



A METICULOUS REVIEW OF A COMPREHENSIVE SUMMARY OF HEMORRHOID THERAPEUTIC INTERVENTIONS AND PROGNOSIS

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ABSTRACT

Millions of individuals all over the world suffer from the widespread medical disease known as hemorrhoids. It is a condition where the veins in the rectum and anus become swollen and inflamed, leading to pain, discomfort, itching, and bleeding. Hemorrhoids can be caused by various factors such as straining during bowel movements, pregnancy, obesity, and a sedentary lifestyle. Treatment options range from lifestyle changes, such as increasing fibre intake and exercise, to over-the-counter medications and surgical procedures. In treatment, there are various herbal formulations available and surgical procedures available that ease the pain. Early diagnosis and prompt treatment are important in managing hemorrhoids and reducing symptoms. Future perspective can treat hemorrhoids by developing a new drug that can provide better pain relief and reduce inflammation in patients with hemorrhoids. Advancements in surgical techniques, such as laser therapy and minimally invasive procedures, could make surgery a more effective and less invasive option for patients. Future research may focus on developing personalized treatment plans that consider a patient's individual medical history, symptoms, and lifestyle factors.

Keywords: Hemorrhoids, Types of hemorrhoids, Factors, Pharmacological Treatments, Future Scope

INTRODUCTION

Hemorrhoids sometimes referred to as piles, are a widespread condition that many people experience. They occur when the veins in the rectal and anal area become swollen and inflamed, causing discomfort, bleeding, itching, and other symptoms.[1] The symptomatic expansion and distal displacement of the typical anal cushions are the hallmarks of hemorrhoids, a relatively frequent anorectal ailment. They are a significant medical and economical issue that affects millions of people worldwide.[2] Hemorrhoidal development has allegedly been caused by several conditions, including constipation and extended straining. Hemorrhoidal disease is characterized by aberrant vascular channel dilatation and distortion as well as degenerative alterations in the connective tissue that supports the anal cushion.[3] Hemorrhoids may show signs of vascular hyperplasia and inflammatory response. Hemorrhoids are typically divided into internal and exterior categories based on where they are located. In contrast to external hemorrhoids, which

appear below the dentate line and are covered by squamous epithelium, internal hemorrhoids appear above the dentate line and are covered by columnar epithelium.[4] Hemorrhoids develop due to the weakening of the anal cushion, which causes the internal sphincter to spasm and the hemorrhoids to prolapse or descend.[5] Hemorrhoids are the fourth most common gastrointestinal outpatient diagnosis in the United States.[6] Realistically, a primary care physician, gastroenterologist, or general surgeon can successfully treat the majority of individuals with low-grade hemorrhoids without surgery in an outpatient setting. High-grade hemorrhoids should only be treated surgically, or if other methods have failed or complications have developed.[7]

1.2. Types of hemorrhoids

There are different types of hemorrhoids based on the position of hemorrhoids [fig:1]

