LOS ANGELES

COLON AND RECTAL SURGICAL ASSOCIATES

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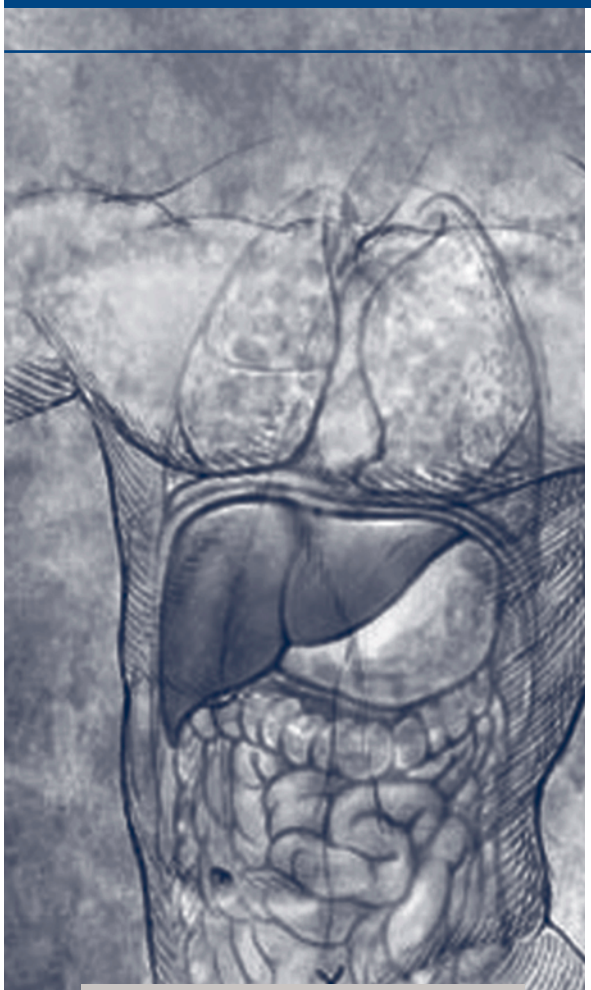

"...patients presenting with rectal bleeding and hemorrhoids may also harbor an occult malignancy."

HEMORRHOIDS

SMALL SIZE, BIG PROBLEMS

The Role of Hemorrhoids In Our National Pastime

Hemorrhoidal disease is a considerable source of morbidity, affecting twenty million adults per year. Symptoms can be debilitating and costly when measured in time away from productive activities. In 1980, during game two of the World Series between the Kansas City Royals and the Philadelphia Phillies, George Brett was forced to leave the game in the sixth inning due to hemorrhoidal symptoms. After a minor surgical procedure, he returned for game three and hit a first inning home run blast in the Royals 4 to 3 win. He quipped "…my problems are all behind me…" The Royals lost the series and Brett underwent a hemorrhoidectomy in the off season.

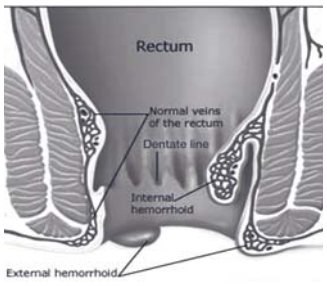

Fig. 1. Hemorrhoidal anatomy

Hemorrhoids occur equally in men and women, and show no predilection for affecting a particular race, ethnic group, religious affiliation or socioeconomic group. Democrats, Republicans and Independents are equally afflicted.

Fig. 2. Who is this man and why is he smiling?

HEMORRHOIDS AND *HEMORRHOIDS*

In actuality, hemorrhoidal cushions are present in everyone and act to facilitate the smooth passage of bowel movements through the anal canal. They are integrally important in continence and sensation and serve to protect the anal sphincters. Hemorrhoids are submucosal and contain arteries, veins, smooth muscle, elastic tissue and connective tissue. They are remarkably constant in their locations, and are found in the right anterior, right posterior and left lateral areas of the anal canal, following the anal arterial and venous vasculature. The dentate line, the junction between the embryological endoderm and ectoderm, divides the upper two thirds from lower one third of the anal canal. Hemorrhoids above this line are considered to be internal hemorrhoids, and hemorrhoids below this line are external hemorrhoids *(figure 1)*. Proximal to the dentate line, there is a paucity of sensory nerves, thus explaining the relative lack of pain caused by internal hemorrhoids. Distal to the dentate line, there exists a rich plexus responsible for a potentially painful set of symptoms. The term *hemorrhoid* should be restricted to clinical situations in which hemorrhoidal cushions are abnormal and cause symptoms.

Theories of causation abound. These include hemorrhoidal arterial hypertension, venous outflow obstruction, venous varicosity, congenital weakness of the fibroelastic-supporting tissue, hereditary disposition, tissue prolapse due to normal anal canal usage over time, and development secondary to prolonged straining at bowel movements. No single theory has gained universal acceptance as causative. Exacerbation of existing hemorrhoidal disease is caused by straining, the

continued on back...

...continued from front

overuse of laxatives or enemas, prolonged sitting on the toilet, diarrhea or constipation, obesity, pregnancy or anal intercourse.

Hemorrhoids are divided into four grades. Grade I hemorrhoids bulge into the anal lumen but do not prolapse externally. Grade II hemorrhoids prolapse upon defecation but spontaneously reduce. Grade III hemorrhoids prolapse upon defecation, but must be manually reduced. Grade IV hemorrhoids are prolapsed and cannot be manually reduced.

A LUMP. AN ITCH. A HEMORRHOID?

