

An Overview of Haemorrhoids (Bawaseer) with Surgical Interventions from Ancient to Modern Era

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Abstract

The word “haemorrhoid” is derived from the Greek “haema”= blood, and “rhoos”= flowing, and was originally used by Hippocrates to describe the flow of blood from the veins of the anus. Commonly, in society it is known as piles, the word pile is derived from Latin, meaning a ball or a mass. In Unani literature, hemorrhoids are known as “Bawaseer”. It is the plural of baasoor, which means wart or polyp like swelling. Haemorrhoids or piles are commonly known, to plagued humankind since ancient times. On the day of the decisive battle at Waterloo, Napoleon Bonaparte was in pain because of a severe case of Thrombosed haemorrhoids, which impaired his battlefield conduct. Although it has been stated that 50% of the population will experience symptomatic haemorrhoid disease at some point in their lives, the peak incidence of symptomatic disease seems to be between the ages of 45–65 years. Exact causes of haemorrhoids are still unknown, but some predisposing factors may aid the disease. Haemorrhoids can be managed by conservative, nonoperative or operative measures depending upon the condition and severity. Unani System of Medicine has also a comprehensive description of the management of haemorrhoids. Moreover, the conventional surgical techniques used nowadays are only the modification of already described procedures in Unani literature. Therefore, it is attempted to correlate the concepts of Bawaseer in Unani and Conventional system of medicine.

Keywords: Haemorrhoids, Bawaseer, Unani, thrombosed

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INTRODUCTION

Haemorrhoids are cushions of specialized, highly vascular tissue found within the anal canal in the submucosal space. The term “haemorrhoidal disease” should be reserved for those vascular cushions that are abnormal and cause symptoms in patients. These cushions of thickened submucosa contain blood vessels, elastic tissue, connective tissue, and smooth muscle [1].

Haemorrhoids, or piles, as they are commonly known, have plagued humankind since ancient times. On the day of the decisive battle at Waterloo, Napoleon Bonaparte was in pain because of a severe case of thrombosed haemorrhoids, which impaired his battlefield conduct [2].

According to The Merck Manual definition haemorrhoids is “Varicosities of the veins of the haemorrhoidal plexus, often complicated by inflammation, thrombosis, and bleeding”.

But a recent definition of haemorrhoids is “Vascular cushions, consisting of thick submucosa containing both venous and arterial blood [3].

Although it has been stated that 50% of the population will experience symptomatic haemorrhoid disease at some point in their lives, the peak incidence of symptomatic disease seems to be between the ages of 45–65 years. Development of haemorrhoids before the age of 20 is unusual, and the risk is higher for whites than for black [4]. Haemorrhoids are the most common cause of lower gastrointestinal bleeding. Its frequency in India is 30–40% [5].

The word “haemorrhoids” is derived from the Greek “haema”= blood, and “rhoos”= flowing, and was originally used by Hippocrates to describe the flow of blood from the veins of the anus. Commonly in society it is known as piles, the word pile is derived from Latin,

meaning a ball or a mass, as this condition may not always be associated with bleeding, the word piles is better used for this condition [6].

John Andrene remarks that common people call them piles and the aristocracy calls them hemorrhoids, the French call them figs, means to clot [7].

In Unani literature, hemorrhoids are known as “Bawaseer”. Bawaseer is the plural of baasoor, which means wart or polyp like swelling [8]. According to Hippocrates (*Buqrat*) Bawaseer is the varicosities of the internal mucous membrane of rectum in which the veins get swollen similar to the veins of lower limb [9]. According to *Majoosi*, Bawaseer is an excessive growth at mouth of vessels present in anus [10].

ANATOMICAL ASPECT OF HEMORRHOIDS

Hemorrhoids are vascular cushions within the anal canal, usually found in three main locations: left lateral, right anterior, and right posterior portions. They lie beneath the epithelial lining of the anal canal and they receive their blood supply primarily from the superior and middle haemorrhoidal arteries; the superior, middle and inferior haemorrhoidal veins provide venous drainage. A sinusoidal pattern of arterio venous communication is formed within the cushions, which explains why the haemorrhoidal bleeding is arterial, rather than venous in nature. In addition, the haemorrhoidal cushions are also rich in muscular fibers. These fibers help to anchor the cushions to the underlying muscular layer of the anorectum, and it is the breakdown of these supporting fibers that eventually leads to the changes that can cause the haemorrhoidal symptoms.