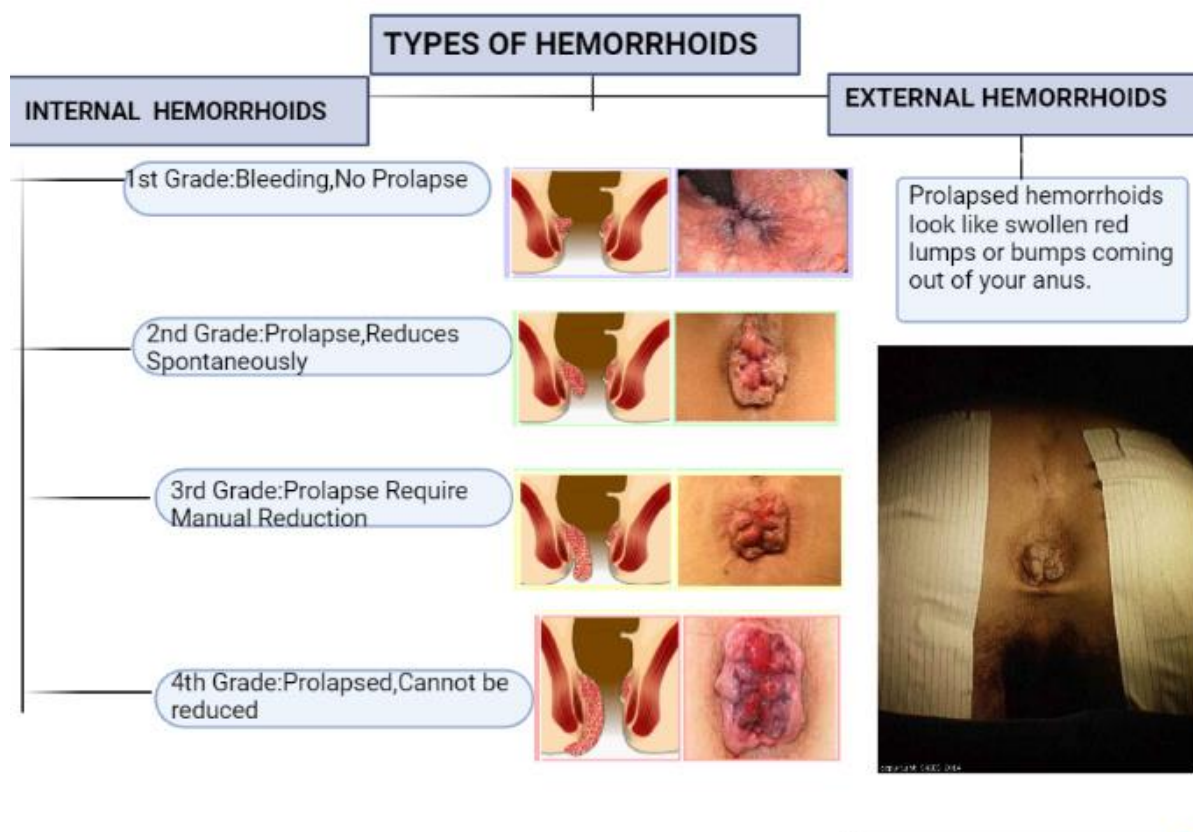


Fig 1: Types of hemorrhoids

1.2.1. Internal hemorrhoids: These are located inside the rectum and usually don't cause pain or discomfort. However, they may bleed when irritated, especially during bowel movements. Internal hemorrhoids are classified according to their severity.[8]

- **First-degree hemorrhoids:** They do not protrude from the anus and can only be seen during a medical exam. They are typically treated with lifestyle changes and home remedies, such as Increasing fiber intake to soften the stool and make bowel movements easier, drinking plenty of water to avoid constipation., Avoiding straining during bowel movements, Taking over-the-counter pain relievers and topical treatments to relieve pain and itching. If first-degree hemorrhoids do not improve with these measures, medical treatment may be necessary. [9] This can include non-surgical treatments such as rubber band ligation, sclerotherapy, or infrared coagulation, which aim to shrink hemorrhoids by cutting off their blood supply. Rarely, surgical removal may be necessary if other treatments are not effective.[10]

- **Second-degree hemorrhoids:** They protrude from the anus during bowel movements but go back inside on their own. They are a more advanced form of internal hemorrhoids. They typically protrude from the anus during a bowel movement but will retract back inside the rectum on their own. They may also bleed during bowel movements and cause discomfort or pain. Treatment for second-degree hemorrhoids usually involves lifestyle changes and home remedies like those recommended for first-degree hemorrhoids, such as: Increasing fiber intake to soften the stool and make bowel movements easier, drinking plenty of water to avoid constipation, avoiding straining during bowel movements, using over-the-counter pain relievers and topical treatments to relieve pain and itching. If lifestyle changes and home remedies are not effective, medical treatments for second-degree hemorrhoids may include rubber band ligation, sclerotherapy, or infrared coagulation. These treatments aim to shrink hemorrhoids by cutting off its blood supply.[11]

In rare cases, surgery may be necessary to remove second-degree hemorrhoids. However, surgery is usually only considered if other treatments have not been effective or if the hemorrhoids are very large and cause severe symptoms.[12]

- **Third-degree hemorrhoids:** They protrude from the anus and must be pushed back in manually. They are a more severe form of internal hemorrhoids than second-degree hemorrhoids. They typically protrude from the anus during bowel movements, but they do not go back inside the rectum on their own and must be manually pushed back in. Treatment for third-degree hemorrhoids typically involves more invasive medical interventions, such as Rubber band ligation: A small rubber band is placed around the base of hemorrhoid, cutting off its blood supply, and causing it to shrink and fall off within a few days. Sclerotherapy: A chemical solution is injected into the hemorrhoids, causing them to shrink and scar over. Infrared coagulation: A device is used to apply heat to the hemorrhoids, causing them to shrink and scar over[13]

In some cases, surgery may be necessary to remove third-degree hemorrhoids. Haemorrhoidectomy is the most common surgical procedure for treating severe hemorrhoids[14]

- **Fourth-degree hemorrhoids:** They are the most severe form of internal hemorrhoids. They cannot be pushed back in and may be accompanied by severe pain. It can also cause bleeding and inflammation. Treatment for fourth-degree hemorrhoids typically involves surgical intervention, as medical treatments such as rubber band ligation, sclerotherapy, or infrared coagulation may not be effective in treating such severe hemorrhoids. The most common surgical procedure for treating fourth-degree hemorrhoids is called haemorrhoidectomy, which involves surgically removing the hemorrhoid tissue.[15]

1.2.2. External hemorrhoids: These are located outside the anus and can be painful, especially if a blood clot forms in them (thrombosed external hemorrhoid). They are usually accompanied by itching, swelling, and irritation. It's important to note that hemorrhoids can also be classified as bleeding or non-bleeding, depending on whether they cause bleeding during bowel movements or not. [16]

2. FACTORS INFLUENCING HEMORRHOIDS

Hemorrhoids are a widespread ailment that impacts many people. They occur when the veins in the rectal area become swollen and inflamed, causing discomfort, bleeding, and other symptoms. While the exact cause of hemorrhoids is not known, there are several factors that can contribute to their development.[fig:2]