Diagnosis is usually straight forward. Patients may present with the acute onset of a painful or painless external thrombotic hemorrhoid (see George Brett, above). This presentation is not uncommon in pregnant women. However, the diagnosis may be more subtle and hemorrhoidal symptoms must be differentiated from colon cancer, anal cancer, Enterobius vermicularis (pinworm), chemical trauma (soap reaction), acute or chronic diarrhea, an anal fissure, a perirectal abscess, anal folliculitis, inflammatory bowel disease with perineal involvement or other uncommon afflictions. A digital anorectal exam and anoscopy are usually confirmatory. **Most importantly, patients presenting with rectal bleeding and hemorrhoids may also harbor an occult malignancy.** In the appropriate age group or clinical setting a thorough colonic evaluation must be undertaken.

With chronic disease and inflammation of the overlying mucosa, other symptoms appear, including chronic pain, bleeding during or between bowel movements, prolapse, or itching, as seen in the now famous television commercial starring Don Zimmer, the bench coach of the 2002 New York Yankees *(figure 2)*. He tried politely and discreetly to resolve his hemorrhoidal itching during a baseball game, by using the hard surface of a dugout bench.

TREATMENT: THE BEGINNING.

With the diagnosis in hand, a treatment program can be started. A diet high in insoluble fiber or stool softeners is begun if necessary. Antidiarrheal agents may be used, and various creams can be applied, such as topical 2.5% hydrocortisone cream. Suppositories are rarely needed. Prolonged sitting on the toilet is to be discouraged. Pregnant women are encouraged to lie on the left side, allowing the enlarged uterine dome to rotate off of the vena cava, thus promoting improved pelvic venous drainage. Many people enjoy reading while having a bowel movement and this prolonged sitting and straining is to be discouraged.

In patients with the acute onset of painful external thrombotic disease, the thrombotic hemorrhoid can be incised and drained. Not all thrombotic hemorrhoids are amenable to this method of treatment however, and surgical treatment must be individualized. Alternatively, with supportive care, the hemorrhoid may be simply allowed to resolve over time.

Symptoms unresponsive to local measures can be treated in a variety of ways. Hemorrhoidal sclerotherapy involves the painless injection of phenol in olive oil near the internal hemorrhoid. The resulting minor inflammation helps to scar and shrink the offending hemorrhoidal complex. The treatment is painless because it involves only the internal, and not the sensory nerve-rich external hemorrhoidal complex.

Other forms of therapy include internal hemorrhoidal banding. This facilitates hemorrhoidal necrosis and sloughing, and is an effective mode of therapy. Infrared coagulation may be used. Simple ligation is an alternative treatment option but may be associated with discomfort during the procedure.

It is important to note that hemorrhoidal prolapse usually will not respond to local measures, and commonly requires operative treatment.

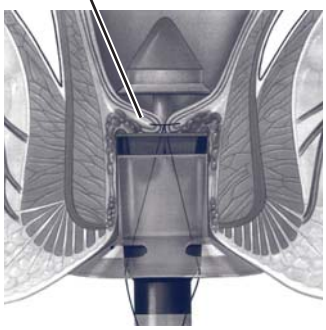

Fig. 3. PPH, excess tissue removal

TREATMENT: THE END

Should nonoperative measures fail to ameliorate the symptoms, operative therapy should be considered. Often, patients will advise physicians that a more definitive treatment or cure is needed and will inquire as to the options.

At this stage of the disease, operative therapy is the traditional treatment modality, especially with grade III or IV disease. However, any grade may require aggressive treatment.

The goal of treatment is to remove the offending tissue. Although once the primary mode of treatment, traditional operative hemorrhoidectomy is less often used today as it has been supplanted by other techniques. Hemorrhoidectomy is performed in an operating room with either general, regional or local anesthesia. Under direct vision each hemorrhoidal complex is removed and the mucosa is reapproximated. Recovery time can be lengthy due to intense postoperative pain. Surgical hemorrhoidectomy may be the procedure of choice for grade IV necrotic hemorrhoids, or may be used by those surgeons untrained in newer techniques.

The Procedure for Prolapse and Hemorrhoids (PPH) was introduced in Italy in 1992. It is also known as Stapled hemorrhoidopexy. Since that time it has become a popular and respected method for the definitive treatment of grade III and some grade IV hemorrhoids, as well as for lesser grade disease unresponsive to medical measures. One theory as to the etiology of hemorrhoidal disease relates to the loosening of the hemorrhoidal fibroconnective elastic tissue from the anal wall, thus facilitating hemorrhoidal prolapse. PPH is used to remove excess hemorrhoidal tissue and reposition and anchor ("pexy") prolapsed tissue to the anal walls *(figure 3)*. This restores the normal anal anatomy *(figure 4)*. PPH is performed as an outpatient procedure using intravenous sedation and local anesthesia. Demonstrated advantages over traditional hemorrhoidectomy include less postoperative pain and a faster return to the activities of daily life. Recurrence rates between operative hemorrhoidectomy and PPH are similar, at approximately five per cent. PPH must be performed by surgeons who have received specialized training in the technique.

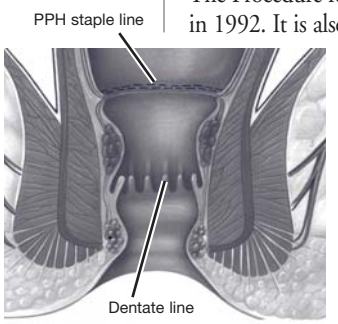

Fig. 4. PPH, completed

Hemorrhoidal disease is best addressed by practitioners versed in all aspects of the diagnosis and treatment. Most commonly, symptomatic therapy will suffice. However, in advanced stage disease more radical therapy is necessary and this therapy must be tailored to the stage of the disease. It is at this step that the experienced clinician may do the greatest good for an uncomfortable, embarrassing and potentially debilitating disease.