	248	Metastatic Carcinomas	250
Nevus and Melanoma	249	Differential Diagnosis (Tumors, Pseudotumors)	250
Leiomyoma	249	References	250
Brushfield Spots	250		
Juvenile Xanthogranuloma	250		
17 The Ciliary Body			254
Cyclitis	254	Glaucomatocyclitic Crisis (Posner-Schlossmann)	254
Pars Planitis	254	References	254
18 The Choroid			255
Choroidal Colobomas	255	Expulsive Hemorrhage	262
Changes in Pigmentation	255	Choroidal Atrophies and Dystrophies	262
Increased Pigmentation	255	Circumscribed Choroidal Atrophies	262
Decreased Pigmentation	256	Diffuse Choroidal Atrophies	263
Choroiditis (Posterior Uveitis)	258	Tumors and Pseudotumors	264
Toxoplasmosis	259	References	266
Choroidal Detachment	261		
19 Intraocular Pressure			268
Physiologic Intraocular Pressure	268	Secondary Glaucomas	273
Increased Intraocular Pressure (Glaucoma)	268	Decrease of Intraocular Pressure	275
Primary Glaucomas	268	References	275
20 The Vitreous			277
Vitreous Opacities	277	Siderosis, Chalcosis	279
Vitreous Floaters	277	Proliferative Retinopathy	279
Hemorrhages	277	Liquefaction of the Vitreous	280
Cellular Opacities	278	Anterior Vitreous Detachment	280
Parasites	278	Posterior Vitreous Detachment	280
Pigment Deposits	279	Vitreous Loss and Macular Changes	280
Asteroid Hyalitis	279	Vitreoretinal Dystrophies	280
Synchysis Scintillans	279	Leukokoria	282
Amyloidosis	279	References	284
21 The Lens			286
Cataract, Zones of Discontinuity, and Location of the Opacities	286	Siderosis Lentis	302
Pathogenesis of a Cataract	286	Sunflower Cataract	302
Symptoms Produced by a Developing Cataract	287	Aftercataract	302
Acquired Cataracts	288	Pseudoexfoliation of the Lens Capsule	302
Congenital Cataracts	295	Changes in the Shape and Position of the Lens	303
Congenital Hereditary Cataracts	295	Spherophakia, Microphakia	303
Changes in the Lens Color	300	Subluxation of the Lens, Ectopia Lentis	304
Traumatic Lens Opacities	301	Anterior Lens Luxation	304
Vossius' Ring	301	Subconjunctival Lens Luxation	305
Post-Traumatic Late Rosette	301	Lenticonus and Lens Coloboma	305
Lens Rosette After Perforating Injury	302	Aphakia	305
Glaukoma spots	302	References	305

22 Retina			309
The Retinal Vessels	309	Syndrome or Combined With	
Congenital Tortuosity of the Retinal		Metabolic Defects	340
Vessels	309	Secondary Retinal Detachment	340
Crossing Phenomena	310	Pathologic Changes of the Macula	342
Aneurysms	310	Aplasia and Hypoplasia of the Fovea	342
Retinal Vasculitis and Perivasculitis	312	Heterotropia of the Macula	342
Reversible Vascular Sheathing	314	Dystrophies and Degenerations of the	
Sludged Blood Phenomenon	315	Macula	343
Paravenous and Para-Arterial Retinal		Cystoid Macular Edema	349
and Choroidal Atrophies	316	Epiretinal Fibroplasia, Puckering	
Thickened Retinal Veins	316	Syndrome	349
Color and Reflexes of the Ocular Fundus	316	Macular Holes	349
Hemorrhages	318	Light Damage of the Macula	350
Hemorrhages and Exudates	320	Inflammatory Macular Lesions	350
Arteriosclerosis of the Retinal and		Cherry Red Spot in the Macula	352
Choroidal Vessels	320	Bull's Eye Macula	353
Hypertensive Retinopathy	320	Hyperpigmentation and	
Retinopathy of Toxemia of Pregnancy	323	Depigmentation of the Macula	353