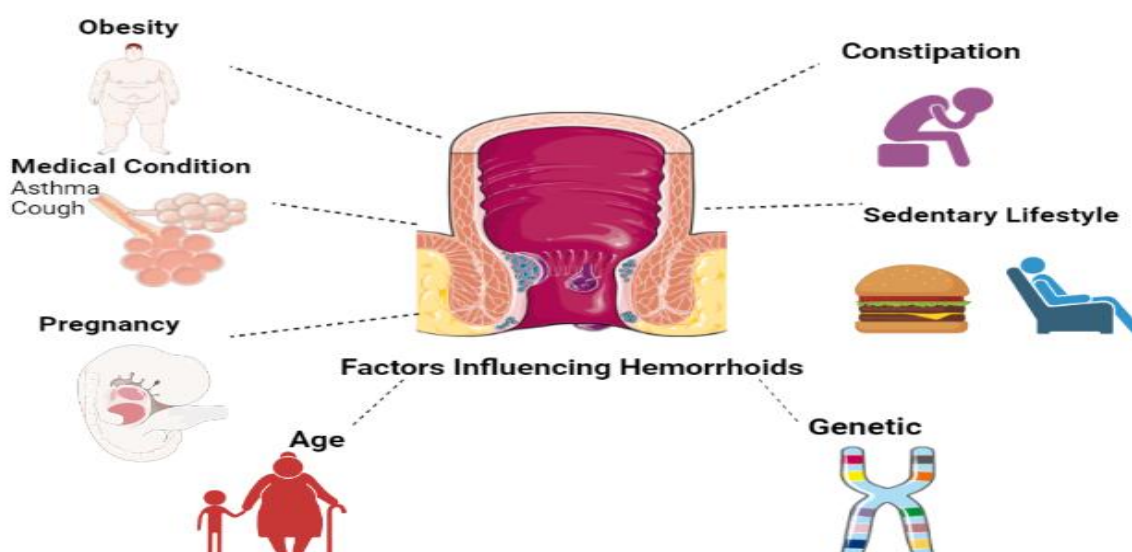


Fig 2: Factors influencing hemorrhoids.

Age: Hemorrhoids become more common as people age, likely due to the weakening of the tissues that support the veins in the rectal area. As we age, our veins become less elastic and more prone to stretching, which can make them more susceptible to damage.[17]

Chronic constipation or diarrhea: Straining during bowel movements can put pressure on the veins in the rectal area, leading to the development of hemorrhoids. Chronic constipation or diarrhea can also cause irritation and inflammation of the anal area, which can contribute to hemorrhoids.[18]

Pregnancy: Pregnant women are more likely to develop hemorrhoids due to increased pressure on the veins in the rectal area caused by the growing uterus. Hormonal changes during pregnancy can also promote to the growth of hemorrhoids. [19]

Obesity: Being overweight or obese can increase the pressure on the veins in the rectal area, leading to the development of hemorrhoids. Excess weight can also lead to other conditions, such as type 2 diabetes and heart disease, that can contribute to the development of hemorrhoids.[20]

Sedentary lifestyle: Lack of physical activity can contribute to the development of hemorrhoids by reducing blood flow to the rectal area and causing constipation. Sitting for long periods of time, such as at a desk job, can also put pressure on the veins in the rectal area and increase the risk of developing hemorrhoids.[21]

Genetics: There is evidence to suggest that genetics may play a role in the development of hemorrhoids. Research has shown that individuals with a family history of hemorrhoids may be more likely to develop the condition themselves. Several genetic factors have been identified as potentially contributing to the development of hemorrhoids. These include changes in genes that regulate the inflammatory response, as well as genes that affect blood vessel function and clotting. Some people may be more genetically predisposed to developing hemorrhoids than others. Studies have shown that there may be a genetic component to the development of hemorrhoids, although more research is needed to fully understand the link.[22]

Other medical conditions: Certain medical conditions, such as liver disease, may increase the risk of developing hemorrhoids. Conditions that cause chronic coughing, such as asthma, can also put pressure on the veins in the rectal area and contribute to the development of hemorrhoids.[23]

3. TREATMENTS FOR HEMORRHOIDS

3.1. Herbal Treatment

Herbal treatment for hemorrhoids has gained popularity due to several potential benefits, including:

1. Reduced side effects: Herbal treatments for hemorrhoids often have fewer side effects compared to traditional medications. This is because herbal remedies are typically derived from natural sources and do not contain synthetic chemicals. [24]
2. Anti-inflammatory effects: Many herbal remedies have anti-inflammatory properties that can help reduce swelling, pain, and itching associated with hemorrhoids. For example, aloe vera, witch hazel, and chamomile are commonly used herbs with anti-inflammatory effects.[25]
3. Improved bowel movements: Herbal treatments can help improve bowel movements, which can reduce the strain on the rectal area and prevent the development of hemorrhoids. Some herbs, such as psyllium and flaxseed, are high in fiber and can promote regular bowel movements. [26]
4. Enhanced healing: Herbal remedies may also promote the healing of hemorrhoids by increasing blood flow to the affected area and reducing inflammation. Calendula, yarrow, and horse chestnut are herbs that have been shown to promote healing. [27]

