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Management of hemorrhoidal disease: medical management

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Only between 5% to 10% of patients with hemorrhoidal disease will require a formal excision or hemorrhoidectomy. The majority of patients are treated satisfactorily with medical management. Medical management has essentially two components – lifestyle/dietary changes and oral phlebotonic drugs. Dietary modification consists of adequate fluid and fiber intake and counseling regarding defecation habits. Topical creams containing lidocaine steroids, phenylephrine, and herbal extracts have been used for symptomatic relief, but there is very little evidence to support their use. Flavonoids are the most common oral phlebotonic drugs used for treating hemorrhoids. They increase vascular tone, reduce venous capacity, decrease capillary permeability, facilitate lymphatic drainage, and have anti-inflammatory effects. The commonly used flavonoids are diosmin and oxerutins. Among all the flavonoids, micronized purified flavonoid fraction (MPFF), an oral phlebotropic drug, has proven to be the most effective, particularly due to micronization of the particles with a diameter $<2 \mu\text{m}$. In acute hemorrhoids, MPFF given in a dose of 3000 mg per day for 4 days, followed by 2000 mg per day for 3 days has been shown to reduce bleeding and inflammation. Continuing MPFF for 2 to 3 months can prevent a relapse of symptoms. Using MPFF in the perioperative period can reduce both the duration and extent of postoperative symptoms and wound bleeding following an hemorrhoidectomy. MPFF can also be used safely in the third trimester of pregnancy to relieve the symptoms of hemorrhoids.

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Introduction

Hemorrhoidal disease is a common disease that affects people worldwide across all ages, sex, races, and ethnicities. Although it rarely causes any serious ailments, hemorrhoidal disease poorly affects the quality of life of patients. Guidelines from across the world are unanimous in recommending a conservative approach toward the management of the disease. The two main symptoms of piles are bleeding and prolapse. Only between 5% to 10% of patients will require a formal excision or hemorrhoidectomy when nonoperative management has failed or in cases where patients are unable to tolerate the symptoms.¹ The majority of patients are treated satisfactorily with medical management; hence, medical management plays an important role in the treatment of hemorrhoidal disease. Medical management has essentially two components – lifestyle/dietary changes and oral phlebotonic drugs. By incorporating these two modalities, the majority of patients can avoid surgery especially in the early stages of the disease.

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Medical management

◆ *Dietary and lifestyle modification*

Dietary modification consisting of adequate fluid and fiber intake and counseling regarding defecation habits, typically form the primary first-line therapy for patients with symptomatic hemorrhoidal disease.² The use of fiber shows a consistent beneficial effect for relieving overall symptoms and bleeding in the treatment of symptomatic hemorrhoids.³ Fiber makes the stools soft and hence, easy to pass and avoid spending a long time sitting on the toilet. The same action could also probably be achieved by using laxatives, but there is not much evidence in the literature to suggest that stimulant or osmotic laxatives help decrease the symptoms of hemorrhoids; though it is a common practice to include these in the medical management of hemorrhoids because a large proportion of patients with hemorrhoids also suffer from constipation. Adding fiber to the diet is particularly beneficial with internal bleeding hemorrhoids.⁴

A meta-analysis by Alonso-Coello P et al to evaluate the impact of fiber on symptoms of hemorrhoidal disease included seven randomized controlled trials wherein 378 patients were randomized to fiber or nonfiber (control) groups. Symptoms of hemorrhoidal disease decreased by 47% (relative risk [RR], 0.53; 95% CI, 0.38-0.73) and the risk of bleeding decreased by 50% (RR, 0.50; 95% CI, 0.28-0.89) in the fiber group, with results being consistent with time.⁵ Even in the study by Misra, geographical location would have had an effect on the diet, suggesting that the high-fiber diets used by the North Indian subcontinent was beneficial in treating hemorrhoids.⁶ Misra subsequently concluded that flavonoids, such as micronized purified flavonoid fraction (MPFF), had a positive effect above and beyond the good dietary intervention received by the North Indian community.⁶

Recently, in an attempt to avoid surgery in patients with advanced hemorrhoids, the implementation of the TONE mnemonic device (T, 3 minutes at defecation; O, once-a-day defecation frequency; N, no straining during passing motions; E, enough fiber) in therapy was evaluated.⁷ On follow-up, out of 102 patients (early grade 3 [n=41], late grade 3 [n=38], grade 4 [n=6]) at 40 months (range, 12 to 96), 56.5% exhibited an improvement in prolapse, 25.9% reported no progress in prolapse, and only 4.7% (4/85) exhibited an advancement in the disease. In addition, the incidence of bleeding decreased from 71.8% to 29.4% ($P < 0.0001$). It is also important to have adequate fluid intake; excessive fluid intake is not necessary, as the same will be passed out in the urine.