Diabetic Retinopathy	323	Retinal Changes Caused by Trauma	354
Venous Stasis	324	Pigment Dystrophies and Pigmentary	
Blood Disorders	324	Degenerations of the Retina	355
Infectious Diseases, Intoxications,		Retinitis Pigmentosa	356
Occupational Diseases, Trichinosis	326	Atypical Pigmentary Degenerations of	
Collagen Diseases	326	the Retina	357
Decompression Sickness (Bends)	327	Hereditary Retinal Diseases Similar to	
Battered Child Syndrome	327	Retinitis Pigmentosa	358
Circumscribed Gray Retinal Foci	327	Tapetochoroidal Dystrophies	360
Cotton-Wool Spots	327	Pigment Epitheliopathies in Hereditary	
Roth Spots in Septicemia	328	Diseases	361
Tuberculosis	328	Phenocopies of Retinitis Pigmentosa	366
Choroiditis	328	Inflammatory Diseases of the Retina	368
Medullated Nerve Fibers	328	Acute Pigment Epitheliopathies of the	
Coloboma of the Retina and the		Retina	368
Choroid	329	Diffuse Chorioretinitis (or	
Diffuse Gray Discoloration of the Retina	329	Neuroretinitis, Retinoneuritis,	
Occlusion of the Retinal Arteries	329	Retinochorionneuritis)	368
Berlin's Edema	332	Juxtapapillary Retinochorioiditis	369
Proliferative Retinopathy, Epiretinal		Septicemia	369
Neovascularization	332	Retinal Necrosis	369
Retinal Folds	333	Retinitis with Malnutrition, Leber's	
Retinoschisis and Retinal Cysts	333	Optic Atrophy, Intoxication with	
Vitreoretinal Degenerations	334	Ethambutol, Thallium, Tobacco,	
Primary Retinoschisis with Cysts	335	Alcohol	370
Cysts in a Retinal Detachment	336	Inflammatory Macular Lesions	370
Macular Cysts	336	Chorioretinitis	370
Degenerations of the Retinal Periphery	336	Pseudoretinitis Pigmentosa	370
Retinal Detachment	337	Tumors and Pseudotumors of the Retina	370
Idiopathic Retinal Detachment	338	Retinoblastoma	370
Retinal Detachments as Part of a		Leukokoria	371
		References	374
23 Optic Nerve			384
The Visual Pathways	384	Visible Pulsation of the Retinal Vessels	384
Ophthalmoscopic Appearance of the		Excavation of the Optic Nerve Head	385
Normal Optic Nerve Head	384	Congenital Anomalies of the Optic Nerve,	385

Hypoplasia and Aplasia of the Optic Nerve Head	385	Optic Neuritis and Papilledema	388
Conus, Supertraction, and Megalopapilla	386	Differential Diagnosis of Neuritis, Pseudoneuritis, Papilledema, and Severe Systemic Hypertension	388
Coloboma and Pit of the Optic Nerve Head	386	Papilledema	389
The Morning Glory Syndrome	386	Papilledema in Various Syndromes	390
Duplication	387	Optic Neuritis	391
Other Congenital Anomalies of the Optic Nerve Head	387	Retrobulbar Neuritis	391
Drusen of the Optic Nerve Head	387	Pseudoneuritis	393
Increased Pigmentation in the Area of the Optic Nerve Head	387	Optic Atrophy	394
Pigmented Choroidal Nevi	387	Temporal Pallor	394
Proliferation of the Retinal Pigment Epithelium	388	Primary Optic Atrophy	394
Melanocytoma	388	Glaucomatous Optic Atrophy	401
Deposition of Hemosiderin	388	Secondary Optic Atrophy	401
Melanoma	388	Optic Atrophy Secondary to Retinal Disease	401
		Tumors of the Optic Nerve Head	401
		References	402
24 The Pupil	405		
Physiologic Changes in Pupillary Diameter	405	Paralytic Mydriasis	407
Changing the Diameter of the Pupil With Medications	405	Various Types of Pupillary Areflexia	409
