

Contents

Section I: Regional Signs and Symptoms

1. Orbit.....	3
• <i>Pseudoproptosis (Appearance of Exophthalmos)</i> 3 • <i>Exophthalmos</i> 4 • <i>Syndromes and Diseases Associated with Exophthalmos</i> 6 • <i>Specific Exophthalmos</i> 8 • <i>Enophthalmos</i> 11 • <i>Intraorbital Calcifications On X-Ray</i> 12 • <i>Orbital Bruit (Noise Heard Over Orbit with Stethoscope)</i> 12 • <i>Orbital Emphysema (Air Found in Orbital Tissues and Adnexa Usually Demonstrable by Palpation)</i> 13 • <i>Orbital Pain</i> 13 • <i>Shallow Orbits or Diminished Orbital Volume (Illusion of Proptosis or Glaucoma)</i> 14 • <i>Pseudohypertelorism (Illusion of Increased Distance Between Bony Orbits and Increased Interpupillary Distance)</i> 14 • <i>Hypertelorism (Increased Distance Between Bony Orbits and Increased Interpupillary Distance)</i> 14 • <i>Hypotelorism (Decreased Distance Between Bony Orbits and Decreased Interpupillary Distance)</i> 16 • <i>Deep-Set Eyes</i> 17 • <i>Prominent Supraorbital Ridges</i> 17 • <i>Osteolysis of Bony Orbit on X-Ray</i> 17 • <i>Fossa Formation of Orbit (Local Expansion of Bony Orbital Wall Caused by Persistent Pressure; Bony Cortex is Intact)</i> 18 • <i>Subperiosteal Orbital Hemorrhage</i> 18 • <i>Orbital Hemorrhage</i> 18 • <i>Expansion of Orbital Margins (Usually Associated with Benign Tumors of the Orbit)</i> 18 • <i>Hypertrophy of Orbital Bones (Hyperostosis or Sclerosis or Both)</i> 19 • <i>Expansion of Optic Canal</i> 19 • <i>Small Optic Canals</i> 19 • <i>Erosion of Optic Canal</i> 20 • <i>Enlargement of Superior Orbital Fissure</i> 20 • <i>Narrowing of Superior Orbital Fissure</i> 20 • <i>Small Orbit</i> 20 • <i>Large Orbit</i> 21 • <i>Hematic Orbital Cysts (Blood Cyst of Orbit)</i> 21	
2. Lids.....	22
• <i>Mongoloid Palpebral Fissure (Temporal Canthus Higher than Nasal Canthus)</i> 23 • <i>Antimongoloid Palpebral Fissure (Downward Displacement of Temporal Canthus)</i> 23 • <i>Pseudoptosis</i> 24 • <i>Blepharoptosis (Ptosis), Droopy Upper Lid; Weak Levator Palpebrae Superioris Muscle</i> 25 • <i>Comprehensive Ptosis Classification</i> 28 • <i>Syndromes and Diseases Associated with Ptosis</i> 48 • <i>Specific Blepharoptosis (Ptosis)</i> 50 • <i>Horner Syndrome</i> 53 • <i>Ptosis of Lower Lid (Uncommon Drooping of Lower Lid so that Lid Margin is Adjacent to Globe But Below Limbus)</i> 55 • <i>Lagophthalmos (Inability to Close Eyelids Voluntarily)</i> 55 • <i>Pseudo-Lid Retraction</i> 55 • <i>Lid Retraction</i> 55 • <i>Lid Lag</i> 57 • <i>Blepharospasm (Spasmodic Eyelid Closure)</i> 57 • <i>Facial Palsy (Bell's Palsy)</i> 59 • <i>Infrequent Blinking</i> 60 • <i>Frequent Blinking</i> 61 • <i>Lid Edema (Puffiness or Baggiess of Lids)</i> 61 • <i>Bleeding of the Eyelid</i> 71 • <i>Ectropion (Lid Margin Turned Outward from the Eyeball)</i> 73 • <i>Entropion (Inversion of Lid Margin)</i> 74 • <i>Epicanthus (Fold of Skin Over Inner Canthus of Eye)</i> 74 • <i>Hypopigmentation (Depigmentation of Eyelids)</i> 76 • <i>Hyperpigmentation (Discoloration of Lids)</i> 77 • <i>Tumors of Eyelids</i> 79 • <i>Xanthelasma (Smooth Yellow Deposits in the Eyelid, Especially the Superior Nasal and Inferior Nasal Areas)</i> 80 • <i>Chronic Blepharitis (Inflammation of Lids)</i> 81	