On basis of lithotomy position there are usually three major hemorrhoidal cushions originated to the right posterior, right anterior, and left lateral position known as 3, 7, and 11 o'clock position of the anal canal [11, 12].

HAEMORRHOIDS, VARICES, AND PORTAL HYPERTENSION

The aetiology of “haemorrhoids” in patients with portal hypertension must be distinguished

from anorectal varices especially when bleeding is present. The upper anal canal (internal haemorrhoids) is drained by the middle rectal vein which drains into the iliac veins and subsequently into the systemic circulation. The inferior rectal veins drain the lower part of the anal canal (external haemorrhoids) into the internal iliac veins. Anorectal varices essentially provide a collateral pathway to decompress the portal system into the systemic circulation. Despite this communication between the portal and systemic systems, the incidence of haemorrhoidal disease in patients with portal hypertension is no greater than in the general population [13, 14].

CAUSES OF HAEMORRHOIDS

Causes of Haemorrhoids according to Conventional System of Medicines

The exact causes of symptomatic haemorrhoids are unknown. But some predisposing factors are believed to play important role including;

1. Erect posture of mankind.
2. Irregular bowel habits (constipation or diarrhoea).
3. A low fibre diet.
4. Increased intra-abdominal pressure (prolonged straining, an intra-abdominal mass, or pregnancy).
5. Absence of valves within the haemorrhoidal veins.
6. Ageing [12, 15].
7. Alcoholic cirrhosis or other causes of portal obstruction can cause severe haemorrhoids. More rarely but much more importantly, haemorrhoids may reflect collateral anastomotic channels that develop as a result of portal hypertension [3].
8. Other factors that are believed to increase the risk include:
 - Obesity
 - Prolonged sitting
 - Chronic cough
 - Pelvic floor dysfunction [12].

Causes of Haemorrhoids According to Unani System of Medicines

- According to Unani physicians most common cause of haemorrhoids is *khilt-e-sauda* (Black humour) [10].
- Due to consumption of drugs which are hot in temperament and due to *safra*

- (when it mixes with the blood), blood becomes *sokhta* (burnt) and *ghaleez* (viscous).
- *Ghaleez dam* (viscous blood), that develops due to excessive consumption of *saudawi* substances.
 - Persons living in the areas where the air is *ratab* (moist) and *mutaaffin* (putrefied) and in those persons who consume more dates, milk, fish.
 - Persons having *saudawi* temperament.
 - Accumulation of excess *khilt-e-balgham* (*Rarely*) [11].
 - Sedentary life style, avoidance of exercise.
 - Long hour sitting professions.
 - Taking excessive red chillies, nonvegetarian foods and spicy/oily foods.
 - Excessive alcohol intake.
 - *Warm ghudud mazi*.
 - Frequent use of purgatives [9].

CLASSIFICATION OF HAEMORRHOIDS

Classification of Haemorrhoids According to Conventional System of Medicines

On the basis of position:

1. *External*: External haemorrhoids are located in the distal one-third of the anal canal, distal to the dentate line, and are covered by anoderm [16].
2. *Internal*: Internal haemorrhoids are located proximal to the dentate line and are covered by columnar or transitional epithelium. Because this overlying tissue is viscerally innervated, it is not sensitive to touch, pain, or temperature.
3. *Internoexternal haemorrhoids*, also called mixed or combined haemorrhoids, are defined as the presence of both internal and external haemorrhoids [17].

Table 1: Grading of Internal Hemorrhoids [12].

Grade	Description
1st	Hemorrhoids do not protrude, but may bleed.
2nd	Hemorrhoids protrude with defecation, but reduce spontaneously.
3rd	Hemorrhoids protrude but cannot reduce spontaneously, however, can be reduced manually.
4th	Hemorrhoids are permanently prolapsed.