Patients should also be advised to maintain proper bowel habits, such as avoiding straining and limiting the time on the toilet seat, because these practices have been associated with higher rates of symptomatic hemorrhoids.⁸ With the widespread use of cell phones, it is increasingly important to strongly discourage patients from using cell phones in the

toilet, a practice where the patient unknowingly spends a long time on the toilet seat while engrossed in reading from their phone. In the fast pace of today's life, patients are often found rushing to their place of work and delaying defecation till they are free to do so, which can lead to constipation and can result in spending a long time to evacuate the hard stools. Sitting on the commode for a long time causes further pressure on the dependent hemorrhoidal veins and can cause them to prolapse and bleed.

◆ *Topical therapy*

Topical therapy provides symptomatic relief rather than controlling the disease; it is typically used as an adjuvant to other treatments. Various formulations of drugs, such as creams and suppositories, are available, generally as over-the-counter medicines. These drugs contain varying combinations of local anesthetics, corticosteroids, antibiotics, and anti-inflammatory drugs. Corticosteroids form the most common composition of the common commercial ointments available. However, the published literature lacks strong evidence supporting the true efficacy of topical treatment for symptomatic hemorrhoids.

In thrombosed external hemorrhoids and following an hemorrhoidectomy, pain is associated with spasms of the anal sphincter. This pain generally responds to anal dilatation or sphincterotomy, but such procedures are often associated with the risk of incontinence. Nitric oxide is the most potent inhibitory neurotransmitter of the internal anal sphincter, meaning that it can be used for pain relief without any risk of damage. Various clinical studies have demonstrated the efficacy of a local application of nitroglycerine and isosorbide dinitrite in relaxing the anal sphincter. However, even topical agents are associated with unwanted side effects, such as headaches, which patients may find intolerable.

The calcium channel blocker nifedipine has shown favorable efficacy in treating acute thrombosed external hemorrhoids, which is most likely due to relaxation of the internal anal sphincter. Lidocaine and dibucaine do not have a significant role in treating hemorrhoids, except when the hemorrhoids are associated with an anal fissure. Phenylephrine is a vasoconstrictor, and its action on arterial circulation provides temporary relief from pain and bleeding on defecation. It has been used in topical preparations. Several herbal extracts have been used in topical preparations, either alone or in combination with other drugs and extracts, but there is very little evidence to support their use. The recombinant streptokinase suppository has been shown to be useful for the treatment of acute

ABBREVIATIONS

MPFF	micronized purified flavonoid fraction
OR	odds ratio
RR	relative risk

hemorrhoids,⁹ and it has significant advantages over widely used over-the-counter hydrocortisone acetate and has an adequate safety profile.

◆ *Oral phlebotonic drugs*

Oral phlebotonic drugs form the main targeted therapy in the medical management of hemorrhoids. In patients who suffer from hemorrhoids, there is a degenerative process in the collagen fibers. In 100 surgical specimens from hemorrhoidectomies, the histologic investigation demonstrated a severe inflammatory reaction that especially affected the wall of the blood vessel and conjunctive tissue, which probably produced an ischemic lesion of the mucosa that could condition the onset of a vascular thrombosis, allowing displacement of the mucosa and its protrusion through the anus.¹⁰ It is apparent that flavonoids, mainly MPFF, has been proven to increase vascular tone, reduce venous capacity, decrease capillary permeability, facilitate lymphatic drainage, and contain anti-inflammatory effects.¹¹ For an oral preparation, flavonoids are the most common phlebotonic drug used for treating hemorrhoids.⁶