- *Acute Blepharitis (Inflammation of Lids with Rapid Onset)* 87 • *Thickened Eyelids* 92
- *Blepharophimosis (Short Palpebral Fissure)* 92 • *Euryblepharon* 92 • *Lid Coloboma* 93
- *Necrosis of Eyelids* 93 • *Poliosis (Whitening of Hair, Eyebrows, and Eyelashes)* 93
- *Trichomegaly (Long Lashes)* 94 • *Madarosis (Loss of Eyelashes)* 94 • *Distichiasis (Accessory Row of Lashes Growing From Openings of Meibomian Gland)* 97 • *Coarse Eyebrows* 97 • *Synophrys (Confluent Eyebrows Extending to Midline)* 98 • *Hertogh Sign (Lack of Outer Third of Eyebrows)* 98 • *Lid Myokymia (Spontaneous Fascicular Eyelid Tremor Without Muscular Atrophy or Weakness)* 98 • *Preseptal Cellulitis of Eyelid* 98 • *Telecanthus (Disproportionate Increase in Distance Between Medial Canthus; Measurements in Infants are 18 to 22 mm)* 99 • *Ankyloblepharon (Partial or Complete Fusion of Upper to Lower Eyelids)* 99 • *Flaring of Nasal Part of Eyebrow* 99
- *High Arched Brow* 100 • *Absent Brow Hair* 100 • *Trichiasis (Inward Turning Lashes)* 100 • *Apraxia of Lid (Atypical Blepharospasm)* 100

3. Lacrimal System 101

- *Dacryoadenitis (Inflammation of Lacrimal Gland)* 101 • *Bloody Tears* 102
- *Excessive Tears (Epiphoria, Tearing)* 102 • *Drugs Found In Tears* 106 • *Dry Eye (Paucity or Absence of Tears)* 107 • *Dacryocystitis (Infection of the Lacrimal Sac)* 109

4. Extraocular Muscles 111

- *Pseudoesotropia (Ocular Appearance of Esotropia when no Manifest Deviation of Visual Axis is Present)* 112 • *Esophoria and Esotropia (Visual Axis Deviated Inward; may be Latent or Manifest)* 112 • *Pseudoexotropia (Ocular Appearance of Exotropia when no Manifested Deviation of Visual Axis is Present)* 113 • *Exophoria and Exotropia (Visual Axis is Deviated Outward; may be Latent or Manifested)* 113 • *Pseudohypertropia* 114
- *Hyperphoria and Hypertropia (Visual Axis Deviated Upward; may be Manifested or Latent)* 114 • *Brown Superior Oblique Tendon Sheath Syndrome (Limitation of Elevation in Adduction that Resembles an Underaction of Inferior Oblique Muscle)* 115 • *Duane Syndrome* 116 • *Oculomotor Apraxia* 116 • *Monocular Limitation of Elevation of Adducted Eye with Forced Duction Test (In Elevation and Adduction Strabismus with Restricted Motility)* 117 • *Cyclic, Recurrent, Repetitive, Episodic Disorders of Extraocular Muscles* 117 • *Syndromes and Diseases Associated with Strabismus* 118 • *Horizontal Gaze Palsy* 121 • *Oscillations of Eyes (Involuntary, Rapid, to-and-fro Movement of Eyes having no Rhythm or Regularity)* 121 • *Cogwheel Eye Movements (Jerky Inaccurate Pursuit Movements)* 122 • *Pendular Nystagmus* 123 • *Horizontal Jerk Nystagmus (Horizontal Oscillatory Movement of Eyes with a Fast and Slow Phase)* 124 • *Vertical Nystagmus (Spontaneous Vertical Oscillations of Eyes)* 124 • *Rotary Nystagmus (Rotary Oscillatory Movement of Eyes)* 125 • *See-Saw Nystagmus* 125 • *Retraction Nystagmus* 126
- *Monocular Nystagmus* 126 • *Periodic Alternating Nystagmus* 126 • *Positional Nystagmus* 127 • *Optokinetic Nystagmus* 129 • *Syndromes and Diseases Associated with Nystagmus* 130 • *Oculogyric Crisis (Spasmodic and Involuntary Deviation of Eyes, Usually Upward, Lasting from a Few Minutes to Several Hours)* 133
- *Ocular Bobbing* 134 • *Paralysis of Third Nerve (Oculomotor Nerve)* 134
- *Childhood Causes of Third Nerve (Oculomotor) Palsy* 136 • *Paralysis of Fourth Nerve (Trochlear Nerve)* 136 • *Childhood Causes of Fourth Nerve (Trochlear) Palsy* 137
- *Pseudoabducens Palsy* 137 • *Paralysis of Sixth Nerve (Abducens Palsy)* 138

