The anorectum marks the end of the digestive tract as it transitions from the endodermal tissues of the colon and intestine to the ectodermal tissues of the skin (Fig. 41.1). The rectum is the portion of the digestive tract that extends distally from the rectosigmoid junction at approximately the level of the S3 sacral vertebral body to the dentate line. At the dentate line, the endodermal tissue transitions to ectodermal tissue. The first 1 to 2 cm is considered the anal canal. This tissue, the anoderm, is squamous in origin but contains no hair follicles or sweat glands. At the anal verge, this tissue transforms to more normal external skin marked by hair follicles, apocrine glands, and subcutaneous tissue.

Just proximal to the dentate line, the tissue of the rectum takes on a pleated appearance and forms the rectal ampulla. These pleats create multiple crypts and the anal valves with their insertion at the dentate line. Proximal to the crypts are the columns of Morgagni, where the epithelium of the anoderm transitions to that of the rectum.

Because of the varying embryonic origins of the anorectal region, the vasculature and innervation demonstrate distinct areas of function. The superior, middle, and inferior hemorrhoidal arteries supply blood to the anorectum; they arise, respectively, from the inferior mesenteric, internal iliac, and internal pudendal arteries. Likewise, venous drainage of the rectum is divided between the superior hemorrhoidal vein (which drains into the portal system) and the inferior hemorrhoidal vein (which drains into the caval system).

Sensory perception of the rectum is supplied by the pudendal nerve, which arises from pelvic branches of the S3 and S4 nerve roots. Structures proximal to the dentate line are insensitive, whereas tissue distal to this boundary can be painful when damaged by trauma, infection, or inflammation.

Fecal continence is maintained by motor innervation that arises from the S2 to S4 nerve roots. Defecation is the result of concomitant parasympathetic and sympathetic stimulation, as well as voluntary contraction of the abdominal muscles.

### EXAMINATION

To examine the anorectum, the emergency physician (EP) places the patient in the lateral decubitus position (Sims position) or a knee-to-chest position on the examination table (Fig. 41.2). The anorectal skin, hygiene, and any anatomic abnormalities are inspected. The EP has the patient bear down (Valsalva maneuver) to accentuate any prolapse of the rectum or internal hemorrhoids. The skin of the anorectum is spread to identify fissures that may be hidden in the folds. A 360-degree digital rectal examination is performed, with note being made of the prostate in males and the cervix in females. The sample of stool on the withdrawn glove is assessed for gross or occult blood. If abnormalities are suspected, an anoscope is used to directly visualize the internal anatomy.

### ANORECTAL ABSCCESS

#### PATHOPHYSIOLOGY

Anorectal abscesses are caused primarily by infection of obstructed anal glands, ducts, and crypts. Abscesses are polymicrobial and involve both anaerobic and aerobic bacteria. Other causes of anorectal abscess are immunosuppression, atypical infection (e.g., tuberculosis, actinomycosis, lymphogranuloma venereum), inflammatory bowel disease (Crohn disease), trauma (e.g., foreign body), surgery (e.g., anorectal, gynecologic procedures), malignancy (e.g., rectal carcinoma, leukemia, lymphoma), radiation, and anal fissures. Anorectal abscesses are classified according to location. The four main types are perianal (most common), ischiorectal, intersphincteric, and suprarelevator (least common) (Fig. 41.3).

#### PRESENTING SIGNS AND SYMPTOMS

General complaints in patients with anal abscesses are pain, swelling, and occasionally fever. Signs and symptoms of a perianal abscess are a tender, erythematous, fluctuant mass at the anal verge and pain that worsens with sitting or defecating. The patient is usually afebrile. If large, an ischiorectal abscess may be manifested as a lateral perianal swelling. The patient has severe buttock pain but typically little to no cutaneous findings. Fever and leukocytosis are also present.
CHAPTER 41 • ANORECTAL DISORDERS

DIAGNOSTIC TESTING AND EXAMINATION

- Classic history and physical examination findings
- Abdominal examination to evaluate for intraabdominal involvement
- Perianal examination to evaluate for perianal abscess and cellulitis
- Rectal examination to evaluate for deeper abscesses
- Vaginal examination to evaluate for deeper abscesses
- Bedside glucose measurement to evaluate for diabetes mellitus
- Abdominal and pelvic computed tomography (CT) or ultrasonography to identify deep abscesses when suspected

TREATMENT

PERIANAL ABSCESSE

Patients who do not have a complicating disorder and whose perianal abscess (Fig. 41.4) measures 10 cm or smaller may...
CRIPTITIS

PATHOPHYSIOLOGY

The anal crypts are small pockets of epithelium located between the anal papillae at the proximal end of the anal canal (the mucocutaneous junction). These crypts have tiny glands that secrete a small drop of mucus as the sphincter muscles contract to ease the passage of stool. Cryptitis occurs when these crypts become inflamed and the mucosal lining of their roofs becomes denuded. Possible causes of cryptitis are as follows:

- Repeated watery stools that can cause trauma or deposits in the crypts
- Direct trauma from large, hard stools
- Inflammation from adjacent structures
- External sources of infection, such as parasites or foreign bodies

If left untreated, cryptitis can lead to perirectal abscess, anal fissure, or anal fistula.