In a Cochrane review of 24 randomized controlled trials enrolling a total of 2334 participants, which compared an intervention using phlebotonic drugs with a control, phlebotonic drugs demonstrated a statistically significant beneficial effect for the outcomes of pruritus (OR, 0.23; 95% CI, 0.07-0.79; $P=0.02$), bleeding (OR, 0.12; 95% CI, 0.04-0.37; $P=0.0002$), post-hemorrhoidectomy bleeding (OR, 0.18; 95% CI, 0.06-0.58; $P=0.004$), discharge and leakage (OR, 0.12; 95% CI, 0.04-0.42; $P=0.0008$), and overall symptom improvement (OR, 15.99; 95% CI, 5.97-42.84; $P<0.00001$) vs the control intervention.¹² Although beneficial, they did not show a statistically significant effect compared with the control intervention for pain (OR, 0.11; 95% CI, 0.01-1.11; $P=0.06$), post-hemorrhoidectomy pain scores (standardized mean difference, -1.04; 95% CI, -3.21-1.12; $P=0.35$) or postoperative analgesic consumption (OR, 0.54; 95% CI, 0.30-0.99; $P=0.05$).¹² The authors thus concluded that the evidence suggests that there is a potential benefit of using phlebotonic drugs in treating hemorrhoidal disease and a benefit in alleviating post-hemorrhoidectomy symptoms. Outcomes, such as bleeding and overall symptom improvement, showed a statistically significant beneficial effect and there were few concerns regarding their overall safety.¹²

A meta-analysis reviewed 14 randomized controlled trials, which compared flavonoids with placebo or no therapy in patients with symptomatic hemorrhoids ($n=1514$), showed that flavonoids decrease the risk of not improving or persisting symptoms by 58% (RR, 0.42; 95% CI, 0.28-0.61) and showed an apparent reduction in the risk of bleeding (RR, 0.33; 95% CI, 0.19-0.57), persistent pain (RR, 0.35; 95% CI, 0.18-0.69), itching (RR, 0.65; 95% CI, 0.44-0.97), and recurrence (RR, 0.53; 95% CI, 0.41-0.69).¹³

◆ *Diosmin*

Diosmin is a flavonoid derived from plants that was initially used as an oral agent to treat venous insufficiency. It is the most widely used flavonoid for the medical management of hemorrhoids. Diosmin exerts its anti-inflammatory action by inhibiting prostaglandin secretion. Several studies have documented its safety and efficacy for treating hemorrhoids. In a previous study, patients treated with oral diosmin 900 mg twice daily for 7 days, which was subsequently tapered to 450 mg twice daily for 60 days, experienced a reduction in pain and bleeding during the first and second weeks of treatment, respectively.⁶

◆ *Micronized purified flavonoid fraction*

MPFF, an oral phlebotropic drug consisting of 90% micronized diosmin and 10% mixed flavonoids (expressed as hesperidin), improves venous tone and lymphatic drainage and reduces capillary hyperpermeability by protecting the microcirculation from inflammatory processes. The absorption of diosmin is improved by its micronization, so that each particle has a diameter $<2\ \mu\text{m}$. In a randomized, double-blind, multicenter trial, which studied the pharmacodynamic and clinical activities of MPFF in comparison with a nonmicronized diosmin, showed that pharmacodynamic and clinical activities of MPFF are superior to those of an equivalent dose of nonmicronized diosmin.¹⁴ In a 90-day randomized, double-blind study comparing MPFF with placebo in 100 outpatients who presented for treatment of acute internal hemorrhoids with a duration less than 3 days, it was found that patients with acute internal hemorrhoids treated with MPFF had a rapid cessation of bleeding and a reduced risk of relapse.¹⁵ This result can also help plan an elective surgery by converting an acute emergency into a planned one. Also, using MPFF for 60 to 90 days can prevent a relapse of symptoms.