• *Childhood Causes of Sixth Nerve (Abducens) Palsy* 139 • *Childhood Causes of Third, Fourth and Sixth Nerve Palsy* 140 • *Acute Ophthalmoplegia (Acute Onset of Extraocular Muscle Palsy)* 140 • *Chronic Progressive External Ophthalmoplegia (CPEO): Slow Onset of Extraocular Muscle Palsy* 143 • *Bilateral Complete Ophthalmoplegia (Bilateral Palsy of Ocular Muscles, Ptosis, with Pupil and Accommodation Involvement)* 143 • *External Ophthalmoplegia (Paralysis of Ocular Muscles Including Ptosis with Sparing of Pupil and Accommodation)* 144 • *Internuclear Ophthalmoplegia* 145 • *Painful Ophthalmoplegia (Palsy of Ocular Muscles with Pain)* 145 • *Transient Ophthalmoplegia (Extraocular Muscle Paralysis of Short Duration)* 146 • *Painful Ocular Movements (Pain with Movement of the Eyes)* 146 • *Poor Convergence (Inability of both Eyes to Fix Simultaneously on a Near Object)* 147 • *Spasm of Convergence* 148 • *Divergence Paralysis* 148 • *Oculocardiac Reflex* 148 • *Retraction of the Globe (On Horizontal Conjugate Gaze)* 149 • *Forced Duction Test* 149 • *Double Elevator Palsy (Monocular Elevation Deficiency)–Apparent Paralysis of Globe Elevators, Superior Rectus and Inferior Oblique Muscles* 150 • *Ocular Neuromyotonia (Paroxysmal Monocular Deviations Ascribable to Involuntary Contraction of Muscles Innervated by Third, Fourth or Sixth Cranial Nerves)* 150 • *Extraocular Muscle Enlargement on Orbital Computerized and Tomographic Scan* 150

5. Conjunctiva..... 152

• *Cellular Responses* 152 • *Purulent Conjunctivitis* 154 • *Acute Mucopurulent Conjunctivitis* 154 • *Chronic Mucopurulent Conjunctivitis (Mucopurulent Discharge, Moderate Hyperemia with a Chronic Course)* 155 • *Membranous Conjunctivitis* 155 • *Pseudomembranous Conjunctivitis* 155 • *Ophthalmia Neonatorum (Conjunctivitis Occurring in Newborns)* 160 • *Acute Follicular Conjunctivitis Lymphoid Follicles (Cobblestoning) of Conjunctiva with Rapid Onset (Conjunctivitis Giant Papillary)* 161 • *Chronic Follicular Conjunctivitis Lymphoid Follicles (Cobblestoning) of Conjunctiva with Long-Term Course (Conjunctivitis Giant Papillary)* 162 • *Cicatricial Conjunctivitis (Cicatricial Pemphigoid) Scarring of Conjunctiva* 162 • *Angular Conjunctivitis (Inflammation at Angle of Eye, Usually Lateral)* 163 • *Conjunctival Disorders Associated with Dermatologic Disorders* 163 • *Conjunctival Disorders Associated with Genital Disorders* 164 • *Congestion of Conjunctiva (Noninfectious Hyperemia of the Conjunctiva)* 164 • *Ciliary Flush* 170 • *Conjunctival Aneurysms, Varicosities, Tortuosities and Telangiectasis* 170 • *Conjunctival Sludging and Segmentation* 171 • *Conjunctival Edema (Chemosis)* 171 • *Conjunctival Xerosis (Dryness of Conjunctiva)* 175 • *Bitot Spots* 176 • *Subconjunctival Hemorrhage (Blood Under Conjunctiva)* 176 • *Tumors of the Conjunctiva* 182 • *Conjunctival Cysts* 183 • *Limbal Mass* 184 • *Large, Flat, Fleshy Lesions of Palpebral Conjunctiva* 184 • *Chronic or Recurrent Ulcers of the Conjunctiva* 184 • *Phlyctenular Keratoconjunctivitis* 185 • *Pigmentation of the Conjunctiva (See Pigment Spots of Sclera and Episclera)* 185 • *Discoloration of Conjunctiva* 87 • *Symblepharon* 188 • *Conjunctival Concretions* 189 • *Lesions of Caruncle* 189

6. Globe 190

• *Microphthalmia (Small Globe)* 190 • *Buphthalmos (Large Globe)* 191 • *Pseudoendophthalmitis (Conditions that Simulate Endophthalmitis)* 192 • *Endophthalmitis (Intraocular Infection)* 192 • *Intraocular Cartilage* 193