PRESENTING SIGNS AND SYMPTOMS

The signs and symptoms of cryptitis are anal pain (rectalgia), which is described as burning or dull in nature and exacerbated with bowel movements, as well as anal spasm, pruritus, and occasionally bleeding.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis for cryptitis includes hemorrhoids, anal fissure, anorectal abscess, and proctitis.

DIAGNOSTIC TESTING AND EXAMINATION

- Palpation of hypertrophied (indurated) papillae adjacent to the crypt
- Classic “pearl of pus” beading from the crypt at the dentate line on anoscopy

TREATMENT

Treatment of cryptitis consists of bulk laxatives to promote well-formed stools and decrease trauma, as well as warm sitz baths. Patients with advanced disease should receive outpatient surgical referral for excision of the gland.

ISCHIORECTAL ABSCESS

Superficial ischiorectal abscesses may be drained in the ED (although the recurrence rate is high). Deeper abscesses, however, must be drained in the operating room. If signs of systemic involvement (fever or leukocytosis) are present, intravenous (IV) antibiotics should be used at the time of drainage, and oral antibiotics should be added to the postincision care regimen.

INTERSPHINCTERIC ABSCESS

Patients with an intersphincteric abscess should undergo urgent drainage in the operating room and be administered IV antibiotics.

SUPRALEVATOR ABSCESS

Emergency surgery should be performed in the operating room for any patient with a supralevator (muscle) abscess. IV antibiotics should be used.

DISPOSITION

Patients with a simple perianal abscess that has been drained in the ED can be discharged. Arrangement should be made for packing changes, wound checks, or both in the ED or with the patient’s primary care physician in 48 hours. Surgical consultation should be obtained for patients with all other anorectal abscesses.
stool through a tight anus. The posterior midline is affected most because of weaker skeletal muscle and the acute angle of the rectum on the anus posteriorly.

Anterior midline fissures are most common in postpartum women. Anal fissures in other areas can be caused by receptive anal intercourse or insertion of foreign bodies or may be manifestations of conditions such as Crohn disease, cancer, tuberculosis, HIV infection, and syphilis.

Fissures that are not properly treated may become chronic and develop the classic triad consisting of sentinel pile, deep ulcer, and enlarged anal papillae. The ulcerating fissure causes edema and irritation of the surrounding tissue. Proximally, the result is hypertrophied papillae. Distally, the result is the formation of sentinel pile—fibrotic tissue that may be confused with an external hemorrhoid. The sentinel pile may eventually develop into a skin tag.

**PRESENTING SIGNS AND SYMPTOMS**

In infants, anal fissures are signified by small amounts of bright red blood on the stool or diaper. Children with anal fissures have painful defecation and "constipation" because of refusal to defecate because of pain.

Adults describe a sharp, cutting, or burning pain with defecation that can persist as a nagging, dull pain for several hours but usually subsides between bowel movements. A small amount of bright red blood may be noted on the stool or toilet paper. Sphincter spasm may also occur and cause further pain.

**DIFFERENTIAL DIAGNOSIS**

The differential diagnosis of anal fissure includes hemorrhoids, proctitis, cryptitis, perianal abscess, and primary syphilis (chancre).

**DIAGNOSTIC TESTING AND EXAMINATION**

Diagnosis of an anal fissure must be made by physical examination, which should be done very carefully to avoid further spasm and pain. Application of a topical anesthetic such as lidocaine jelly may be necessary to facilitate the examination. Gentle retraction of the buttocks and perianal skin with the patient bearing down may expose the distal end of the fissure. The sentinel pile may also be visualized in this manner.

Because of the severe pain and spasm, the patient may not be able to tolerate a digital rectal examination. If such an examination is performed, the surrounding hypertrophic papillae may be palpated.

If the fissure is not located in the midline, the differential diagnosis and consequent testing must be expanded to include more serious conditions such as cancer, HIV disease, Crohn disease, sexually transmitted diseases, and tuberculosis.