Sl. No	Plant	Treatment
1	<i>Arum maculatum</i>	A. maculatum has been seen to speed up the recovery of skin wounds. Granulation tissue and epidermal regeneration both increased contains antioxidant and are used in the treatment of hemorrhoids. [28]
2	<i>Ruellia simplex</i>	Leaves of these plants treat inflammation, pains, and diabetes and potentially can treat hemorrhoids. [29]
3	Corydalis saxicola Bunting	<i>C. saxicola</i> suppository exhibits good anti-inflammatory actions and controls immunity. The immunological proteins IgG and IgM, as well as the inflammatory agents TNF- and IL-6, may be controlled by this mechanism. [30]
4	<i>Sclerocarya birrea</i>	Also known as marula, the bark of this plant showed potential effect on treating gastrointestinal disorder like hemorrhoids, malaria, dysentery, and diarrhea because of high content of linoleic, oleic acid present in the plant. [31]
5	<i>Seena</i>	Used in treating infection, inflammation because of micronutrient present that boost of high amount of vitamin E, C. [32]
6	<i>Puerariae Flos</i>	Flowers of PF showed high content of saponin, and flavonoids showed good biological activities in treating inflammation, tumor, and oxidation. [33]
7	<i>Xanthium strumarium</i>	The plant also known as gokhru grows in the wasteland. The root of this plant is used in piles, eye disease, headaches, and cancerous wounds.[34]
8	<i>Allium sativum L</i>	Commonly known as garlic contain a high concentration of sulfur compounds like allicin used in treating microbial infection, hemorrhoids, cancer, diabetes, fistula, and night blindness.[35]

9	Roidosanal	An herbal preparation reported to show inflammatory, vasodilation allergy and effective in the treatment of hemorrhoids because of naturally occurring proanthocyanidins. [36]
10	Butcher's broom	It contains ruscinogens and saponin administered in form of capsules and enhances action when combined with flavonoid, ascorbic acid showed effective internal hemorrhoids. [37]
11	Horse Chestnut	The seeds of this plant are dried and contain aescines using 40 mg of this plant for 2 months reducing 80% of hemorrhoids. [38]
12	Stone Root	Isolated flavonoids of this herb showed potent action on congestion and hemorrhoids. [39]
13	Witch Hazel	Leaves and bark contain tannin, and catechin contains a medicinal value and is used as a topical cream for the treatment of internal and external hemorrhoids. [40]
14	<i>Arum maculatum L</i>	The herbal plant showed standard treatment of hemorrhoids when used as a cream. [41]
15	<i>Myrtus communis</i>	The oil, lotion, and ointment of this herbal preparation reduced bleeding, chronic discomfort, defecation pain, anal irritation, itching, and heaviness in people with types I and II hemorrhoids. [42]
16	<i>Capsella bursa-pastoris</i>	The herbal plant showed treatment in grade II & III hemorrhoids lower the VAS score pain showed antioxidant and inflammation properties. [43]
17	<i>Olea europaea</i> (Olive oil)	Omega-3 fatty acid-rich It has beneficial effects on cholesterol management and LDL cholesterol oxidation is anti-inflammatory, and antioxidant used in treating hemorrhoids. [44]
18	<i>Rutagraveolens</i> (Rue oil)	It supports weak blood vessels and lessens varicose veins. Additionally, it is used to treat gout, sciatica, rheumatic pain, and hemorrhoids. [45]
19	<i>Sesamum indicum</i> (Sesame seed oil)	It functions as an antiviral, antibacterial, and natural inflammatory agent. The tissues and bone marrow readily absorb and absorb sesame seed oil. Because it is high in vitamin E, sesame seed oil is also utilized to cure hemorrhoids. [46]
20	<i>Lupinus albus</i>	It has been demonstrated that the essential oil extract from lupin (also known as lupaline) is 5000 times and 10,000 times more effective than vitamins C and E, respectively. This helps skin mend and recover by promoting the activity of skin repair enzymes. [47]
21	<i>Vateria Indica</i>	used for generations in India as a traditional treatment for hemorrhoids. It aids in reducing inflammation and promoting recovery. [48]
22	<i>Mentha Piperita</i>	White flowers that produce a strong oil are used in flavoring. Use to lessen itching and relieve pain from

