

CLINICAL VIGNETTE

Hemorrhoids: A Common but Challenging Condition

Brian Morris, MD

A 55-year-old male with hypertension, paroxysmal atrial fibrillation and hyperlipidemia presents after an episode of rectal bleeding. The initial episode started twenty years ago but were infrequent, mild and typically resolved in a day or two. Over the last three months, episodes have become more frequent and lasted for 2-3 weeks before resolving. This week, after he exercised at the gym he had a severe episode and presented for evaluation. He had recent upper endoscopy and colonoscopy that revealed h. pylori negative gastritis, and hemorrhoids and internal and external hemorrhoids. Current medications include daily Losartan, Finasteride, Gabapentin, and Atorvastatin. He does not take supplements and has no medication allergies. His surgical history is remarkable for prior shoulder and knee surgeries related to football injuries. He is a non-smoker and drinks 1-2 glasses of red wine per month. Family history is negative for coronary artery disease, cancer, and bleeding disorders.

On Physical examination he was somewhat uncomfortable. Vital Signs included BP 129/72, HR 60/min, T 97.3 F, Height 6 feet 0 inches, 200 pounds.

Exam was generally unremarkable. Abdomen was soft, non-distended without masses, or hepatosplenomegaly. No masses or hepatosplenomegaly. Digital rectal exam revealed non-bleeding external hemorrhoids. Stool was hemoccult negative.

Labs included normal CBC, metabolic panel 14, PT, PTT, ESR, and urinalysis.

Discussion

Hemorrhoids are abnormally formed submucosal fibrovascular channels located in or near the anal canal that can cause itching, pain, and bleeding.¹ These structures can be internal or external and many patients have both at presentation.² Internal hemorrhoids are proximal to the dentate line, while external hemorrhoids are distal to the dentate line.³ Mixed hemorrhoids are located both above and below the dentate line.² Hemorrhoids are extremely common with reported symptomatic prevalence of about 4% and total prevalence close to 20-30% in certain populations.¹ Peak incidence is between ages 40-70.¹ Hemorrhoids are rarely seen before the age of 25 years.³ It is believed that hemorrhoids develop from enlarged arteriovenous vessels and nearby connective tissue.³ Internal hemorrhoids tend to arise from the middle and superior hemorrhoidal veins, while external hemorrhoids tend to arise from the inferior hemorrhoidal plexus.² The breakdown of associated connective

tissue, increased activity of the internal anal sphincter during defecation, and abnormal development of the arteriovenous connection within the hemorrhoidal cushions or internal hemorrhoidal venous plexus are all believed to relate to the pathogenesis.² Internal and external hemorrhoids often connect with each other and drain into nearby veins connecting back to the inferior vena cava.² External hemorrhoids are often located near or adjacent to nerve bundles leading to associated pain and discomfort.³ Risk factors for hemorrhoids include age, chronic constipation, excessive sitting or straining, and pregnancy.¹

Clinical Features

The clinical features of hemorrhoids are typically pain, itching, and hematochezia, although about one third of patients never have symptoms and never seek medical attention.³ The discomfort and bleeding are usually associated with defecation and straining associated with constipation.³ Occasionally, the bleeding can occur without an obvious inciting incident.² The bleeding is often significant and can result in clinically relevant anemia and associated sequelae.² Patients may thus present with fatigue and other constitutional symptoms related to the anemia or they may present with pruritus, discharge, or after noticing a palpable mass in the perianal region.³ The irritation and itching tend to occur from locally produced mucous deposits in the perianal skin region.² Skin breakdown, skin tags, and fecal incontinence are also common associated problems.² External hemorrhoids, and occasionally internal hemorrhoids, can also become thrombosed resulting in severe pain and discomfort in the region.² Thrombosed internal hemorrhoids are usually painless and only mildly painful except when they become strangulated.²