- *Intraorbital Calcifications on X-Ray* 193 • *Intraocular Adipose Tissue* 194
- *Soft Globe (Decreased Intraocular Pressure)* 194 • *Phthisis Bulbi (Degenerative Shrinkage of Eyeball with Hypotony)* 197 • *Clinical Anophthalmos (Apparent Absence of Globe)* 197 • *Oculodigital Stimulation* 198 • *Anterior Segment Ischemia* 198

7. Sclera 199

- *Blue Sclera* 199 • *Dilated Episcleral Vessels* 200 • *Pigment Spots of Sclera and Episclera* 200 • *Episcleritis* 201 • *Scleritis* 202 • *Staphyloma (Stretching and Thinning of the Sclera with Incarceration of Uveal Tissue)* 203 • *Episcleral and Scleral Tumors* 204

8. Cornea 205

- *Crystals of the Cornea (Deposition of Crystalline Substances in the Cornea)* 206
- *Anesthesia of the Cornea (Hypesthesia or Diminished Corneal Sensation in Trigeminal Distribution)* 207 • *Hyperplastic Corneal Nerves* 208 • *Increased Visibility of Corneal Nerves* 208 • *Pigmentation of the Cornea* 209 • *Corneal Edema* 211 • *Corneal Hydrops (Ruptures of Descemet Membrane with Cornea Intralamellar Dissection and Collection of Aqueous Humor)* 213 • *Microcornea (Cornea with a Horizontal Diameter of Less than 10 mm)* 213 • *Megalocornea (Cornea Having a Horizontal Diameter of More than 14 mm)* 214 • *Corneal Opacification in Infancy* 215 • *Band-Shaped Keratopathy* 215 • *Corneal Keloids* 216 • *Punctate Keratitis or Keratopathy* 216
- *Morphologic Classification of Punctate Corneal Lesions (Classification by Anatomic Location)* 221 • *Sicca Keratitis (Dry Eye with Secondary Corneal Changes)* 222
- *White Rings of the Cornea (Coats Disease)* 223 • *Dry Spots of the Cornea (Pre Corneal Tear Film Drying in Spot-Wise Fashion)* 223 • *Anterior Embryotoxon (Arcus)* 223 • *Bowman Membrane Folds* 224 • *Delayed Corneal Wound Healing* 224
- *Anterior Corneal Mosaic* 225 • *Linear Opacity in Superficial Corneal Stroma* 225
- *Superficial Vertical Corneal Striations—Epithelial Wrinkles can be Accentuated with Fluorescein* 225 • *Dendritic Corneal Lesions (Area of Staining of Cornea in a Branching Pattern)* 225 • *Bullous Keratopathy (Terminal Stages of Severe or Prolonged Epithelial Edema Secondary to Endothelial Damage)* 226 • *Nummular Keratitis (Coin-Shaped Lesions of Cornea)* 226 • *Deep Keratitis* 226 • *Interstitial Keratitis (Corneal Stromal Inflammation, not Primarily on Anterior or Posterior Surfaces of Stroma)* 226 • *Pannus (Superficial Vascular Invasion Confined to a Segment of the Cornea or Extending around the Entire Limbus)* 227 • *Corneal Opacity-Diffuse* 228 • *Corneal Opacity—Localized, Congenital* 229 • *Deep Corneal Stromal Deposits* 229 • *Intracorneal Hemorrhage* 229
- *Central Posterior Stromal Corneal Deposits* 230 • *Dellen* 230 • *Phlyctenular Keratoconjunctivitis* 230 • *Corneal Ring Lesion* 230 • *Corneoscleral Keratitis* 231
- *Central Corneal Ulcer* 231 • *Marginal Corneal Ulcers (Peripheral Corneal Thinning)* 232 • *Descemet Membrane Folds (Usually Following Hypotony)* 233
- *Descemet Membrane Tears (Haab Striae)* 233 • *Descemet Membrane Thickening* 233
- *Retrocorneal Pigmentation* 234 • *Low Endothelial Cell Count (Diminished Number of Corneal Endothelial Cells)* 234 • *Snail Tracks of Cornea* 234 • *Keratoconus (Conical Cornea)* 234 • *Cornea Plana (Decreased Corneal Curvature)* 235
- *Staphyloma of Cornea (Corneal Stretching with Incarceration of Uveal Tissue)* 235
- *Whorl-Like Corneal Lesions* 235 • *Corneal Dermoids* 236 • *Corneal Problems*

