Should we treat hemorrhoids according to the stage

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Hemorrhoidal disease is a very common and widespread disease, and it is estimated that about one subject out of three may suffer from this pathology. Hemorrhoids generally cause symptoms when enlarged, inflamed, thrombosed, or prolapsed. Internal hemorrhoids arise above the dentate line (in comparison to external hemorrhoids – perianal phlebothrombosis) and are covered by transitional or columnar epithelium. Sclerotherapy is one of the oldest therapy forms mainly for bleeding hemorrhoids. The so called Barron ligature is an office procedure in which a small rubber band is placed at the base of the internal hemorrhoid with a special applicator.

Key words: hemorrhoidal disease, phlebothrombosis

INTRODUCTION:

Hemorrhoidal disease is a very common and widespread disease, and it is estimated that about one subject out of three may suffer from this pathology. Although very common, the etiology is still not fully understood.

Pathophysiology:

The term hemorrhoid usually relates to symptoms caused by hemorrhoids. Hemorrhoids are also present in healthy individuals. When these vascular cushions produce symptoms physicians refer to them as hemorrhoids. Hemorrhoids generally cause symptoms when enlarged, inflamed, thrombosed, or prolapsed.

Most studies agree that low-fiber diets cause smaller caliber stools, which result in straining with defecation. This increased pressure causes engorgement of the hemorrhoids, possibly by interfering with venous return. Pregnancy and abnormally high tension of the internal sphincter can also cause hemorrhoidal problems. Decreased venous return is thought of as the mechanism of action. Prolonged sitting on a toilet (e.g. while reading) is believed to cause a relative venous return problem in the perianal area (a tourniquet effect), resulting in enlarged hemorrhoids. Aging causes weakening of the support structures, which facilitates prolapse. Weakening of support structures can occur as early as the third decade of life.

Straining and constipation have long been thought of as culprits in the formation of hemorrhoids. This may or may not be true. A higher-than-normal anal canal resting tone has been found in patients who report hemorrhoids. Interestingly, the resting tone is lower after hemorrhoidectomy. This change in the resting tone is the mechanism of action of Lord dilatation.

Pregnancy clearly predisposes patients to symptoms from hemorrhoids, although the etiology is unknown. Notably, most patients revert to their previously asymptomatic state after delivery. The relationship between pregnancy and hemorrhoids lends credence to hormonal changes or direct pressure as the culprit.

Portal hypertension and anorectal varices have often been mentioned in conjunction with hemorrhoids. Hemorrhoidal symptoms do not occur more frequently in patients with portal hypertension than in those without. Massive bleeding from hemorrhoids in these patients is unusual. Bleeding is very often complicated by coagulopathy. If bleeding is found, direct suture ligation of the offending column is suggested.

Probably one of the most interesting theories was introduced by Stelzer. He proposed that the swollen tissue might represent a "corpus cavernosum recti" with numerous arteriovenous communications in the anal region.

Clinic:

Many anorectal problems, including fissures, fistulae, abscesses, or irritation and itching (pruritus ani), have similar symptoms and are incorrectly referred to as hemorrhoids.
Hemorrhoids usually are not dangerous or life threatening. Although many people have hemorrhoids, not all experience symptoms. The most common symptom of internal hemorrhoids is bright red blood covering the stool, on toilet paper, or in the toilet bowl. However, an internal hemorrhoid may protrude through the anus outside the body, becoming irritated and painful. This is known as a protruding hemorrhoid. In addition, excessive straining, rubbing, or cleaning around the anus may cause irritation with bleeding and/or itching, which may produce a vicious cycle of symptoms. Draining mucus may also cause itching.

**CLASSIFICATION**

Internal hemorrhoids arise above the dentate line (in comparison to external hemorrhoids – perianal phlebothrombosis) and are covered by transitional or columnar epithelium. They may extend into the squamous-lined epithelium of the lower anal canal, or they may be continuous with an external hemorrhoidal complex forming a combined internal-external complex. The most often used classification for internal hemorrhoids is as follows:

- **First degree hemorrhoids**: bulge into the lumen of the anal canal and may cause bleeding during defecation
- **Second degree hemorrhoids**: protrude to the outside only during bowel movements but reduce spontaneously
- **Third degree hemorrhoids**: protrude to the outside either spontaneously or during bowel movement and require manual dilatation
- **Fourth degree hemorrhoids**: are permanently prolapsed. No reduction possible.

**TREATMENT OPTIONS**

**Conservative Treatment:**

In many cases hemorrhoidal disease can be treated by dietary modifications, topical medications and soaking in warm water, which temporarily reduce symptoms of pain and swelling. Additionally, painless non-surgical methods of treatment are available to most patients as a viable alternative to a permanent hemorrhoid cure.