		hemorrhoids. [49]
23	<i>A. millefolium L</i>	Astringent, emollient, antibacterial, digestive, diuretic, analgesic, antispasmodic, wound healer, and hemorrhoid medicine. [50]
24	<i>Verbascum thapus</i>	It has historically been used to treat piles, bruises, frostbites, and other wounds as an analgesic, anti-inflammatory, antibacterial, spasmolytic, astringent, diuretic, emollient, and expectorant.[51]
25	<i>Terminalia chebula</i>	Constipation, discomfort, hemorrhoid mass size, and hemorrhoid bleeding were evaluated and were evaluated as a potential supplement for treating hemorrhoids. [52]
26	<i>Centella Asiatica</i>	prevent varicose veins and hemorrhoids from causing time-consuming, unpleasant, and expensive problems. [53]
27	<i>Ruscus aculeatus</i>	Ruscogenins, the primary bioactive ingredients, have long been used to treat varicose and hemorrhoidal veins and internal hemorrhoids ^[54]
28	<i>Bergenia ciliata</i>	Due to its usage in the treatment of several illnesses such as gastrointestinal issues, lung infections, heart disorders, ophthalmic, hemorrhoids, renal, and gall bladder stones, bergenia ciliata is regarded as a miracle plant.[55]
29	<i>Euphorbia prostrata</i>	The plant present in diverse with man traditional benefits has been effective in many diseases like hemorrhoid, inflammation, wound healing, and bacterial because of the presence of different phytochemicals like flavonoid, glycoside, and tannins. [56]
30	Geranium essential oil	This oil treats dysentery and hemorrhoids as well as reduces pain by inhibiting different bacteria strains. [57]
31	Mediterranean cypress	The young branches of this plant and the decoction of cones have shown an effective treatment in treating hemorrhoids, inflammation, coagulation, and wound healing. [58]
32	Fenugreek	The seeds of fenugreek have high fiber content present in them which treats hemorrhoids and inflammation. [59]
33	Wheatgrass juice	Young grasses and other plants with high levels of chlorophyll are a safe and effective way to treat conditions like high blood pressure, obesity, diabetes, gastritis, ulcers, pancreas and liver issues, fatigue, anemia, asthma, eczema, hemorrhoids, skin problems, halitosis, body odor, and constipation [60]
34	Aloe vera	This plant shows inflammation properties and reduces irritations by its antipyretic and inflammatory activity. [61]

35	Chamomile	Chamomile has anti-inflammatory properties that can help reduce swelling and promote healing. It can be used as a sitz bath or applied topically to the affected area.[62]
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Table 1: Different herbal treatments available for treating hemorrhoids.

3.2. Surgical Procedures

There are various surgical procedures available to treat hemorrhoids as it eases the pain of the patient [fig:3]

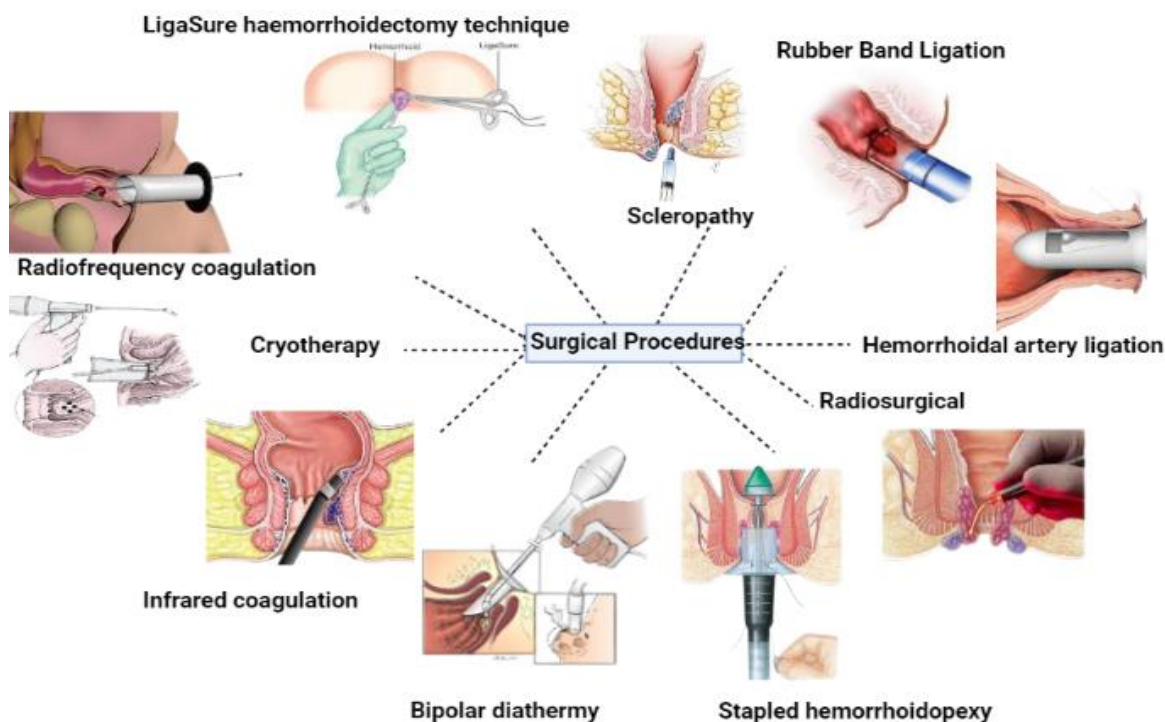


Fig 3: Surgical Procedures for hemorrhoids

3.2.1. Rubber Band Ligation & Endoscopic Rubber Band Ligation (ERBL)

The prolapsing internal hemorrhoids of grades II and III can be treated by using disposable and reusable endoscopes. The best and most effective treatment for internal hemorrhoid is the rubber band ligation method by inserting a small tool ligator through a lighted tube in the anal and grasps hemorrhoid with forceps when the ligator cylinder is released upward the rubber band is tied around the base of the hemorrhoids. The rubber band then cut off hemorrhoid's blood supply and it is removed.[63] In more recent times, a gastroscope and a set of elastic rubber bands for esophageal varices have been utilized in conjunction with this method. Endoscopic Rubber Band Ligation of Hemorrhoids was the name of this procedure (ERBL).[64] After ligation to reduce pain local anesthetic can be used. Some minor complications like difficulty in urination, bleeding, anal fissure, and ulcer. Patients taking medication like anticoagulants have a higher risk of secondary bleeding. [65]