Associated with Keratotic Skin Lesions 236 • *Corneal Problems Associated with Lid Excrescences* 236 • *Corneal Disease Associated with Lenticular Problems* 237 • *Corneal Disease Associated With Retinal Problems* 239 • *Corneal Diseases Associated with Deafness* 241 • *Trigger Mechanisms for Recurrent Herpes Simplex Keratitis* 241 • *Predisposing Factors in Keratomycosis* 242 • *Sclerocornea* 242 • *Postoperative Corneal Melt* 242 • *Corneal Mucous Plaques* 243

9. Intraocular Pressure.....244

• *Glaucoma Suspect; an Infant* 244 • *Conditions Simulating Congenital Glaucoma* 244 • *Syndromes and Diseases Associated with Glaucoma* 245 • *Glaucoma Suspect; an Adult* 249 • *Elevated Intraocular Pressure Measurement with Normal Appearing Optic Disk* 249 • *Secondary Open-Angle Glaucoma* 250 • *Unilateral Glaucoma* 251 • *Glaucoma Associated with Displaced Lens* 252 • *Glaucoma and Elevated Episcleral Venous Pressure* 252 • *Glaucoma Associated with Shallow Anterior Chamber* 253 • *Glaucoma in Aphakia or Pseudophakia* 253 • *Medications and Chemicals that may Cause Elevated Intraocular Pressure* 254 • *Primary Low-Tension Glaucoma* 255 • *Neovascular Glaucoma* 256 • *Hypotony* 257 • *Glaucoma Associated with Uveitis* 258 • *Glaucoma Associated with Intraocular Tumors* 258 • *Glaucoma, Comprehensive Developmental Classification* 259 • *Pseudo-Developmental Glaucoma: Classification* 261 • *Pseudo-Developmental Glaucoma: Appearance of Developmental Glaucoma* 261 • *Secondary Congenital Glaucoma* 263

10. Anterior Chamber.....265

• *Hypopyon (Pus in Anterior Chamber)* 265 • *Hyphema (Bleeding into the Anterior Chamber)* 267 • *Spontaneous Hyphema* 267 • *Spontaneous Hyphema in Infants* 268 • *Plasmoid Aqueous (Aqueous with a High Protein Content)* 268 • *Cholesterolosis of the Anterior Chamber* 268 • *Gas Bubbles in the Anterior Chamber* 269 • *Pigmentation of Trabecular Meshwork* 269 • *Pigment Liberation into the Anterior Chamber with Dilatation of Pupil* 269 • *Grading of Anterior Chamber Angle Width (Usually Determined by Gonioscopy)* 269 • *Blood in Schlemm Canal (Reversal of Normal Pressure Gradient)* 270 • *Deep Anterior Chamber Angle* 270 • *Narrow Anterior Chamber Angle (may be Capable of Angle Closure Glaucoma)* 270 • *Irregular Depth of the Anterior Chamber* 271 • *Peripheral Anterior Synechiae (Adhesion of Iris Tissue Across Anterior Chamber Structures in Variable Amounts Noted with Gonioscopy)* 271 • *Neovascularization of Anterior Chamber Angle (Newly Formed Vessels Extend into the Trabecular Meshwork)* 272 • *Iris Processes (Pectinate Ligaments in Anterior Chamber Angle)* 272 • *White Mass in Anterior Chamber* 273

11. Pupil.....274

• *Mydriasis (Dilated Pupil, Usually Greater than 5 mm)* 274 • *Relative Fixed, Dilated Pupil* 279 • *Miosis (Small Pupil Usually Less than 2 mm)* 280 • *Paradoxical Pupillary Reaction* 283 • *Absence or Decrease of Pupillary Reaction to Light* 283 • *Anisocoria (Inequality of Pupils of Greater than or Equal to 1 mm)* 286 • *Irregularity of Pupil (Including Oval or Peaked Pupil)* 287 • *Hippus* 287 • *Tonohaptic Pupil* 288 • *Leukokoria* 288 • *Long Ciliary Processes Extending to Dilated Pupillary Space* 291

- Persistent Pupillary Membrane 291 • Decentered Pupillary Light Reflex 291
- Pupillary Block Following Cataract Extraction 292 • Afferent Pupillary Defect 292