In a double-blind, placebo-controlled evaluation of the clinical activity and safety of Daflon 500 mg in the treatment of acute hemorrhoids, Daflon 500 mg was administered at the dosage of three tablets twice daily for the first 4 days and two tablets twice daily for the following 3 days. The overall improvement in symptoms was greater in the Daflon 500 mg group than in the placebo group, from day 2 up to day 7. The clinical severity of proctorrhagia, anal discomfort, pain, and anal discharge diminished in both groups, but to a greater extent in the Daflon 500 mg group ($P<0.001$) for all parameters except proctorrhagia ($P=0.006$). There was a marked improvement in inflammation, congestion, edema, and prolapse in the Daflon 500 mg group than in the placebo group. The author concluded that Daflon 500 mg resulted in a quicker and more pronounced relief of signs and symptoms of acute hemorrhoids than with the placebo.¹⁶

MPFF is effective for decreasing bleeding, and it has been found to be effective in the treatment of hemorrhoidal prolapse in the majority of patients in the early stages of the disease,

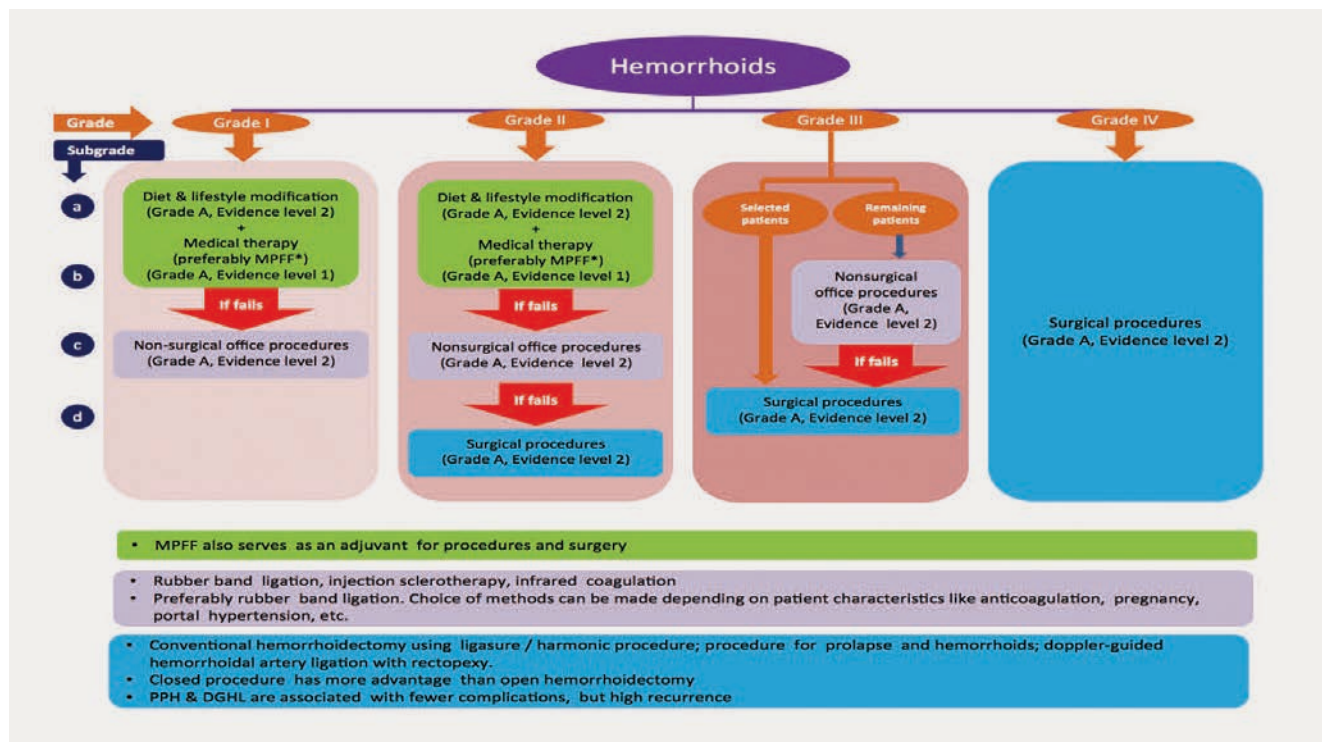


Figure 1. Algorithm for the management of hemorrhoids by the Association of Colon and Rectal Surgeons of India practice guidelines. Abbreviations: DGHL, Doppler-guided hemorrhoidal artery ligation; MPFF, micronized purified flavonoid fraction; PPH, procedure for prolapse and hemorrhoids. From reference 18: Agarwal N et al. Indian J Surg. 2017;79(1):58-61. © 2017, Association of Surgeons of India.