Classification of Haemorrhoids According to Unani System of Medicines

1. According to shape of mass.
 - i). Sololi—Like warts.
 - ii). Inabi—Like Grapes.
 - iii). Tooti—Like mulberry.
2. According to bleeding.
 - i). Damiya—Haemorrhoids with bleeding (*Bawaseere Khooni*).
 - ii). Umiya—Haemorrhoids without bleeding (*Bawaseere Reehi*).
3. According to the site of appearance/location.
 - i). Nabita—External Haemorrhoids.
 - ii). Ghaira—Internal Haemorrhoids [9].

CLINICAL FEATURES OF HAEMORRHOIDS

Clinical Features of Haemorrhoids According to Conventional of Medicines

The symptoms of pathological haemorrhoids depend on the type present.

1. External haemorrhoids:
 - If not thrombosed external haemorrhoids are symptomless.
 - If a blood clot (thrombosis) develops in an external haemorrhoid, it becomes a painful, hard lump and may bleed if it ruptures [2].
 - The swelling may take a few weeks to disappear, and after healing a skin tag may remain.
 - If they are large and causing issues with hygiene, they may produce irritation of the surrounding skin and thus causes itching around the anus.
2. Internal haemorrhoids:
 - Internal haemorrhoids usually present with painless, bright red, rectal bleeding during or following defecation.
 - The blood typically covers the stool, a condition known as hematochezia, is on the toilet paper, or drips into the toilet bowl (Table 1).
 - When completely prolapsed May cause itching, mucous discharge and faecal incontinence. Internal haemorrhoids are usually only painful if they become thrombosed or necrotic [18].

Clinical Features of Haemorrhoids according to Unani System of Medicines

- Bleeding per rectum in *Bawaseer khooni* which results due to perforation of rectal

veins. Some patients may complain of epistaxis also which is considered beneficial for patient [19].

- Burning pain during defecation (if present may be due to *Safravi madda*).
- Sometimes itching may also be present [20].
- In “*Bawaseer reehi*” patient may experience joint pain, indigestion, acidity.
- When bleeding is continuous patient may become anaemic [19].

DIAGNOSIS OF INTERNAL HAEMORRHOIDS

Proctoscopic Examination

- Patient is advised to lie in left lateral or knee elbow or Sim’s position (Most popular Position).
- Warm and lubricated proctoscope is gently inserted into to the rectum.
- The instrument is introduced at first in the direction of the axis of the anal canal i.e., upwards and forwards towards patient’s umbilicus until the anal canal is passed. The instrument is then directed posteriorly towards sacrum to enter rectum.
- Now the obturator is with drawn and the interior of rectum and anal canal is seen with the help of light.
- The internal pile if present will prolapse into the proctoscope as this instrument is being withdrawn.
- Note the position of the piles (Mainly present at 3, 7 and 11 O clock position, called primary piles) [21].

MANAGEMENT OF HAEMORRHOIDS

Management of Haemorrhoids According to Conventional System of medicines

Conservative

- The main goal of this treatment is to minimize straining at stool. This is usually achieved by increasing fluid and fibre in the diet.
- Most effective topical treatment for the relief of symptoms comes in the way of warm (40°C) sitz baths. Soaking time should be limited (15 min).
- The application of ice packs to the anal region also may relieve symptoms and is acceptable provided that contact time is not prolonged.

- Topical soothing agents combined with corticosteroids or anaesthetic agents [12, 22].
- Avoidance of spicy, fried, nonveg food items, constant sitting, excessive straining in defecation etc.
- Make use of cow milk, butter, buttermilk, wheat, ghee, green vegetable etc. [18].

Nonoperative Measures

Various methods that do not involve surgical excision are also available as an alternative treatment. These procedures are usually done on OPD basis.