**TREATMENT**

Medical treatments that are most common and most effective for anal fissures are as follows:

- Warm sitz baths for 15 minutes three times per day
- A high-fiber diet
- Oral analgesics (narcotics increase constipation and should thus be avoided)

**ANAL FISTULA**

**PATHOPHYSIOLOGY**

Anal fistula, also called fistula in ano, is considered a chronic variant of a poorly healed anorectal abscess. Fistulas are tracts between the anal canal (or rectum) and the skin that are lined with epithelial or granulation tissue. Although anal fistulas typically arise from an anorectal abscess, they can also be associated with inflammatory bowel disease, malignancies, infection (sexually transmitted diseases, actinomycosis, tuberculosis, and diverticulitis), anal fissures, or foreign bodies.

**PRESENTING SIGNS AND SYMPTOMS**

The signs and symptoms of anal fistulas are a blood-tinged, malodorous discharge and rectal pain that improves with an increased discharge. An abscess may be located at the opening of the fistula. The fistula can be palpated as a cord leading to the sphincter.

**DIFFERENTIAL DIAGNOSIS**

The differential diagnosis of anal fistula consists of abscess, hemorrhoid, anal fissure, and gonococcal proctitis.

**DIAGNOSTIC TESTING AND EXAMINATION**

- Anal and rectal examinations with classic findings
- Abdominal and pelvic CT demonstration of a fistula tract
- Transanal ultrasonography (with or without hydrogen peroxide injected into the tract)

**TREATMENT**

Treatment of anal fistulas consists of surgical excision to eliminate the fistula, prevent recurrent disease, and preserve sphincter function. Stable patients may be referred for urgent outpatient surgical consultation.

**ANORECTAL FOREIGN BODIES**

**PATHOPHYSIOLOGY**

The structure of the rectum and distal end of the colon predisposes a foreign body to migrate cephalad after insertion. A delay in evaluation may also allow the development of
edema, which further complicates removal of a foreign body. Foreign bodies with smooth contours and a diameter near that of the rectum or colon may become “vacuum-locked” in place, with attempts at removal causing collapse of the rectum or colon distal to the object.

**PRESENTING SIGNS AND SYMPTOMS**

Although anorectal foreign bodies are often the subject of humor and medical lore, ED management of an anorectal foreign body is actually quite rare. Because of the social stigma involved, patients are reluctant to come to the ED and are often not forthcoming about their actual complaint. The patient has frequently attempted to remove the foreign body before seeking medical attention, thereby potentially causing further damage or complicating removal.

Although the majority of patients give an accurate history, some have vague complaints of abdominal pain or an unlikely story about how the object became lodged in the rectum. In the ED, every effort must be made to ascertain the type, shape, number, and composition of a retained foreign body, as well as how long it has been in the anorectum, before removing it.

**RED FLAGS**

<table>
<thead>
<tr>
<th>Foreign Bodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: glass, food, metallic, sharp</td>
</tr>
<tr>
<td>Shape</td>
</tr>
<tr>
<td>Number of objects present</td>
</tr>
<tr>
<td>Time of insertion (delays in treatment promote edema)</td>
</tr>
</tbody>
</table>

**DIFFERENTIAL DIAGNOSIS**

Objects lodged in the anorectum may have been self-inserted, inserted as a result of sexual assault, iatrogenically inserted (e.g., rectal thermometer), or swallowed.

**DIAGNOSTIC TESTING AND EXAMINATION**

The shape, composition, surface, contour, and orientation of a foreign body influence the ultimate method of removal. Most foreign bodies can be classified as low lying and therefore palpable in the rectal ampulla or as high lying, at or proximal to the rectosigmoid junction. Examination and diagnostic testing should include the following:

- Thorough palpation of the abdomen (to identify masses, peritonitis)
- Flat and upright radiographs of the abdomen
- Digital rectal examination (if the object is not sharp by patient report and does not appear sharp on radiographs)
- Anoscopy to visualize the foreign body should be considered.

**TREATMENT**

Treatment of an anorectal foreign body is based on the results of abdominal and rectal examination, as well as plain radiographs (Fig. 41.5). Patients with palpable, low-lying foreign bodies can undergo conscious sedation and local anesthesia for attempted removal in the ED. Patients with high-lying foreign bodies or risk for perforation should be managed operatively.

**FOLEY CATHETER REMOVAL OF ANORECTAL FOREIGN BODIES**

A Foley catheter can be used to break the suction caused by the insertion of an object with a diameter similar to that of the colon or rectum; the procedure is as follows (Fig. 41.6):

1. Place the patient in the lithotomy position.
2. Pass one or more Foley catheters beyond the foreign body.
3. Insufflate air to break the suction.
4. Inflate the Foley balloons.
5. While grasping the foreign body and applying gentle traction with either hands or forceps, slowly remove the catheter or catheters with moderate pressure.
DISPOSITION

A patient who underwent successful removal of a low-lying foreign body may be discharged from the ED. For any patient with suspected rectal perforation, proctosigmoidoscopy should be performed by a gastroenterologist or colorectal surgeon before disposition.