Diagnosis and Testing

The diagnosis of hemorrhoids is usually made clinically.³ Patients may present with painless bright red blood per rectum associated with defecation.³ There can be associated with thrombosis, fissure, fistula, abscess, skin ulcer, or mass.⁴ Systemic or constitutional symptoms usually imply associated anemia, infection, inflammation, or malignancy.⁵ Evaluation should include a detailed history to screen for associated conditions with a particular emphasis on bowel habits, as well as a detailed family history including risk factors for inflammatory bowel disease or colorectal cancer.³ The physical examination should include inspection and palpation of the perianal region looking for hemorrhoids, fissures, fistulas, neoplasm, and skin

tags.³ External hemorrhoids may be recognized, but internal hemorrhoids are rarely noted without anoscopy.⁶ The exception would be a thrombosed internal hemorrhoid.⁶ If possible, anoscopy can assess for internal hemorrhoids and associated prolapse, masses, fistulas, polyps, dermatologic processes such as squamous cell carcinoma, fissures, findings related to inflammatory bowel disease, or thrombosis.⁶ Laboratory studies are often not needed, unless systemic issues are suspected.³ In those cases, CBC, iron studies, sedimentation rate, and basic chemistries can be checked.³ Colonoscopy and possibly an upper endoscopy (if there are signs of an upper GI bleed such as melena and orthostatic hypotension) may also be performed depending on the patient's age if personal history includes bowel changes, family history, and risk factors.⁶

Treatment

The treatment of symptomatic hemorrhoids depends on the severity, location, and associated issues.⁷ Most mild hemorrhoids can be effectively treated with over the counter or prescription topical agents.³ Higher grade hemorrhoids and those associated with other conditions may require more advanced office-based or surgical treatments.² Initial treatment typically involves dietary and lifestyle modification which includes drinking plenty of water (typically 1-2 liters per day), getting sufficient fiber (25-30 grams per day), and avoiding straining during defecation. These measures may take 1-2 months for full benefits to be achieved.² Psyllium or methylcellulose are two highly effective supplemental sources of fiber for those without sufficient dietary fiber.² Medications that promote constipation may need to be adjusted.³ In general, internal hemorrhoids are associated with less pain and discomfort and are more amendable to office-based treatments.⁷ Symptomatic external hemorrhoids are often associated with more pain and sometimes require surgical interventions.² Hemorrhoids are associated with four symptoms: itching, bleeding, thrombosis, and prolapse. Itching can be treated with topical creams, corticosteroid suppositories, and sitz baths.¹ Topical products include topical analgesics, topical steroids, and topical anti-spasmodic agents.² Injectable botulinum toxin can also be tried in select cases.¹ Sitz baths are an important treatment, especially for pruritus, spasm, and irritation.⁸ Skin changes such as dermatitis and atrophy can occur with topical steroid products, especially if used longer than ten days.² Bleeding is more often seen with internal hemorrhoids and usually resolves on its own.¹ Treatment usually involves discontinuing medications and supplements that promote bleeding, increasing dietary fiber, and topical preparations.³ Office-based procedures such as band ligation may be necessary in certain cases.² Thrombosis can cause significant short-term pain with the pain often abating over time with conservative measures.³ Higher grade internal hemorrhoids with thrombosis may require an office-based or surgical procedure.⁹ Prolapse is another complicating issue that may require rubber band ligation or surgery.¹⁰ Patients should be referred to a colorectal or general surgeon to consider office-based procedures or surgery options if hemorrhoids remain symptomatic after the initial phase of treatment.¹⁰ Other indications for referral

include high grade hemorrhoids, moderate to severe thrombosis, or presence of complicating factors.⁹ Office-based treatment may include rubber band ligation or sclerotherapy, which do not usually require anesthesia.¹⁰ Rubber band ligation is generally contraindicated in patients on anti-coagulations or anti-platelet medications.¹⁰ After ligation, patients must be observed for pain, delayed bleeding, delayed clotting, infection, and urinary retention.⁹ Injectable sclerotherapy is also commonly used especially in patients with a higher bleeding risk.⁹ Sclerotherapy complications are rare, but the procedure can occasionally be associated with bleeding or skin discomfort.¹⁰ Infrared coagulation is another office-based procedure.¹¹ Coagulation is associated with fewer complications, but has a higher risk of recurrence.¹¹ Patients with high grade internal hemorrhoids or those who fail ligation, sclerotherapy, or coagulation are usually considered for hemorrhoidectomy.¹² External hemorrhoids rarely require surgical options.¹²

Clinical Course and Follow-Up

The patient was referred to a colo-rectal surgeon. Anoscopy revealed enlarged internal external and internal hemorrhoids. A banding procedure was recommended with frequent episodes of heavy bleeding. Hemorrhoidectomy was also discussed as a future option.

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