12. Iris 293

- Aniridia (Absence of Iris, Partial or Complete) 293 • Coloboma of Iris 294*
- Rubeosis Iridis (Neovascularization [Newly Formed Blood Vessels] on the Iris) 295
- Hyperemia of Iris (Dilatation of Pre-Existing Vessels of the Iris) 296 • Heterochromia (Difference of Color Between Two Irides) 296 • Iris Atrophy 300 • Iridodonesis (Tremulous Iris) 300 • Tumors Arising from Pigment Epithelium of Iris 301 • Pigmented Lesions of Iris 301 • Nonpigmented Lesions of Iris 302 • Conditions Simulating Posterior Uveitis or Choroiditis • 303 Syndromes and Diseases Associated with Iritis 304
- Iritis (Anterior Uveitis) in Children 304 • Nongranulomatous Uveitis 305
- Granulomatous Uveitis 307 • Pigmented Ciliary Body Lesions 308 • Neuroepithelial Tumors of Ciliary Body 308 • Internal Ophthalmoplegia 309 • Concave Peripheral Iris 309

13. Lens 310

- Anterior Subcapsular Cataract 310 • Nuclear Cataracts 311 • Lamellar (Stellate, Zonular, Cortical, Coronary) Cataracts 312 • Punctate Cataracts (Numerous Small Opacities) 312 • Posterior Subcapsular Cataract 313 • Iridescent Crystalline Deposits in Lens 314 • Oil Droplet in Lens 315 • Lenticonus (Conical Lens Surface Protuberance) and Lentiglobus (Globular Lens Surface Protuberance) 315
- Lens Absorption 316 Exfoliation of Lens Capsule 316 • Microphakia or Spherophakia or Microspherophakia (Small Lens or Highly Spheric Lens) 316 • Dislocated Lens 316
- Aphakia (Absence of Lens in Usual Position Behind the Iris) 317 • Equatorial Lens Pigmentation 318 • Unilateral Cataracts 318 • Lenticular Disease Associated with Corneal Problems 318 • Drugs Associated with Cataracts 321 • Syndromes and Diseases Associated with Cataracts 323 • Lenticulocorneal Adherence (Lens Adjacent to Endothelium of Cornea) 328 • Spasm of Accommodation 328 • Paresis of Accommodation 328 • Comprehensive Classification of Pediatric Cataracts 331

14. Vitreous 341

- Pseudodetachment of Vitreous (Conditions Simulating Detachment of Vitreous) 341
- Anterior Vitreous Detachment 341 • Posterior Vitreous Detachment 342 • Vitreous Hemorrhage 342 • Vitreous Opacities 343 • Persistent Hyperplastic Primary Vitreous 344
- Beads in Vitreous (Snowballs in Vitreous) 344 • Complications Following Operative Vitreous Loss 345 • Postoperative Vitreous Retraction 345 • Vitreous Cyst (Cystic Structure in Vitreous Body) 346 • Vitreous Liquefaction 346

15. Retina 347

- Anatomic Classification of Macular Diseases 348 • Bilateral Macular Lesions 350
- Pseudomacular Edema 351 • Macular Edema 351 • Absence of Foveal Reflex 354
- Macular Pucker 354 • Macular Exudates and Hemorrhages 354 • Macular Star or Stellate Retinopathy (Exudates in a Star Formation Radiating around Macula in the Nerve Fiber Layer 354 • Retinociliary Vein-Disappears from the Retina at Disc Margin without Connection to Central Retinal Vein 355 • Cherry-Red Spot In Macula (Rule Out Macular Hemorrhage) 355 • Macular Hemorrhage 356 • Parafoveal Telangiectasia 356
- Microhemorrhagic Maculopathy—Small Monocular Macular Hemorrhage that is Punctate,

