

Contents

<i>Recommended Reference Books</i>	xiv
1 Examination of the Globe: Technical Aspects	1
Introduction	1
Clinical Correlation	1
Equipment for Macroscopic Examination	2
Basic Gross Anatomy: External Features.....	3
Basic Gross Anatomy: Internal Features.....	8
Radiological Examination of the Globe	10
Common Artefacts.....	11
Fixation Techniques.....	12
Embedding Techniques	13
Specialised Techniques	14
Special Stains	15
Techniques for Illustration and Documentation	17
Fluorescence Microscopy.....	18
Polarised Light and Phase/Interference Contrast Microscopy	18
Electron Microscopy.....	18
Diagnostic Cytopathology.....	18
Normal Ocular Histology	19
2 The Traumatised Eye	25
Introduction	25
The "Irreparable Eye"	25
The Globe Removed after Unsuccessful Attempts at Repair	29
Globe Containing a Metallic Foreign Body	33
Long-Term Effects of Ocular Trauma	35
Post-traumatic Phthisis	41
Acid Burns to the Eye	43
Alkali Burns	44
Effects of Ionising Radiation	44

3 Absolute Glaucoma	47
Introduction	47
The Functional Morphology of the Outflow System	47
Classification of Glaucoma	48
Primary Open Angle Glaucoma	49
Primary Acute Angle Closure Glaucoma	51
Congenital Glaucoma: Buphthalmos	54
Secondary Open Angle Glaucoma	55
Secondary Angle Closure Glaucoma	60
Tissue Effects of Glaucoma	63
Complications in the Surgical Treatment of Glaucoma	69
4 Retinal Vascular Disease	75
Introduction	75
Retinal Ischaemic Disease	75
Common Disease Entities Associated with Intraocular Neovascularisation	81
Rarer Vascular Disorders Leading to Neovascular Glaucoma	86
Vascular Disorders which Rarely Lead to Neovascular Glaucoma in Adults	90
Subretinal Neovascularisation	91
5 Intraocular Tumours	97
General Introduction	97
Melanocytic Tumours	97
Malignant Melanoma of the Uveal Tract	100
Malignant Melanoma of the Choroid	102
Conditions which Clinically Simulate Uveal Melanoma	110
Retinoblastoma	116
Tumours which May Simulate Retinoblastoma	123
Non-neoplastic Lesions	124
6 Ocular Inflammation	127
Introduction	127
Pyogenic Bacterial Infections	128
Viral Infection	135
Chronic Specific Granulomatous Inflammation	138
Non-specific Non-granulomatous Uveitis	145
Acute Retinal Necrosis (ARN)	146
Acquired Immunodeficiency Syndrome (AIDS)	147
7 Failed Treatment of Retinal Detachment	151
Introduction	151
Classification of Retinal Detachment	152
Degenerative and Other Conditions which Predispose to Retinal Detachment	155
Innocuous Peripheral Retinal Disease	158
Effects of Detachment on the Ocular Tissues	159
Pathology of Treatment of Retinal Detachment	161

Vitrectomy Procedure	164
Vitrectomy Specimens	165
The Extruded Silicone Sponge or Plomb	165
 8 The Malformed Eye	 167
Introduction	167
Relevant Basic Ocular Embryology	167
Gross Malformations due to Abnormal Development in the First 4 Weeks of Embryonic Life	170
Malformations of the Anterior Segment	172
Malformation of Lens	175
Malformations of the Vitreous and Hyaloid Artery System	176
Malformations of the Retina	177
Malformations of the Optic Nerve Head	178
The Phakomatoses	178
Syndromes Associated with Chromosomal Abnormalities	180
 9 "Autopsy Eye": The Eye in Systemic Disease	 183
Introduction	183
Methods for Obtaining Ocular Tissue at Autopsy	183
Value of Autopsy Material in Ophthalmology	185
Vasculopathy	188
Haematological Disorders	189
Degenerative Disease	191
Tapetoretinal Degeneration	193
Neurological Disorders	200
Deficiency Diseases	201
Other Systemic Metabolic Diseases	203
Toxicity	203
 10 Biopsy of the Eyelid, the Lacrimal Sac and the Temporal Artery	 207
Introduction	207
Relevant Functional Anatomy of the Eyelid	207
Eyelid Cysts: "Excision of Subcutaneous Nodule"	209
Benign Epithelial Tumours	211
Some Unusual Disorders in the Eyelid	217
Solid Nodules and Plaques	218
Neural Tumours: Neurofibroma	219
Malignant Tumours	219
Lacrimal Sac	226
Temporal Artery Biopsy	227
 11 The Conjunctival Biopsy	 231
Introduction	231
Functional Anatomy	231

Biopsy Technique	232
“Conjunctival Scrapings”	233
Impression Cytology	235
Inflammatory Disease: Diffuse	235
Inflammatory Disease: Localised	239
Bullous Disease and Cicatrising Conjunctivitis	242
Non-neoplastic Nodules	243
Hamartomatous and Choristomatous Tumours	244
Benign, Premalignant and Malignant Tumours of Epithelium	247
Melanocytic Tumours	247
Lymphoid Proliferation	252
Miscellaneous Soft Tissue Tumours	255
Tumours of Caruncle	255
12 The Orbital Biopsy and the Exenteration Specimen	259
Introduction	259
Clinicopathological Background	259
Simple Cysts	259
Chronic Idiopathic Orbital Inflammatory Disease (Inflammatory Pseudotumour)	260
Lymphohistiocytic Proliferations	266
Teratomas, Hamartomas and Vascular Neoplasms	270
Neural Tumours	272
Soft Tissue Tumours	272
Tumours Derived from Bone-Forming Tissue	275
Tumours Derived from Lipocytes	276
Tumours Derived from Fibroblasts	276
Tumours of the Optic Nerve	277
Lacrimal Gland Tumours	280
Metastatic Tumours	282
Endocrine Exophthalmos	282
The Exenteration Specimen	283
13 The Corneal Disc	287
Introduction	287
Relevant Functional Anatomy	287
Background: Clinical Aspects of Keratoplasty	290
Non-specific Changes in a Keratoplasty Specimen	290
Common Disorders Treated by Keratoplasty	293
Corneal Ulceration	298
Immunosuppression Keratopathy	302
Specific Forms of Keratitis	303
Corneal Dystrophies	304
Deposition of Exogenous Materials	308
Developmental Abnormalities	311
14 Lens	313
Introduction	313
The Normal Lens	313

Cataract	314
Traumatic Cataract	318
Irradiation Cataract	319
Microwave	320
Infrared Cataract	320
Ocular Pathology after Lens Extraction	320
Intracapsular Lens Extraction	323
Extracapsular Lens Extraction	323
Intraocular Lens Implants	324
Subject Index	329