Haemorrhoids

Haemorrhoids (*"anus venous towns*", *"golden veins"*) are **nodular vascular plexuses** in the rectal and anal canal area. It is one of the most common diseases, their incidence increases with age, more than half of the population over 50 suffers from them. Their formation is conditioned by an increase in pressure **in hemorrhoidal venous plexuses**, which can react by **dilation, swelling, bleeding** and **prolapse of the mucosa**. The disease is accompanied by itching, pain and difficulty in defecation, which has a bad effect on the human psyche due to the sensitivity and intimacy of the problem. Differential diagnosis of bleeding is important to rule out colorectal cancer or other diseases.

Anatomy

Haemorrhoids are divided into **internal** and **external** according to location.

- **Internal haemorrhoids** arise from **the corpus cavernosum recti** (= plexus haemorrhoidalis internus; plexus venosus recti), which is a submucosal vascular "spongy" formation surrounding the rectal haemorrhoidalis zone (at the level of anal sinuses, longitudinal algae) **above the mucocutaneous dent**, above the **lineage physiological part of the defecation and closure mechanism**, gently seals the anal canal, helps retain stool and is responsible for the cleanliness of the anus by preventing stool contact with the skin. The plexus is supplied from **the superior rectal artery**, so there is a connection between its branching and the location of the hemorrhoidal nodes. During the kneeling examination (genupectoral position), they are most often palpated at Nos. **1, 5 and 9**. (At the back position **3, 7, 11**). If the disease state is advanced, it may also occur circularly.
- **External hemorrhoids** arise from *the plexus haemorrhoidalis externus* (anal vein area). They are visible to the naked eye when the buttocks are opened, they are located below the mucocutaneous border in the immediate vicinity of the anus. They are covered with skin in the pars analis recti, they do not have a segmental arrangement. Their drainage takes place via **vv. inferior rectals** do v. cava inferior.

Etiology of pathogenesis

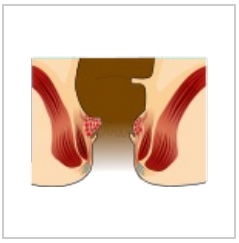
The causes of haemorrhoids are not fully understood. They usually occur during **a long-term increase in pressure** in haemorrhoidal venous plexuses for various reasons such as:

- **increased tone of sphincters** - makes it difficult to drain from the plexuses.
- **increased intra-abdominal pressure** - defecation disorders - constipation, diarrhoea, a small volume of stool due to lack of fibre, pregnancy, obesity, sedentary employment, lack of exercise.
- small **pelvic tumors**.
- **hyperplasia AV anastomoses**.
- **genetic predisposition** may also play a role.

The onset of haemorrhoids is related to **a person's lifestyle**. Obesity, stress, smoking, alcoholism, sedentary lifestyle, little exercise, poor eating habits, lack of fluids, low fibre intake contribute to the development of this disease.

The mechanisms of origin are described by **two theories** - mechanical and hemodynamic.

- **Mechanical theory** (more likely) - there is a gradual **degeneration of the ligament** surrounding the venous plexus, which are then not well fixed, at higher pressure they expand and weaken.
- **Hemodynamic theory** - due to the increased tone of the internal sphincter, there is **a drainage disorder** with blood stasis, a decrease in oxygen saturation and an increase in CO2 with subsequent damage to the vessel wall leading to thrombosis with a local inflammatory reaction.



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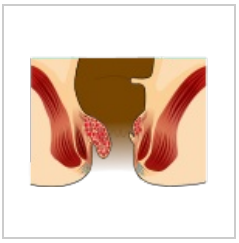
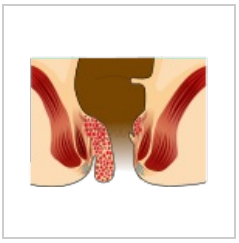


II. grade (https://www.wikiskripta.eu/index.php?curid=36907#/media/Soubor:Piles_Grade_2.svg)



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Symptoms

Haemorrhoids are often **asymptomatic**. In most cases, the inner braids are affected, sometimes in combination with the outer ones. Separate **external haemorrhoids** are very rare, unlike internal haemorrhoids, they do **not bleed,** but they can permanently irritate and moisturize the area or turn into acute thrombosis with inflammation. **A very painful blue-violet perianal node** (the size of a smaller cherry) is formed, which is treated by incision and release of the thrombus.