Round or Bilobed 356 Macular Cyst 357 • Macular Hole 357 • Macular Coloboma 357
 • Elevated Macular Lesion 358 • Heterotopia of the Macula 358 • White or Yellow
 Flat Macular Lesion and Pigmentary Change 358 • Pigmentary Changes in Macula 359
 • Bull's-Eye Macular Lesion—Circular Area of Retinal Pigment Epithelium Atrophy
 Surrounding a Spared Fovea 361 • Macular Wisps and Foveolar Splinter 361
 • Macular Hypoplasia (Incomplete Macular Development Manifested by Decreased
 Vision) 361 • Premacular Subhyaloid Hemorrhage 362 • Retinal Vascular
 Tortuosity 362 • Retinal Venous Beading 363 • Ophthalmodynamometry 363
 • Pulsation of Retinal Arteriole (High Pulse Pressure) 363 • Retinal Artery
 Occlusion 363 • Localized Arterial Narrowing 365 • Generalized Arterial
 Narrowing 365 • Periarteritis Retinalis Segmentalis 366 • Frosted-Branch Angitis 367
 • Sheathing of Retinal Veins 367 • Absent Venous Pulsations (Spontaneous Venous
 Pulsations Absent at Venules on the Disc) 368 • Dilated Retinal Veins 368
 • Tortuosity of Retinal Veins and Hypoplasia of Optic Nerves 370 • Central Retinal
 Vein Occlusion 370 • Dilated Retinal Veins and Retinal Hemorrhages 371
 • Retinal Hemorrhages 372 • Large Hemorrhages in the Fundus of an Infant or Young
 Child 378 • Retinovitreal Hemorrhage in a Young Adult 378 • Retinal Hemorrhage
 with Central White Spot (Roth Spot) 378 • Microaneurysms of Retina (Punctate Red
 Spots Scattered Over Region of Posterior Pole) 379 • Retinal Arteriovenous Shunt at
 the Arteriovenous Crossing 379 • Macroaneurysms of Retinal Arteries 379 • Retinal
 Neovascularization (Growth of Abnormal New Blood Vessels into the Vitreous) 380
 • Predisposition to Rhegmatogenous Retinal Detachment 380 • Retinal Detachment
 (Location and Morphologic Classification) 380 • Syndromes and Diseases Associated
 with Retinal Detachment 381 • Retinal Folds 383 • Cotton-Wool Spots 384
 • Hard Exudates (Yellowish White Discrete Masses Deep in the Retina) 384
 • Retinal Exudate and Hemorrhage 385 • Retinitis or Pseudoretinitis Pigmentosa 385
 • Lesions Confused with Retinoblastoma 387 • Single White Lesion of Retina 390
 • Pale Fundus Lesions 390 • Medullated Nerve Fibers 391 • Pigmented Fundus
 Lesions 392 • Cholesterol Emboli of Retina (Hollenhorst Plaques) 393 • Retinal
 Microemboli 394 • Lipemia Retinalis (Arterioles and Venules Similar in Color and
 Appearing Orange-Yellow to White) 394 • Hemorrhagic or Serous Exudates Beneath
 Pigment Epithelium 394 • Retinal Vascular Tumors and Angiomatosis Retinae
 Syndromes 395 • Retinal Sea-Fans 395 • Retinal Vessels Displace Temporally 396
 • Retinal Vessels Displaced Nasally 396 • Peripheral Fundus Lesions 396 • Retinal
 Disease Associated with Corneal Problems 398 • Retinal Lesions Associated with
 Deafness 400 • Subretinal Fibrosis 401 • Epiretinal Membranes—Membranes that
 Grow on the Inner Surface of the Retina 401 • Linear Streaks Pattern in Fundus 401
 • Yellow-Orange Lesions of Subretinal Fundus 401 • Talc Retinopathy—Drug Addicts
 Who Inject Drugs Intravenously 401 • Crystalline Retinopathy 402 • Pulfrich Stereo-Illusion
 Phenomenon 402 • Parafoveal Telangiectasia 402 • Hereditary Pediatric Retinal
 Degenerations 402 • Reticular Pattern of Dark Lines in Fundus 403 • Retinal
 Pigment Epithelial Tears 403 • Retinal Pigment Epithelial Folds 403 • Peripapillary
 Subretinal Neovascularization 403 • Mizuo Phenomenon 404 • White-Dot Fovea 404

16. Choroid 405

• Angioid Streaks 405 • Choroidal Folds 406 • Lesions Confused with Malignant
 Melanoma 406 • Choroidal Hemorrhage 407 • Choroidal Detachment 407

- *Conditions Simulating Posterior Uveitis or Choroiditis* 408 • *Choroiditis (Posterior Uveitis)* 409 • *Conditions Simulating Posterior Uveitis in Children* 409 • *Choroiditis (Posterior Uveitis) in Children* 410 • *Syndromes and Diseases Associated with Uveitis* 410
- *Chorioretinitis Juxtapapillaris* 418 • *Choroidal Neovascularization* 418
- *Ischemic Infarcts of Choroid (Elschnig Spots)* 419 • *Chorioretinal and Choriovitreous Neovascularization* 419 • *Uveal Effusion* 419 • *Choroid Coloboma* 419
- *Choroidal Ischemia* 420 • *Pars Planitis (Peripheral Uveitis)* 420

