

HEMORRHOIDS

Colorectal Surgery Services

INTRODUCTION

Hemorrhoids ... Everyone has them !!! They are a normal part of human anatomy & probably serve to help with fecal continence. They are usually not symptomatic & cause no problems.

Hemorrhoids help prevent leakage of gas or stool from the anus. They help ensure complete closure of anal canal by acting as a plug or as a compressible lining. They act very much like valves preventing the flow of gas or stool from the rectum.

When they become abnormal and symptomatic is when they need to be treated. The exact reason why hemorrhoids become symptomatic is unknown. Common symptoms include bleeding, anal masses, itching, burning, swelling, pain or anal seepage/ soilage. Hemorrhoids are associated with advanced age, diarrhea/constipation, pregnancy, pelvic tumors, prolonged sitting and increased pressure in the abdomen.

INCIDENCE & PREVALENCE

- Close to 50% of people 50 years or older are affected by hemorrhoids
- NIH data (1983 - 1987) reveals the following epidemiologic data:
 - Incidence: 1 million
 - Prevalence: 10.4 million
 - Hospitalizations: 316,000
 - Physician office visits: 3.5 million
 - Prescriptions: 1.5 million
- 4.4 % of the US population is seen by physician for symptomatic hemorrhoids

HEMORRHOID ANATOMY

Hemorrhoids occur at two levels relative to the anus. They are either internal, external or a combination of both. The level of the hemorrhoid influences the type of treatment.

External Hemorrhoid Anatomy:

- Occur below the dentate line or level of nerve endings
- Usually accompany internal hemorrhoids
- Can make skin tags
- Typically readily found by patients
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Internal Hemorrhoid Anatomy:

- Above the dentate line or level of nerve endings and therefore usually don't hurt.
- Cause an anal mass only if they prolapse or descend out of the anus.
- Four (4) degrees are defined based on the degree of prolapse.

THEORIES OF PATHOGENESIS

Several theories of pathology exist. None have proven to be universally correct. All results in easily traumatized tissue leading to bleeding.

TREATMENT OF HEMORRHOIDS

There are many treatments for hemorrhoids. This includes over-the-counter or prescription medications, change in dietary and stooling habits and different surgical interventions. Common treatments are listed below.

Common Medical Treatments:

- Diet changes & fluids
- Stool softeners & Laxatives
- Warm baths
- Eliminate straining
- Salves or topical agents

Common Surgical Treatments:

- Rubber band ligation
- Sclerotherapy / injection
- Infrared photocoagulation
- Bipolar diathermy coagulation
- Laser
- Cryotherapy
- Excision
 - Radiofrequency (Ligasure™)
 - Harmonic energy
 - Stapling (PPH™)
- Dilation

SURGICAL MANAGEMENT OF HEMORRHOIDS

The indications for surgery for hemorrhoids are described as follows:

- Refractory 2nd degree hemorrhoids
- Symptomatic 3rd & 4th degree hemorrhoids
- Rectal mucosal prolapse or protrusion
- Low grade hemorrhoids w/ other associated disease(s)
- Failure of conservative or medical treatment
- Patient request

Regardless of how hemorrhoids are managed by surgery there are certain criteria that must be satisfied. Essential elements of surgical treatment of hemorrhoids:

- Ligation or interruption of blood flow to the hemorrhoids
- Excision of extra tissue & dilated hemorrhoidal blood vessels
- Remodeling of remaining anal tissue (excision of skin tags)
- Induction of inflammation & fibrosis

SURGICAL OPTIONS FOR MANAGEMENT OF HEMORRHOIDS

Surgical Excision

- Can be done by a variety of techniques
- Usually done with a scalpel, scissors or cautery device
- Performed in the office (rarely) or outpatient operating room
- Local, regional or general anesthesia is used
- Moderate discomfort especially the first several days after surgery
- Best for high-grade internal hemorrhoids

Ligasure™ Excision

- A new way to excise or resect hemorrhoids
- Another version of surgical excision
- Safe and effective alternative to traditional techniques
- Rapid and bloodless
- No differences compared with standard surgery in post-op based on multiple studies

Rubber Band Ligation of Hemorrhoids

- Most common office procedure
- Band placed using special instruments. Band must be placed above dentate line or severe pain will result
- Band draws excess mucosa at the top of hemorrhoid, causes scar & fixation of lining of anal canal to prevent prolapse

In one study on rubberband ligation there were 240 patients. The patients were followed for 32 months. Results based on grade of hemorrhoids:

- Grade 1 - 100 % success rate
- Grade 2 - 97% success rate
- Grade 3 - 69% success rate
- Grade 4 - 0% success rate

Another study showed there are better results & no difference in complications with multiple bands vs. one band

Complications of rubberband ligation

- Delayed hemorrhage: 1% at 1-2 weeks
- Thrombosis of external hemorrhoids: 3%
- Rectal tenesmus or spasm: 11%
- Mild anal pain 7.4% (esp. with multiple bands)
- Dysuria: 4.3%
- Transient anal bleeding (3.7%) usually 5-7days
- Rectal sepsis or major infection: Rare

Laser treatment

- Considered for low grade internal hemorrhoids
- Can be an office procedure. No anesthesia is needed in most cases
- A large prospective study showed no difference compared with other procedures
- Prospective, randomized study showed higher cost & prolonged healing
- American Society of Colon and Rectal Surgeons task force doesn't support its use.
- Not commonly used

Infrared Coagulation

- Can be an office procedure
- Regaining popularity
- No anesthesia is needed in most cases
- Infrared radiation coagulates or burns tissue protein
- Destruction of the hemorrhoids depends on intensity & duration of treatment
- Decreases hemorrhoidal blood flow
- Does not treat excess redundant tissue
- Requires more treatments than rubberband ligation
- Less painful than ligation

Procedure for Prolapse and Hemorrhoids (PPH)

- Also called stapled hemorrhoidectomy
- Requires special training and experience
- PPH offers less pain & a quicker recovery to patients in comparison to conventional hemorrhoid techniques.
- PPH has similar safety parameters. PPH has similar morbidities
- PPH is quicker to perform

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