- **Sclerotherapy:** This was described first by Morgan in Dublin in 1869, mostly used for 1st and 2nd degree haemorrhoids. A submucosal injection of 5 ml of 5% phenol in oil, 5% quinine and urea, or hyper tonic (23.4%) salt solution at the base of the haemorrhoid causes thrombosis of vessels, sclerosis and shrinkage of connective tissues and overlying mucosa. It takes only few minutes to perform.
- **Rubber band ligation:** This was originally described by Barron in 1963. Mostly used for 2nd degree internal haemorrhoids. The rubber band is placed on internal pile mass a minimum of 2 cm above the dentate line which causes strangulation of the blood supply to the banded tissue, and the mass sloughs off in 5–7 days [23].
- **Cryotherapy** is based on the principal that freezing the internal haemorrhoid at low temperatures can lead to tissue necrosis. A special probe is required through which nitrous oxide at -60° to -80°C or liquid nitrogen at -196°C is circulated. Nowadays not used commonly because the procedure is time consuming and associated with a foul-smelling profuse discharge, irritation, and pain after procedure [24].
- **Transanal haemorrhoidal dearterialization (THD):** The procedure uses a kit with an anoscope that reaches the upper portion of the lower rectum, where a Doppler device locates the terminal branches of the haemorrhoidal arteries (6–7 cm from the anal margin) at

the rectal circumference. These vessels are ligated direction up to the lower Doppler signal, 2 cm from the anal margin, above the dentate line. The lower portion of the suture ligation is tied to the upper portion performing a mucopexy, with prolapse reduction. The procedure may be indicated for patients with bleeding second, third or fourth degree haemorrhoids [25].

- **Infrared Photocoagulation (IRC):** Infrared photocoagulation utilizes infrared radiation generated by a tungsten-halogen lamp applied onto the haemorrhoidal tissue through a solid quartz light guide. The infrared coagulator light is converted to heat which coagulates tissue protein and evaporates water from cells leading to inflammation, eschar formation, and eventual scarring which assists in fixation of the haemorrhoidal mass. It has been described to be slightly less painful than rubber banding [26, 27].
- **Bipolar Diathermy:** Bipolar diathermy or coagulation is essentially electrocautery in which the heat does not penetrate as deeply as in monopolar coagulation. The diathermy is applied in 1 sec pulses at approximately 20 watts until the underlying tissue coagulates [28, 29].
- **Direct-Current Electrotherapy:** Direct-current is applied through a probe placed via an anoscope onto the mucosa at the apex of the haemorrhoid. Application of the 110 volt direct current is set to the maximal tolerable level (approximately 16 mA) and then left in place for approximately 10 min [30].

Operative Measures

Surgical treatment is generally reserved for those patients who have failed to respond to conservative measures, about 5–10% of patients. Surgical treatment is the initial option in the management of symptomatic third- or fourth-degree haemorrhoids, or in patients with acute haemorrhoids that have not improved with other therapies.

Haemorrhoidectomy

It is considered the gold standard, Milligan-Morgan's and Ferguson's procedures are the

most widely used techniques throughout the world. Although these techniques have yielded excellent results and low complication rates, they are usually associated with postoperative pain [31].

- **Closed haemorrhoidectomy:** The Ferguson haemorrhoidectomy (closed) is the most commonly used surgical technique. An elliptical incision is made in the external hemorrhoidal tissue extending proximally through the dentate line to the upper limit of haemorrhoids. One should take care to make a narrow ellipse and remove only the redundant anoderm and haemorrhoidal tissue. The wound is closed with continuous absorbable suture. Usually three piles are excised. This technique is effective in 95% of cases, and surgical wound infection is extremely rare [32].
- **Open haemorrhoidectomy:** The Milligan-Morgan technique (open) is widely used in the United Kingdom. It involves excision of the external and internal haemorrhoid components leaving the skin defects open to heal by secondary intention over a 4- to 8-week period [33].
- **Stapled Haemorrhoidopexy:** New technique using a stapler (stapled haemorrhoidectomy). This technique uses a specific (circular) stapler to excise a circumferential ring of mucosa above the dentate line. The main characteristic of this procedure is less surgical wounds, which makes this procedure potentially less painful than the conventional procedure. This technique is used in third or fourth-degree haemorrhoids, as long as they are not too bulky [34].

Management of Haemorrhoids According to Unani System of Medicines

According to USM, first and foremost thing is the *Izala e sabab* (elimination of cause) i.e., whatever the cause it should be promptly eliminated. Since the main cause for the development of haemorrhoids is *saudawi* or *ghaleez khoon* (morbid matter), so *Tanqiya* (expelling) of this morbid matter from the body with the help of different procedures is done and its formation in the body should also be avoided.