suggesting that the pathologic process may be reversible.¹⁷ The Association of Colon and Rectal Surgeons of India (ACRSI) has recommended the use of MPFF for acute bleeding. The recommended dose is 3 tablets of MPFF 1000 mg once daily for 4 days, tapered to 3 tablets a day for the next 3 days. This regimen may be followed up with a maintenance dose of 1000 mg daily for ≥ 2 months. They have also recommended the use of MPFF for all stages of hemorrhoid disease (Figure 1).¹⁸

The role of MPFF is not only restricted to the conservative management of hemorrhoids, but, if used in the perioperative period, it is also useful to reduce the side effects of hemorrhoid surgery. A randomized, controlled, clinical trial was conducted to study the clinical use of MPFF for the treatment of symptoms after an hemorrhoidectomy.¹⁹ In the study, the efficacy of MPFF used in combination with short-term antibiotic and anti-inflammatory drugs was compared with that of antibiotic and anti-inflammatory drugs alone in terms of improving postoperative symptoms and bleeding wounds following a Milligan-Morgan open hemorrhoidectomy. Pain, tenesmus, and bleeding resolved sooner in patients receiving MPFF as a combination treatment. The authors concluded that MPFF used in combination with short-term antibiotic and anti-inflammatory treatment can reduce both the duration and extent of postoperative symptoms and wound bleeding following a hemorrhoidectomy.¹⁹ In another study, significant improvement in pain, heaviness, bleeding, pruritus from baseline to week 8

post-hemorrhoidectomy ($P < 0.05$) was observed after the perioperative use of diosmin. Patients taking diosmin had a shorter hospitalization stay after surgery ($P < 0.05$). There was also a significant improvement in the proctoscopic appearance.²⁰ It is recommended to start MPFF 1 week before surgery at a dose of 3000 mg per day for the first 4 days, followed by 2000 mg for the next 3 days, and to continue for 2 weeks after surgery at 1000 mg per day.

In a study comparing the use of MPFF+bulk laxatives with placebo+laxatives in patients with grade 1 and 2 hemorrhoids, a significant improvement was reported in swelling and congestion by as early as day 4 after adding MPFF to bulk laxatives.²¹ Although laxatives are commonly used in the medical management of hemorrhoids to avoid constipation, adding MPFF can help further improve the symptoms.

MPFF also plays an important role during pregnancy to relieve the symptoms of hemorrhoids. Hemorrhoids commonly occur during pregnancy. The ACRSI recommends that symptomatic hemorrhoids be treated conservatively by eating a high-fiber diet, increasing liquid intake, avoiding constipation, maintaining personal hygiene, and lying in a left lateral position to relieve pain.¹⁸ Medical therapy with MPFF is safe and effective in pregnancy. However, its use must be avoided during the first trimester due to a lack of clinical evidence. Maintenance doses of MPFF 1000 mg once daily can considerably reduce the frequency and duration of acute hem-