3.2.2. Scleropathy

Proctoscopic injection sclerotherapy using some of the modern sclerosants like Aluminum potassium sulfate, tannic acid, Polidocanol, and phenol in almond oil treated different grades of internal hemorrhoids.[65] Endoscopic injection sclerotherapy showed one of the most promising, cost-effective treatments with low complications. A recently developed endoscopic approach for treating internal hemorrhoids is called cap-assisted endoscopic sclerotherapy (CAES). This

treatment is contraindicated in patients who are diagnosed with asthma, cardiac, hepatic, allergy, and thrombophilia. [66,67]

3.2.3. Infrared coagulation

Before making touch with the hemorrhoidal node, a light guide is brought there. The hemorrhoidal node receives heat energy, which causes the veins to constrict and adhere. In a single treatment, the handpiece is moved over the node's base 2–6 times. [68]

3.2.4. Liga Sure hemorrhoidectomy technique

A Luer clamp is used to grip the internal hemorrhoidal node, and the vascular pedicle is sutured. With further coagulation, the Liga Sure coagulation clamp jaws are applied to the base of the node from the outside in. With scissors, the node is severed along the coagulation layer's outer border up to the vascular pedicle. The vascular pedicle is twice coagulated, with the device's jaws moving continuously without a space between the coagulated regions. The node is then removed by cutting the stalk with scissors along the coagulation layer's outer edge.[69]

3.2.5. Radio surgical treatment of hemorrhoids

A revolutionary non-contact technique for cutting and coagulating soft tissue using high-frequency radio waves is radiofrequency surgery with the Surgitron equipment. The heat produced by the tissue's resistance to guided high-frequency pulses penetrating through is what creates the incision effect. The "active" or "surgical" electrode's tip concentrates high-frequency energy, which creates a rush of intracellular molecular energy that warms the tissue and effectively vaporizes the cells. Additionally, as the waves flow through the patient's body, the radiosurgery procedure fully prevents unpleasant muscle contractions or nerve-ending stimulation.[70]

3.2.6. Cryotherapy

The direct application of cold therapy to the exterior and interior hemorrhoidal masses is possible with the anatomically built Hemor-Rite® cryotherapy instrument. It was created with the intention of treating this medical problem while considering medical theory and human anatomy. It has been demonstrated that the vasoconstrictive and analgesic qualities of this medical device allow for the instant relief of pain, irritation, and inflammation when applied directly. This device when topically induced causes vasoconstriction and muscle relaxation. The vasoconstriction decreases blood supply and reduces swelling; decreases edema by decreasing the severity.[71]

3.2.7. Hemorrhoidal artery ligation

This treatment is mainly used for grade III and IV hemorrhoids and is simple, safe, and effective. A non-excisional surgical procedure called Doppler-guided hemorrhoidal artery ligation (DGHAL) is used to treat hemorrhoidal illness. It entails ligating the distal branches of the superior rectal artery, which reduces blood flow and unclogs the hemorrhoidal plexus, causing fibrosis.^[72]

3.2.8. Stapled hemorrhoidopexy

Stapled hemorrhoidopexy is an alternative treatment to excisional haemorrhoidectomy used mainly in grade III, IV, and thrombosed internal hemorrhoid patients. [73,74] It can be performed with local, general, and regional anesthesia.[75] Sutures are used to raise hemorrhoidal tissue into a ring of tissues, and then the hemorrhoids are removed with a stapler, essentially cutting off the tissue's blood supply. After this treatment patient experiences less pain, itching, and swelling.[76]

3.2.9. Bipolar diathermy and direct-current electrotherapy

Local heat application is used in bipolar diathermy and direct-current electrotherapy to cause coagulation and fibrosis, which leads to hemorrhoidal fixation. According to various studies, these techniques have success rates that are like those of infrared coagulation and relatively low complication rates. [77,78]

3.2.10. Radiofrequency coagulation

The radiofrequency coagulation unit activates the device for two seconds in three or four locations of the hemorrhoid complex using a disposable probe with an electrical current flowing between two flat electrodes (positive and negative) positioned at the tip. By using fibrosis, this technique causes

the vascular components of the hemorrhoids to be reduced and then fixed to the underlying tissue. The most common side effects from radiofrequency coagulation include acute urine retention, wound infection, and peri-anal thrombosis. Even though the surgery is painless, bleeding and hemorrhoidal prolapse have been found to recur more frequently. [79,80]