Miotics	405	Afferent Pupillary Defects	409
Mydriatics	405	Hemianopic Pupillary Areflexia	409
Pathologic Changes in Pupillary Diameter	407	Light-Near Dissociation	409
Anisokoria	407	Adie's Pupil	410
Spastic Miosis	407	Isolated Areflexia With Convergence	411
Paralytic Miosis	407	Pupillary Areflexia	411
Spastic Mydriasis	407	Hippus	412
		Distorted Pupils	412
		References	412
25 The Orbit	414		
Changes in the Orbital Contents	414	Exophthalmus With Orbital Hematoma and Trauma	424
Exophthalmus	414	Retrobulbar Hematoma	424
Enophthalmus	414	Traumatic Exophthalmus	424
Anophthalmia, Microphthalmus, Cryptophthalmus	414	Graves' Orbitopathy	425
Cyclops	415	Pulsating Exophthalmus	426
Examination Methods	415	Vascular Diseases	426
Noninflammatory Exophthalmus in Developmental Anomalies and Systemic Diseases	416	Bony Defects	426
Mandibulofacial Dysplasia	416	Intermittent Exophthalmus	426
Dyscranio-dysphalangia	419	Orbital Tumors and Cysts	427
Oculodentodigital Dysplasia	419	Signs and Symptoms	427
Craniostenoses	419	Examination Methods	427
Meningoencephalocele, Mucocele	421	Visual Function	428
Internal Hydrocephalus	421	Cysts and Pseudotumors	428
Systemic Diseases	421	Meningocele, Encephalocele, Mucocele	428
Pseudoexophthalmus	423	Teratoma, Cholesteatoma, Parasites	429
		Orbital Tumors	429

Orbital Inflammations	435	Ciliary Neuralgia, Trigeminal Neuralgia	438
Acute Inflammation (Cellulitis)	435	References	438
Chronic Orbital Inflammations	436		
Orbital Pain	438		
26 Damage to the Eye by Light and Ionizing Radiation	441		
Photoelectric Keratoconjunctivitis	441	Damage to the Eye by Ionizing Radiation	441
Light Coagulation of the Retina	441	Photosensitization and Light Dermatoses	442
Infrared Cataract	441	References	442
27 Burns and Chemical Injuries	443		
28 Accidental Trauma to the Globe	444		
Foreign Bodies in the Conjunctival Sac	444	Retrobulbar Hemorrhage	446
Corneal Foreign Bodies	444	Intraocular Foreign Bodies	446
Recurrent Erosions	444	Siderosis	446
Perforating Injuries of the Globe	444	Chalcosis	446
Blunt Trauma	444	Other Foreign Bodies	446
Blunt Trauma to the Iris	445	Sympathetic Ophthalmia	446
Rupture of the Globe	445	Causes and Sequelae of Ocular Injuries in	
Blunt Trauma to the Lens	445	Infants	448
Blunt Trauma to the Retina	445	References	448
Choroidal Rupture	446		
29 Chromosomal Anomalies Affecting the Eye	449		
Anomalies of Autosomal Chromosomes	449	Anomalies of the Sex Chromosomes (Gonosomes)	450
Trisomy	449	References	451
Chromosomal Deletion	450		
30 Autoimmune Diseases; Collagen Diseases	452		
References	452		
31 Hereditary Inborn Metabolic Disorders Affecting the Eye	453		
Disturbances of Fat Metabolism	454	Disturbances of Protein Metabolism	457
Hyperlipoproteinemia	454	Albinism	457
Hypolipoproteinemia	454	Disturbances of the Amino Acids	457
Dyslipoproteinemia	454	Other Metabolic Diseases	458
Lipid Storage Disease	454	Disturbances of Copper Metabolism	458
Mucopolysaccharidoses	455	Disturbance of Iron Metabolism	458
Sphingolipidoses	455	Disturbances of Calcium and Phosphate Metabolism	458
Disturbances of Carbohydrate Metabolism	455	Porphyria	459
Systemic Mucopolysaccharidoses	456	References	459
Index	461		