In a certain percentage of cases, however, surgical procedures are necessary to provide satisfactory, long-term relief.

**Semi-operative methods:**

**Sclerotherapy**

Sclerotherapy is one of the oldest therapy forms mainly for bleeding hemorrhoids. Theoretically, sclerotherapy works by obliterating some of the vascularity of hemorrhoids, fixing them to adjacent anorectal muscularis propria to prevent prolapse.

**Rubber band ligation**

The so called Barron ligation is an office procedure in which a small rubber band is placed at the base of the internal hemorrhoid with a special applicator. The rubber band cuts off the blood supply to the hemorrhoid and the hemorrhoid falls off in about four to five days. There is generally minimal or no discomfort associated with this procedure. The procedure is best suited if prolapse is the main symptom.

**Doppler Guided Hemorrhoid Arterial Ligature Technique (DG-HAL)**

A new safe, effective and almost pain free technique for the treatment of hemorrhoids is the DG-HAL. The procedure involves stemming the blood flow to the hemorrhoids by ligaturing the hemorrhoidal supplying arteries, thereby causing the hemorrhoids to shrink and diminish. To detect the feeding arteries a specialised proctoscope with a special integrated 8 MHz Doppler probe is used.

**OPERATIVE TREATMENT**

**Milligan-Morgan Technique**

This technique was developed in the United Kingdom by Drs. Milligan and Morgan, in 1937. The three major hemorrhoidal vessels are excised. In order to avoid stenosis, three pear-shaped incisions are left open, separated by bridges of skin and mucosa. This technique is the most popular method, and is considered the gold standard by which most other surgical hemorrhoidectomy techniques are compared.

**Ferguson Technique**

This method was developed in the United States by Dr. Ferguson, in 1952. This operation is a modification of the Milligan-Morgan technique, whereby the incisions are totally or partially closed with absorbable running suture.

**Stapled Hemorrhoidopexy (PPH Procedure)**

PPH is a technique developed in the early 90's that reduces the prolapse of hemorrhoidal tissue by excising a band of the prolapsed anal mucosa membrane with the use of a circular stapling device. In PPH, the prolapsed tissue is pulled into a device that allows the excess tissue to be removed while the remaining hemorrhoidal tissue is stapled. This restores the hemorrhoidal tissue back to its original anatomical position.

**Discussion**

Since the introduction of new therapy options ŠKoblandin-Longo 1998 (9), DG-HAL 1995(10) C for the treatment of hemorrhoids, several discussions about the adequate therapy have been evolved. The most important questions are which therapeutically principle should be followed. The options are:

- resection of the diseased hemorrhoidal cushion
- reposition of the hemorrhoids
- vascular atrophy of the hemorrhoids by minimizing blood flow to the cushions
Suggested classification according to Müller-Lobeck

The German surgeon Müller-Lobeck proposed recently a new classification system (11) combining morphology with clinical symptoms.

First degree hemorrhoids: bulge into the lumen of the anal canal during proctoscopy with symptoms of bleeding, pruritus and mucous discharge

Second degree hemorrhoids: protrude to the outside only during bowel movements but reduce spontaneously. Clinically bleeding, itching, moistness as well as feeling of incomplete evacuation or swollen anal feeling may be present.

Third degree hemorrhoids: protrude to the outside either spontaneously or during bowel movement and require manual dilatation. The clininc is similar to the second degree hemorrhoids with additional (slight) incontinence symptoms.

Fourth degree hemorrhoids are permanently prolapsed; no reduction is possible. The classification is divided into 2 subgroups:

4a) prolapsed, acute incarcerated and thrombosed hemorrhoids. Usually this situation is very painful.

4b) Chronic prolapsed piles usually not bleeding very much. Most problems occur due to perianal irritation and anal fibrosis.

PROPOSAL

Considering the new proposed classification the following options for treating hemorrhoids seem possible:

First degree hemorrhoids: Rubber band ligation, Sclerotherapy

Second degree hemorrhoids: Rubber band ligation, DG-HAL, Longo

Third degree hemorrhoids: isolated : Milligan Morgan, DG-HAL circumferential: Longo, DG-HAL

Fourth degree hemorrhoids: 4a) conservative treatment in the acute phase (reposition, analgesics, bed rest) operation in the interval

4b) anoplastical operation e.g. Parks, Ferguson, Fansler or Milligan-Morgan

CONCLUSION

In conclusion colorectal surgeons must have knowledge of different operations to treat hemorrhoids best. An individual approach according to stage, symptoms and patient’s habits and surgeon’s experience is preferred.

REFERENCES