17. Optic Nerve.....422

- *Cilioptic Vein* 422 • *Drusen of Optic Nerve* 422 • *Fluid Enlargement of Retrobulbar Optic Nerve or Sheath (Demonstrated by Computed Tomographic Scanning and Echography)* 423 • *Hyperemia of Optic Disc* 423 • *Ischemic Optic Neuropathy* 423
- *Linear Hemorrhage on Optic Disc* 424 • *Neovascularization of Optic Disc (Growth of Blood Vessels Onto Optic Disc)* 424 • *Neuroretinitis (Inflammation of Optic Nerve and Adjacent Retina)* 425 • *Optic-Nerve Atrophy* 426 • *Optic-Nerve Atrophy and Deafness* 431 • *Syndromes and Diseases Associated with Optic Atrophy* 432
- *Optic-Nerve Hypoplasia* 438 • *Optic Neuritis (Papillitis and Retrobulbar Neuritis)* 439
- *Pseudo-optic Neuritis (Lesions that Mimic Optic Neuritis)* 444 • *Optociliary Shunts (Tortuous Ectatic Channels From Optic Nerve to Choroid)* 444 • *Papilledema (Swelling of Optic Disc)* 445 • *Pseudopapilledema (May be Mistaken for Swelling of Optic Nerve)* 451 • *Peripapillary Subretinal Neovascularization* 452 • *Pigmented Tumors of Optic Disc* 452 • *Pseudoglaucomatous Atrophy of Optic Disc* 452 • *Temporally Displaced Disc (Dragged Disc)* 452 • *Optic Neuritis, Childhood* 453

18. Visual-Field Defects454

- *Pseudo-Visual Field Defects* 454 • *Bilateral Central Scotomas* 455 • *Arcuate (Cuneate) Scotoma* 457 • *Unilateral Sector-Shaped Defects* 457 • *Peripheral-Field Contraction* 458 • *Altitudinal Hemianopia* 459 • *Binasal Hemianopia* 460
- *Bitemporal Hemianopia* 460 • *Homonymous Quadrantanopia* 461 • *Crossed Quadrantanopia* 461 • *Homonymous Hemianopia* 462 • *Spiral-Field Defects* 463
- *Double Homonymous Hemianopia* 463

Section II: General Signs and Symptoms

19. Visual Disturbance.....467

- *Acquired Myopia* 467 • *Acquired Hyperopia* 470 • *Dysmegalopsia-Optical Illusions of Size* 471 • *Bilateral Transient Loss of Vision (Transient Darkening of Vision)* 472
- *Amaurosis Fugax (Transient Monocular Blackout of Vision)* 472 • *Sudden Painless Loss of Visual Acuity in one Eye* 473 • *Post-Traumatic Loss of Vision* 473 • *Decreased Visual Acuity* 474 • *Bilateral Blurring of Vision* 480 • *Cortical Blindness (Cerebral Blindness)* 481
- *Blindness in Childhood* 482 • *Binocular Diplopia (Double Vision Using Both Eyes)* 483
- *Binocular Triplopia (Unilateral Diplopia)* 484 • *Diplopia Following Head Trauma* 485
- *Eccentric Vision* 485 • *Decreased Dark Adaptation (Nyctalopia; Night Blindness)* 485
- *Astigmatism* 486 • *Visual Allesthesia* 486 • *Visual Acuity Loss after Glaucoma*

Surgery 486 • *Sudden Painful Loss of Vision* 487 • *Sudden Painless Loss of Visual Acuity in one Eye* 487 • *Gradual Painless Loss of Vision* 487

20. Visual Complaint.....488

- *Photopsia (Scintillations, Sparks or Flashes of Light Before the Eyes)* 488
- *Hallucinations (Formed Images)* 489 • *“Spots” Before Eyes (Dots or Filaments that Move with Movement of Eye)* 493 • *Colored Halos Around Lights (Blue and Violet are Next to the Stimulating Light and Red Outermost)* 493 • *Light Streaks* 494
- *Photophobia (Painful Intolerance of the Eyes to Light)* 495 • *Asthenopia (Uncomfortable Ocular Sensation or Eye Ache)* 498 • *Dazzling or Glare Discomfort* 498 • *Chromatopsia (Colored Vision, Objects are Abnormally Colored)* 498 • *Heightened Color Perception* 502
- *Nyctalopia (Night Blindness)* 502 • *Hemeralopia* 503 • *Oscillopsia* 504
- *Color Blindness* 504 • *Palinopsia* 508 • *Vertical Reading (Patient Reads from Above Downward)* 508 • *Visual Agnosia* 508 • *Ocular Lateropulsion* 509 • *Pain in and About Eye* 509 • *Headache* 509 • *Pulfrich Phenomenon* 510

21. Head Position511

- *Head Turn (Face Turn)* 511 • *Head Tilt (Head Tilted Toward Either Shoulder or around an Anteroposterior Axis)* 512 • *Chin Elevation* 512 • *Chin Depression* 512
- *Head Nodding* 513 • *Head Tremor* 513 • *Head Thrust* 513

Subject Index..... 515