Author et al	Study type Patients (n)	Treatment with MPFF	Primary end point	Results
Amato C, 1994 ¹⁴	Randomized, double-blind, multicenter trial n=90	2 tablets MPFF 500 mg/day or equivalent dose of nonmicronized diosmin for 2 months	Clinical symptoms and plethysmographic parameters	Pharmacodynamic and clinical activities of MPFF are superior to those of an equivalent dose of nonmicronized diosmin
Misra MC Parshad R, 2002 ¹⁵	Randomized, 90-day, double- blind study n=100	First 7 days: 6 tablets MPFF 500 mg or placebo daily for 4 days Following 83 days: 2 tablets MPFF 500 mg or placebo daily	Effective in rapidly stopping bleeding from internal hemorrhoids and preventing relapse	MPFF was effective in quickly stopping the bleeding in a noninvasive manner
Cospite M, 1994 ¹⁶	Double-blind, placebo-con- trolled study n=100	First 4 days: 6 tablets MPFF 500 mg or placebo Following 3 days: 4 tablets MPFF 500 mg or placebo	Eliminate mechanical and local triggering factors Reduce inflammation, always present in acute manifestations Re-establish optimal hemodynamic and micro- circulatory conditions	Outstanding rapidity of action Overall improvement in symptoms like bleeding, pain, and itching ($P<0.001$) Reduced duration and intensity of the present crisis
Thanapongs- athorn W, Vajrabukka T, 1992 ²¹	Double-blind, comparative controlled study n=100	First 4 days: 4 tablets MPFF 500 mg or placebo three times daily added to bulk laxatives Following 10 days: 2 tablets MPFF 500 mg or placebo twice daily added to bulk laxatives	Efficacy on treating the acute symptoms of first- and second-degree internal hemorrhoids	On day 4: MPFF resulted in a significant objective improvement in symptoms ($P<0.01$), but no subjective improvement On day 14, no significant differences were observed between groups
Jiang ZM, Cao JD, 2006 ²³	Prospective, randomized, double-blind, placebo-con- trolled study n=90	First 4 days: 6 tablets MPFF 500 mg or placebo daily Following 3 days: 4 tablets MPFF 500 mg or placebo daily	Efficacy of MPFF vs place- bo on various symptoms and signs related to acute hemorrhoidal episodes Tolerability and safety of the MPFF treatment	MPFF significantly reduced bleeding scores vs placebo Only 1 patient in the MPFF group complained of mild abdominal discomfort, which disappeared spontaneously without any symptomatic treatment
Shelygin Y et al, 2016 ²⁴	Double-blind, multicenter, randomized parallel-group study	First 4 days: 3000 mg MPFF 1000 mg (3 tablets) or MPFF 500 mg (6 ta- blets) daily Following 3 days: 2000 mg MPFF 1000 mg (2 tablets) or MPFF 500 mg (4 ta- blets) daily	Demonstrate efficacy and clinical acceptability of 1 tablet of MPFF 1000 mg compared with 2 tablets of MPFF 500 mg in pa- tients with acute hemor- rhoidal disease at a daily dosage of up to 3000 mg	The new MPFF 1000 mg tablet has clinical acceptability and a good safety profile compared with MPFF 500 mg MPFF 1000 mg was effective in reducing anal pain and bleeding and should lead to better treat- ment adherence
Colak T et al, 2003 ²⁵	Prospective, randomized controlled study n=112	First 4 days: either 1500 mg MPFF twice daily or no MPFF Following 3 days: either 1000 mg MPFF twice daily or no MPFF	To evaluate the effect of MPFF on pain after a hemorrhoidectomy	Using MFF after a hemorrhoidecto- my reduced the severity of pain and intramuscular analgesic requirements
Dimitroulo- poulos D et al, 2005 ²⁶	Prospective, randomized controlled, sin- gle-blind study n=351	MPFF+infrared photocoag- ulation vs MPFF only vs Infrared photocoagulation only	Effect on bleeding cessation in patients with grades 1, 2, and 3 acute internal hemorrhoids	MPFF+infrared photocoagulation significantly reduced bleeding in patients with grades 1 and 2 acute internal hemorrhoids after 5 days vs each treatment used alone

Table 1. Summary of studies evaluating MPFF in patients with hemorrhoids.

Abbreviation: MPFF, micronized purified flavonoid fraction.



Author et al	Study type Patients (n)	Treatment with MPFF	Primary end point	Results
Godeberge P, 1994 ²⁷	Double-blind, placebo-controlled trial n=120	2 Tablets MPFF 500 mg or placebo daily for 2 months	Effect of MPFF on acute and chronic symptoms of hemorrhoids	MPFF is effective in treating acute and chronic symptoms of hemorrhoidal disease
Ho YH et al, 1995 ²⁸	Prospective, randomized controlled trial n=228	MPFF 500 mg for 1 week after surgery	Effects of MPFF on bleeding after hemorrhoidectomy	The risk of secondary bleeding from hemorrhoidectomy is reduced with postoperative MPFF
Ho YH et al, 2000 ²⁹	Randomized controlled trial n=162	MPFF+ispaghula or rubber band ligation + ispagula; or ispaghula alone	Effect on bleeding from nonprolapsed hemorrhoids	MPFF used with fiber supplements rapidly and safely relieved bleeding from non-prolapsed hemorrhoids
Meshikhes AW, 2002 ³⁰	Prospective clinical study n=105	MPFF 500 mg 2 tablets twice daily for 4 weeks	Effect of MPFF on hemorrhoidal symptoms, including thrombosed piles	MPFF is a very safe and effective drug for the treatment of all hemorrhoidal symptoms
Meshikhes AW, 2004 ³¹	Multicenter, non-randomized, observational study with no placebo n=268	MPFF 500 mg 4 tablets/day for 4 weeks	Efficacy of MPFF in treatment of hemorrhoidal symptoms	MPFF is effective in alleviating hemorrhoidal symptoms and improving the proctoscopic appearance of hemorrhoids
Navadiya S et al, 2013 ³²	Prospective randomized clinical study n=200	MPFF 500 mg or rubber band ligation	To compare safety, efficacy, advantages, and disadvantages of rubber band ligation and MPFF in the treatment of internal hemorrhoids	MPFF provides rapid relief from hemorrhoidal symptoms vs rubber band ligation