1. MEDICAL TREATMENTS FOR HEMORRHOIDS

There are many different formulations available for treating hemorrhoids like creams, suppositories, pills, and wipes. However, more research and review are needed for the topical treatment of hemorrhoids. Oral flavonoids are venotonic drugs that are used to treat edema and chronic venous insufficiency, and inflammation and could increase vascular tone, decrease venous capacity, decrease capillary permeability, and facilitate lymphatic drainage. They treat inflammation by increasing venous tone capillary permeability, and vascular endothelial activation.[81] Oral calcium dobesilate are phlebotomist drugs that treat venous circulation abnormalities commonly used to treat diabetic retinopathy and other chronic venous-related diseases as well as they can treat the acute symptom of hemorrhoids by working by lowering the generation of inflammatory-causing substances and shielding the endothelial cells that line blood arteries from harm.[82] A steroid medicine called hydrocortisone works by lowering swelling and inflammation in the affected area. It functions by preventing the body from producing specific inflammatory compounds including prostaglandins and leukotrienes. Hydrocortisone cream or suppositories are applied directly to the afflicted area while treating hemorrhoids. With a reduction in inflammation and irritation, this can aid in the relief of symptoms like pain, itching, and swelling. [83,84,85] Phlebotonics are a diverse group of plant-based medications that work by improving the function of the endothelial cells that line blood vessels, reducing the production of chemicals that cause inflammation, and increasing the production of substances that promote blood vessel health. promote lymphatic drainage, regulate capillary permeability, and improve venous tone Phlebotonics come in a variety of forms, including diosmin, troxerutin, hydroxyethylrutoside, and calcium dobesilate, which are all sold in the US as dietary supplements.[86] Osmotic therapy can treat hemorrhoids by drawing water into the colon, this treatment helps to soften stool and ease bowel motions, relieving symptoms including discomfort and bleeding and reducing pressure on hemorrhoidal veins. Osmotic agents can be administered orally to help soften stool and ease bowel motions, such as with the use of laxatives or stool softeners. Moreover, they can be applied topically, such as with sitz baths, which include sitting in warm water to help lower inflammation and encourage healing. Osmotic medications for hemorrhoids include lactulose, magnesium hydroxide, psyllium, polyethylene glycol, and others.[87] Emollients, which are moisturizing agents, are occasionally used to cure hemorrhoids by forming a protective barrier on the surface of the skin or mucous membrane, which can help to prevent further irritation and damage. They can also help to reduce friction between the affected area and clothing or other surfaces, which can help to alleviate discomfort and promote healing. These substances relieve pain and irritability by lubricating and softening the afflicted area. [88]

Dietary and lifestyle modification: A healthy lifestyle should encourage moderate physical activity, encourage using the toilet in the proper position (knees above the level of the anus to better open the anorectal angle), and restrict the use of laxatives, alcohol, and fad diets. Adequate fluid intake (1.5–2 L/day) and fiber intake (30–40 g/day) are required to regularize the bowel habit of producing soft stools and reducing straining at defecation.[89] Any patient with hemorrhoids of any severity should be counseled to modify their lifestyle as a part of their therapy and as a preventative strategy. These adjustments include upping dietary fiber and oral fluid intake, lowering fat intake, exercising frequently, improving anal hygiene, refraining from reading or straining while using the restroom, and avoiding drugs that cause constipation or diarrhea. Fiber supplement: Constipation and a low-fiber diet have traditionally been linked to an increased risk of hemorrhoids. Increasing

fiber intake, staying hydrated, and avoiding straining during bowel movements can help prevent and relieve hemorrhoids. [90]

Probiotic & Prebiotic in treating hemorrhoid pain: Fermented milk containing *Lactobacillus casei* strain Shirota (LcS) on continuous consumption of probiotics for 5–6 weeks decreased hemorrhoids by reducing the symptoms of constipation, promoting regular bowel movements, and helping women who were experiencing puberty heal from hemorrhoids sooner. The first line of treatment for hemorrhoids includes drinking more water, using stool softeners, and eating a high-fiber diet containing psyllium and yogurt, which provide a cooling effect. The soluble fibers (such as guar or psyllium, which are fermented in the colon with the final production of butyric acid, favoring saprophytic bacterial growth) are ispaghula husk, sterculia, or unprocessed bran.[91]