The most common manifestation of **internal haemorrhoids** is **the presence of bright red blood** on the surface of stool and toilet paper or dripping blood from the rectum after emptying. Usually no pain. Subsequently, **the mucosa may become prolapse**. A classification is created according to the degree of disability.

Classification of internal hemorrhoids

Grade	Symptoms	Prolapses
I.	bleeding	-
II.	bleeding, prolapse, discomfort	prolapse on defecation, resonates spontaneously
III.	bleeding, prolapse, discomfort, spotting, pruritus	prolapse during defecation, it is repositioned manually
IV.a	bleeding, prolapse, pain, thrombosis, spotting, necrosis, ulceration	permanent prolapse, not repositionable, incarcerated prolapse with thrombosis
IV.b	prolapse, pain, spotting, signs of incontinence	fixed fibrotized prolapse

Diagnostics

- **Anamnesis** reveals bleeding, pressure or stool pain, signs of anemia.
- **Physical examination** is performed either **on the left side** (Sims position), **on all fours** (genupectoral position) or **on the back** (gynecological-lithotomy position).

  By looking can be revealed up to **III. or IV. grade**, prolapse, incarceration, inflammation, fissures, perineal dermatitis.
  Per rectum at **I.** and **II**. degree, the finding is negative, in case of inflammation (if pain or tone of the sphincter allows) palpable nodules in predilection sites (see paragraph Anatomy).

- **I.** and **II**. stage can be detected **anoscopically**.
- **Rectoscopy, sigmoidoscopy, colonoscopy** are performed to exclude another source of bleeding, especially colorectal cancer.

Treatment

The treatment of haemorrhoids is mainly about **alleviating their unpleasant symptoms**. **A combination of local intervention** and **pharmacotherapy** is used.

- **Dietary measures** are important to affect stool consistency - diet adjustment, **increased fibre intake,** adequate hydration and exercise.
- **Rectal care** - sitting baths (hypermanganese, oak bark decoction), ointments, creams. They have either astringent (astringent, astringent) or local anaesthetic effects against pain and itching. (Dobexil, Faktu, Mastu S, Preparation H, Proctoglyvenol).
- **Drug treatment** - venotonics (for acute and chronic problems).
- **Local treatment** - **ligation** (Barron's elastic ligature - most effective), i**njection sclerosing, infrared coagulation, cryotherapy, laser therapy, radiofrequency thermotherapy.**
- **Surgical treatment** - **hemorrhoidectomy** (hemorrhoidal vascular ligation, and removal of nodules), **abdominal ligature, Milligan-Morgan surgery, submucosal hemorrhoidectomy according to Parks, Ferguson surgery, Stapler hemorrhoidopexy** (Long's method), **Sure League, DG-HAL** (Doppler-guided haemorrhoid) arterial ligation) - **RAR** (Recto Anal Repair). The treatment is aimed at **mini-invasive procedures** with short-term convalescence.

Haemorrhoid treatment depends on the degree of disability. In the **first degree**, **a conservative approach** is recommended, it is usually lengthy, but it is safe and well-tolerated by patients with sufficient efficiency. In **II. and especially III. and IV. degree** is usually a **radical surgical solution**. Repeated relapses occur to varying degrees.

Links

Related articals

- Rectum
- Per rectum examination
- Colonoscopic examination

- Long's method
- Venofarmaka
- Colorectal carcinoma/ diagnostics
- Sideropenic anemia
- Circulatory disorders/Repetitorium
- Thrombus
- Bleeding from the GIT

External sourses

- Hemorrhoids (http://www.hemorrhoids.org/)
- Haemorrhoids (Czech wikiskripta) (https://www.wikiskripta.eu/index.php?curid=36907)
- Haemorrhoid (English wikipedia) (https://en.wikipedia.org/wiki/Hemorrhoid)

Biography

- KLENER, Pavel. *Internal medicine.* 4. edition. Galén : Karolinum, 2011. ISBN 978-80-246-1986-6.
- VLČEK, Petr. What's new in the treatment of hemorrhoids?. *Med. Pro Praxi.* 2010, y. 7, p. 9-13, ISSN 1803-5310.