orrhoids. Buckshee et al conducted an open-label study to assess the safety and efficacy of treatment with MPFF in 50 pregnant women with internal hemorrhoids during the antenatal period.²² A total of 32 patients with grade 1 and 2 hemorrhoids were treated with a loading dose of 3000 mg daily for 4 days, followed by 2000 mg daily for 3 days. A maintenance dose of 1000 mg was continued until delivery and up to 30 days after delivery to prevent relapse. MPFF, given for a median of 8 weeks before delivery and 4 weeks after delivery in women with acute hemorrhoids, resulted in 66% (95% CI, 79.1-52.9) obtaining relief from acute symptoms by day 4; 53.6% (95% CI, 70-37.1; $P < 0.001$) fewer patients had a relapse in the antenatal period. Treatment was well accepted and did not affect pregnancy outcomes.

Table 1 summarizes the available clinical evidence of MPFF.

◆ **Other phlebotonic drugs**

Troxerutin is a flavonoid with strong affinity for the venous wall. It markedly inhibits platelet adhesion to the extracellular matrix, thus preventing erythrocyte aggregation, and favors fibrinolysis. A randomized, double-blind, placebo-controlled, phase 4 study demonstrated the efficacy of the combination of troxerutin 150 mg and carbazochrome 1.5 mg, given intra-

muscularly, in improving postsurgical hemorrhoidal symptoms within 5 days. Bleeding and pruritus were significantly reduced by postoperative day 2. In addition, inflammation and edema were significantly reduced on postoperative day 5 in patients receiving drug therapy compared with placebo. No adverse events were reported, and the combination therapy had no adverse effects on the coagulation profiles.³³

Apart from MPFF, topical treatments, laxatives, and paracetamol can be used by pregnant and lactating women. Surgical and nonsurgical methods should be used only if a patient fails to respond to conservative and medical treatments. Surgical procedures should be restricted in cases of strangulated or thrombosed hemorrhoids alone and should be performed under local anesthesia.¹⁸ Children suffering from hemorrhoids should be conservatively treated. Laxatives and nonsteroidal anti-inflammatory drugs may be prescribed.³⁴

Calcium dobesilate is commonly used in diabetic retinopathy, chronic venous insufficiency, and hemorrhoids. It reduces capillary permeability, inhibits platelet aggregation, and reduces blood viscosity, leading to decreased edema. A randomized, double-blind controlled trial evaluating the efficacy of calcium dobesilate in acute hemorrhoids showed that, compared with

the control group who received a high-fiber diet alone, patients receiving the drug exhibited resolution of bleeding after 2 weeks of treatment.³⁵ However, calcium dobesilate can cause agranulocytosis and should be used with caution.³⁶

Summary

Medical treatment of hemorrhoids forms an important role in the management of hemorrhoids, as most patients with hemorrhoids do not need surgery and only receive medical treatment. Adequate fluid and fiber in the diet have been shown to decrease the symptoms of hemorrhoids, primarily by avoiding constipation. It is important to advise patient not to spend a

long time on the toilet seat, as this may lead to congestion of the hemorrhoidal veins and cause inflammation. Drug therapy is the mainstay in the medical management of hemorrhoids, with oral flavonoids being the preferred drugs. MPFF, due to its micronization, is the most effective flavonoid and it has been shown to decrease almost all symptoms of hemorrhoids. It is safe to use MPFF during the latter part of pregnancy along with other conservative measures. Using MPFF in the perioperative period can reduce the postoperative inflammation and bleeding that normally occur after surgery. There are topical drugs available for the medical treatment of hemorrhoids, but there is not much credible evidence to support their use. ■

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