

Glaucoma Drainage Devices: A Practical Illustrated Guide

Glaucoma is a leading cause of blindness worldwide, and glaucoma drainage devices (GDDs) are an important treatment option for patients with refractory glaucoma. This book provides a comprehensive overview of GDDs, from their history and development to their surgical implantation and postoperative management.



Glaucoma Drainage Devices: A Practical Illustrated Guide by Farhad B. Naini

★★★★☆ 4.4 out of 5

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The book is divided into three parts.

- **Part 1** provides an overview of the history of GDDs, the different types of GDDs, and the indications for their use.
- **Part 2** focuses on the surgical implantation of GDDs, with detailed descriptions of each step of the procedure.
- **Part 3** covers the postoperative management of GDDs, including the potential complications and their management.

The book is written by a team of experts in the field, and it is filled with high-quality illustrations and photographs. This book is an essential resource for ophthalmologists and glaucoma specialists who want to learn more about GDDs.

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Part 1: Overview of Glaucoma Drainage Devices

History of Glaucoma Drainage Devices

The history of glaucoma drainage devices (GDDs) can be traced back to the early 1900s, when surgeons began to experiment with ways to create a

new drainage pathway for aqueous humor in the eye. The first GDDs were made of rubber or silicone, and they were implanted into the anterior chamber of the eye. However, these early devices were often associated with complications, such as infection and inflammation.

In the 1960s, a new type of GDD was developed that was made of a porous material called polytetrafluoroethylene (PTFE). These devices were implanted into the subconjunctival space, and they were less likely to cause complications than the earlier devices. However, PTFE GDDs were still associated with a risk of failure, and they could only be used in a limited number of patients.

In the 1990s, a new generation of GDDs was developed that was made of a flexible material called silicone. These devices were implanted into the suprachoroidal space, and they were less likely to cause complications than the earlier devices. Silicone GDDs are now the most commonly used type of GDD, and they have been shown to be effective in reducing intraocular pressure (IOP) in patients with refractory glaucoma.

Types of Glaucoma Drainage Devices

There are two main types of GDDs:

- **Trabeculectomy-like devices** create a new drainage pathway for aqueous humor in the eye. These devices are typically implanted into the anterior chamber or the subconjunctival space.
- **Shunt devices** create a direct connection between the anterior chamber and the subconjunctival space. These devices are typically implanted into the suprachoroidal space.

The type of GDD that is best for a particular patient will depend on their individual needs and circumstances.

Indications for Glaucoma Drainage Devices

GDDs are indicated for the treatment of refractory glaucoma. Refractory glaucoma is glaucoma that is uncontrolled with medical therapy and laser trabeculoplasty. GDDs may also be indicated for the treatment of glaucoma in patients who are at high risk of vision loss, such as patients with advanced glaucoma or patients with a history of glaucoma surgery failure.

Part 2: Surgical Implantation of Glaucoma Drainage Devices

Preoperative Evaluation

Before surgery, the patient will undergo a thorough evaluation to assess their suitability for GDD implantation. This evaluation will include a complete medical history and physical examination, as well as a dilated eye examination. The doctor will also Free Download imaging studies, such as an optical coherence tomography (OCT) scan, to assess the structure of the eye.

Surgical Technique

GDD implantation is a surgical procedure that is performed under general anesthesia. The surgery typically takes about 1-2 hours to complete.

During surgery, the doctor will make an incision in the eye and insert the GDD into the appropriate location. The doctor will then secure the device in place with sutures.

The eye is then covered with a bandage and the patient is sent home.

Postoperative Care

After surgery, the patient will need to follow their doctor's instructions carefully. These instructions will typically include:

- Using eye drops to prevent infection and inflammation.
- Wearing an eye patch or shield to protect the eye.
- Avoiding strenuous activity.
- Following up with the doctor for regular checkups.

The doctor will also monitor the patient's IOP closely. If the IOP is not adequately controlled, the doctor may need to adjust the GDD or perform additional surgery.

Part 3: Postoperative Management of Glaucoma Drainage Devices

Potential Complications

The most common complications associated with GDD implantation



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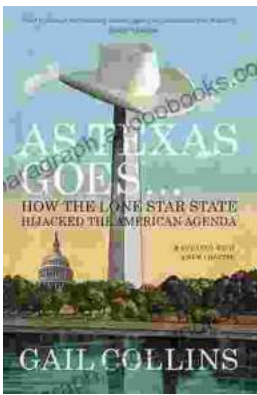
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