5. SPECIFIC CONSIDERATIONS

Hemorrhoids are a common condition that affects many people, and those who are taking anticoagulant or antiplatelet drugs are at an increased risk of developing hemorrhoids due to their blood-thinning effects. The medication interferes with the blood's ability to clot, which can cause bleeding and make existing hemorrhoids worse.[92] Patients on these medications who develop hemorrhoids should discuss their treatment options with their healthcare provider. It may be necessary to adjust or temporarily stop the medication to prevent further bleeding. Hemorrhoids are a common condition that can affect people with cirrhosis or portal hypertension. In these conditions, blood flow to the liver is blocked, causing blood to back up in the veins of the gastrointestinal tract. This can lead to the development of hemorrhoids, which are swollen veins in the rectum or anus. Patients with cirrhosis or portal hypertension who develop hemorrhoids should discuss their treatment options with their healthcare provider. In some cases, medication may be prescribed to reduce inflammation and pain. In severe cases, surgery may be necessary to remove the hemorrhoids. [93] Hemorrhoids can be a common and uncomfortable condition for many people, including those who are immunocompromised. Immunocompromised patients, such as those with HIV, or cancer, or who have undergone organ transplants, may be at a higher risk of developing hemorrhoids due to weakened immune systems and increased susceptibility to infections. Patients who are immunocompromised and develop hemorrhoids should discuss their treatment options with their healthcare provider. In some cases, medication may be prescribed to reduce inflammation and pain. It is important to note that some medications, such as corticosteroids, can increase the risk of infection, so it is important to monitor for signs of infection and take appropriate measures to prevent them. [94] Hemorrhoids are a common and uncomfortable condition that can affect pregnant women. The increased pressure on the rectum and anus during pregnancy, as well as hormonal changes, can contribute to the development of hemorrhoids. Treatment for hemorrhoids in pregnant women often involves lifestyle modifications, such as increasing fiber and fluid intake, avoiding prolonged sitting, and engaging in regular exercise. Over-the-counter creams and ointments may also be used to reduce inflammation and pain, but it is important to consult with a healthcare provider before using any medications during pregnancy. In some cases, medical procedures may be necessary to treat severe hemorrhoids. However, these procedures are usually avoided during pregnancy due to the potential risks to the developing fetus. Prevention is also an important aspect of managing hemorrhoids during pregnancy. This includes maintaining good bowel habits, avoiding straining during bowel movements, and practicing good hygiene to prevent infection. [95] These can cause significant pain and discomfort. They occur when a blood clot forms within external hemorrhoid, causing inflammation and swelling. This can make sitting, walking, and even bowel movements painful. Treatment for acutely thrombosed external hemorrhoids often involves pain management, such as the use of sitz baths, over-the-counter pain relievers, and prescription medication if necessary. Some patients may require incision and drainage of hemorrhoids to remove the blood clot and relieve pressure. In some cases, medical

procedures may be necessary to treat severe hemorrhoids. These procedures may include rubber band ligation or surgical removal of hemorrhoids. However, these procedures are typically reserved for chronic or recurrent hemorrhoids and are not typically recommended for acute thrombosed hemorrhoids. Prevention is also an important aspect of managing acutely thrombosed external hemorrhoids. This includes maintaining good bowel habits, avoiding straining during bowel movements, and engaging in regular exercise to improve circulation. It is important for patients with acutely thrombosed external hemorrhoids to seek medical attention promptly to prevent complications and manage symptoms effectively. With proper treatment and prevention, most patients can find relief from the pain and discomfort associated with this condition. [96]

6. FUTURE PERSPECTIVES TREATMENT OF HEMORRHOID

The treatment of hemorrhoids has come a long way over the years, and there are many effective options available today. However, there are still some challenges and opportunities for improvement in the treatment of hemorrhoids. Here are some future perspectives on the treatment of hemorrhoids like development of new drugs as there is a need for new drugs that can provide better pain relief and reduce inflammation in patients with hemorrhoids. Researchers are currently exploring new drugs and drug combinations that could be more effective than the current treatments. While surgery is typically reserved for severe cases of hemorrhoids, there are still some challenges with current surgical techniques. Advancements in surgical techniques, such as laser therapy and minimally invasive procedures, could make surgery a more effective and less invasive option for patients. One of the challenges in treating hemorrhoids is that every patient is unique, and what works for one patient may not work for another. Future research may focus on developing personalized treatment plans that consider a patient's individual medical history, symptoms, and lifestyle factors. While there are many treatments available for hemorrhoids, preventing them from occurring in the first place is always the best approach. Future research may focus on identifying risk factors for hemorrhoids and developing strategies to prevent them, such as dietary changes and lifestyle modifications.

2. CONCLUSION

In conclusion, hemorrhoids are a common condition that can cause discomfort, bleeding, itching, and other symptoms in the rectal and anal areas. While the exact cause of hemorrhoids is not known, several factors can contribute to their development, including age, chronic constipation or diarrhea, pregnancy, obesity, a sedentary lifestyle, genetics, anal intercourse, and certain medical conditions. Fortunately, hemorrhoids can be managed and treated with a variety of options, ranging from simple lifestyle changes to medical treatments such as medications, procedures, or surgery. It's important to consult a healthcare provider if you are experiencing symptoms of hemorrhoids or have concerns about your risk of developing them. With proper treatment and management, most people with hemorrhoids can find relief from their symptoms and prevent future flare-ups. Prevention and treatment of hemorrhoids typically involve lifestyle changes, such as eating a high-fiber diet, staying hydrated, getting regular exercise, and avoiding straining during bowel movements. In more severe cases, medical treatments such as medications, procedures, or surgery may be necessary. It's important to consult a healthcare provider if you are experiencing symptoms of hemorrhoids or have concerns about your risk factors for developing them.

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