For the Tanqiya (expelling) of Morbid Matter from the Body the Procedure may be done

- *Fasd* (venesection): *Fasd* of *Rag e basaleeq* (Basilic vein) is done to let down the *saudavi/ghaleez khoon*. In severe conditions *Fasd* of *Rag e saphin* (saphenous vein) along with *Rag e Basaleeq* is done.
- *Hijama*(cupping): Cups are applied on the hips to expel the *Saudavi* matter.
- *Ta'leeq* (Leeching): Leeches are directly applied over the haemorrhoidal swelling or adjacent to them due to which the morbid matter lodged in the haemorrhoidal plexus directly expel out from the affected area.
- *Is'haal* (Purgation): It is done with the help of *Mus'hilaat e suada* drugs (*Aftimoon, Kharbaq, Halela siyah* etc.) to expel out the *saudavi and ghaleez madda* [11].

In Bleeding Hemorrhoids

Following combinations of drugs may be used:

- *Geru* (Red chalk) 1 g
 - *Kherba Shamie* (*Vaterica indica*) 1 g
 - *Busd Ahmar* (*Corallium rubrum*) 1 g
- Powder of these drugs is used with *Sharbat Anar* 20 ml

For Local Soothing Effect

Marham (Ointment) is applied which is prepared from following single drugs:

- *Safeda* (Lead carbonate)
- *Kalai* (Tin)
- *Mom Safed* (Bees Wax)
- *Roghan Gul* (Oil of Rosa damascene)

Amal Dastakari (Surgical) Techniques

- Excision of Pile Mass and Then Cautery.
- Excision of Pile Mass and Then Suturing of Raw Area.
- Ligation of Base of Pile Mass, Following Which the Mass Sheds Off.
- Application of *Akkal* (Corrosive) Medicines Over Pile Mass [9].

CLASSICAL SURGICAL PROCEDURES

Amal Khazam: Needle attached with silk thread is inserted at the base of pile mass and

the thread is tied two to three times circumferentially, then knot is made and the thread is kept as such. After few days the mass dries and sheds off along with thread.

Amal Shadd: Pile mass is dragged out with the help of forceps, the base is visualized and tied with thread, thread is kept as such and on 2nd day it is tied again tightly till the mass sheds off.

Amal Qatae: Pile mass is dragged with forceps or with dry rough cloth. When the pile mass prolapses completely it is tied at base and is excised. Then Haemostatic medicines are sprinkled over the raw area. When two or more pile masses are there, one is left as such to avoid complications [35].

SUMMARY AND CONCLUSION OF THE REVIEW

Haemorrhoids are a common anorectal disorder worldwide. As in case of every disease prevention is the best common treatment. Most patients can be effectively treated with diet and life style modifications only. Avoidance of constipation is a key in treating haemorrhoids. Nonoperative treatment methods are used for the patients with the first second and third degree haemorrhoids. Surgery is indicated in patients with acute complications or those in whom conservative treatment has failed. The ideal surgical option for the treatment of haemorrhoids should be able to provide relief of symptoms, less complications and have a low recurrence rate. With the new techniques, THD (Transanal haemorrhoidal dearterialization), Infrared Photocoagulation (IRC) and Direct-Current Electrotherapy, although less postoperative pain is observed, there is a greater likelihood of recurrence. Despite these surgical options, haemorrhoidectomy remains the treatment of choice and the gold standard remedy. Many surgical and nonsurgical treatments are also available in Unani system of medicine. Nonsurgical techniques which includes *Fasd, Hijama* and *Ta'leeq* are also beneficial in treating the haemorrhoids and may prove to be best and cheap alternative. Moreover, the conventional surgical techniques used nowadays are only the modification of already described procedures in Unani literature. These procedures are now used routinely but with different names, the work done by Unani

surgeons is lost in the crowd and shades of gray. The main aim of this review is to highlight contribution of Unani physicians as well as surgeons in treating this common ailment conservatively, nonsurgically and surgically.

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