Contents

1. Trabeculectomy **1**

Pedro Faria

- Indications and Contraindications 1
- Preoperative Assessment 2
- Surgical Technique 2
  - Anesthesia 2
  - Opening of the Conjunctiva 2
  - Scleral Flap 2
  - Paracentesis 2
  - Sclerectomy 3
  - Iridectomy 3
  - Conjunctival Closure 3
- Methods to Prevent Scarring of the Filtration Bleb 3
  - Antimetabolites 3
  - Bleb-forming Implants 4
  - Anti-VEGFs 4
- Intraoperative Complications 4
  - Hyphema 4
  - Athalamia 4
  - Vitreous Loss 4
  - Expulsive Hemorrhage 5
- Immediate Postoperative Complications 5
  - Hypothalamia with Ocular Hypotony 5
  - Hyphema 5
  - Choroidal Detachment 5
  - Hypotonic Maculopathy 5
  - Hypothalamia with Ocular Hypertony 5
  - Suprachoroidal Hemorrhage 6
  - Intraocular Infection 6
  - Ocular Hypertension 6
  - Encapsulated Bleb 6
- Late Postoperative Complications 6
  - Late Hypotony 6
  - Cataracts 7

2. ExPress™—Mini Glaucoma Shunt **8**

Arabela Futre Coelho

- Indications 8
- Contraindications 9
- Surgery 9
  - Anesthesia 9
  - Surgical Technique 9
- Postoperative Therapy 10
- Complications 12
  - Intraoperative 12
  - Postoperative 12

3. Posterior Drainage Devices **14**

Manuela Carvalho

- Device Characteristics 14
  - Presence or Absence of a Flow Restriction Mechanism (Restrictive Versus Nonrestrictive) 14
  - Plate Surface Area 15
  - Composition 16
- Classic Indications 16
  - Eyes in which Trabeculectomy with Mitomycin C (MMC), even with Adjunctive Antimetabolite Use, Have a High-Risk of Failure 16
  - Eyes in which Trabeculectomy is Technically Not Possible or Has a High-Risk of Intraoperative Complications 16
  - Patients in whom Trabeculectomy with MMC Has a very High-Risk of Postoperative Complications 16
- Recent Indications 16
  - Relative Contraindications 17
- Preoperative Assessment 17
- General Assessment 17
- Types of Anesthesia 17
- Surgical Technique 17
  - Globe Fixation 17
  - Conjunctival Flap 17
  - Plate Insertion and Fixation 18
  - Paracentesis 18
  - Tube Insertion 18
  - Tube Covering 18
  - Conjunctival Suture 19
- Technique Variants 19
  - Tube Insertion in the Posterior Chamber 19
  - Tube Insertion in the Pars Plana 19
  - Technique Variations to Avoid Early Postoperative Hypotony (Nonvalved Implants) 19
  - Use of Antiscarring Agents 20

- Postoperative Complications 20
  - Early Hypotony 20
  - Transient Hypertensive Phase 20
  - Tube- or Plate-related Complications 20
  - Other Complications of Glaucoma Surgery 21

4. Deep Sclerectomy **23**

Maria da Luz Freitas

- Indications 24
  - Strictu Sensu 24
  - Relative Contraindications 25
  - Absolute Contraindications 25
- Patient's Assessment 25
- Surgical Technique 25
- Difficulties/Complications and their Intraoperative Resolution 30
  - Depth of Deep Scleral Flap 30
  - Perforation of Trabeculodescemetic Window 30
- Immediate Postoperative Complications and Resolution of Complications (1–10 Days) 30
  - Seidel 30
  - Inflammation 30
  - Hypotony 31
  - High Intraocular Pressure 31
  - Choroidal Detachment 31
  - Low Anterior Chamber 31
  - Hematic Tyndall/Hyphema 31
  - Descemet's Membrane Detachment 31
  - Reduced Visual Acuity 31
- Late Postoperative Complications and Resolution of Complications (2–5 Weeks) 31
  - Increased Intraocular Pressure 31
  - Blebitis 31

5. Gonioscopic Surgery: Trabecular Micro-Bypass Stent Implantation **33**

A Rodrigues Figueiredo

6. Canaloplasty **37**

Maria da Luz Freitas

- Indications 37
- Relative Contraindications 37
- Absolute Contraindications 37
- Patient's Assessment 38
- Surgical Technique 38
  - Preoperative Preparation 38
  - Surgery Location 38

- Scleral Flaps, Opening of Schlemm's Canal Opening and Creation of a Trabeculodescemetic Window 40
- Catheterization, Dilation and Distention of Schlemm's Canal 41
- Closure of Scleral Flap and Conjunctiva 41
- Difficulties/Complications and their Intraoperative Resolution 44
- Immediate Postoperative Complications and Resolution of Complications (1–10 Days) 45
- Late Postoperative Complications and Resolution of Complications (2–5 Weeks) 46

7. Combined Surgery **48**

Teresa Gomes

- Indications and Contraindications 48
- Patient's Clinical Evaluation 49
- Surgical Technique amd Complications 50

8. Lens Surgery in Glaucoma **55**

Maria Reina

- Indications and Contraindications 55
- Clinical Evaluation or Patient Evaluation 57
- Description of Surgical Technique, Difficulties and their Resolution 59
- Immediate Postoperative Complications and Resolution of Complications 62

Index *65*