HEMORRHOIDS

PATHOPHYSIOLOGY

The hemorrhoidal plexuses provide a vascular cushion to the area surrounding the anus. The hemorrhoidal vessels are one of three layers of submucosal tissue that support the anal canal and aid in continence and defecation. As this tissue deteriorates and weakens, the hemorrhoidal veins may prolapse or may become engorged or thrombosed.

The internal hemorrhoidal veins are located above the dentate line. Their blood supply is derived from the superior hemorrhoidal plexus, and drainage is into the portal system by way of the superior rectal veins and the inferior mesenteric vein. They also communicate with the external hemorrhoidal veins. Internal hemorrhoids are covered by transitional or columnar epithelial mucosa without pain fibers. They are nearly always in the same positions: left lateral (9 o’clock), right posterolateral (5 o’clock), and right anterolateral (2 o’clock) (Fig. 41.7). They are classified into four categories according to severity (Table 41.1).

The external hemorrhoidal veins are located below the dentate line. Their blood supply is derived from the inferior hemorrhoidal plexus, with drainage into the iliac and pudendal venous systems. They are covered by anoderm (modified squamous epithelium) with sensory nerve endings that contain pain receptors.

PRESENTING SIGNS AND SYMPTOMS

The most common symptom of hemorrhoids is painless bleeding with defecation (blood on stool or toilet paper). If the hemorrhoid is thrombosed, strangulated, or prolapsed, pain with defecation also occurs. The lesion is detected as a curvilinear mass at the anus.

Prolapsed hemorrhoids also cause discharge of mucus and pruritus ani. A thrombosed external hemorrhoid appears as a dark blue, firm, tender mass distal to the anal verge. A prolapsed, strangulated internal hemorrhoid appears as a purplish tender mass covered by mucosa and emerging from the anal verge. A strangulated internal hemorrhoid is often associated with a thrombosed external hemorrhoid.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis for hemorrhoids consists of anal fissure, rectal prolapse, perianal condyloma, abscess, fistula, rectal varices, tumors, and manifestations of inflammatory bowel disease.

DIAGNOSTIC TESTING AND EXAMINATION

The diagnostic criteria for hemorrhoids are as follows:

- Prolapse of hemorrhoids is noted on rectal examination when the patient bears down.
- Internal hemorrhoids are not palpable, so anoscopy is required to visualize them.

TREATMENT

As a rule, most hemorrhoids should be treated conservatively, as follows:

- Warm sitz baths for 15 minutes three times per day
- Increase in dietary fiber
- Stool softeners and bulk laxatives (those causing liquid stool, which could lead to cryptitis, should be avoided)
- 0.2% topical nitroglycerin ointment to treat pain by decreasing sphincter spasm
- Topical anesthetics and steroid creams, though controversial, provide anecdotal pain relief
- Judicious use of narcotics (stool softeners should also be used if narcotics are prescribed)

<table>
<thead>
<tr>
<th>SEVERITY (DEGREE)</th>
<th>FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>No prolapse; painless bleeding</td>
</tr>
<tr>
<td>Second</td>
<td>Prolapse with straining and spontaneous reduction Mild discomfort and bleeding</td>
</tr>
<tr>
<td>Third</td>
<td>Prolapse with straining, which requires manual reduction Some throbbing pain, itching, bleeding, and mucus discharge</td>
</tr>
<tr>
<td>Fourth</td>
<td>Permanent prolapse that cannot be reduced Pain and bleeding common Potential for thrombosis and strangulation</td>
</tr>
</tbody>
</table>

Fig. 41.7 Common positions of internal hemorrhoids.
Acutely thrombosed external hemorrhoids can be excised in the ED (Fig. 41.8). Rather than performing simple incision and drainage, the EP should excise the roof of the thrombosed hemorrhoid as an ellipse. Excision of thrombosed hemorrhoids should never be performed in the ED in children or in adults who are immunocompromised or pregnant, in patients receiving anticoagulation therapy, and in patients with portal hypertension.

**RED FLAG**

Excision of a nonthrombosed hemorrhoid should never be attempted.

**EXCISION PROCEDURE**

Thrombosed external hemorrhoids can be excised as follows (Fig. 41.9):

1. Put the patient in a prone or left lateral decubitus position.
2. If a single provider is performing the procedure without an assistant, tape the buttocks as shown in Figure 41.10.
3. With a 27-gauge needle, infiltrate bupivacaine with epinephrine into the overlying skin and the skin underneath the clot.
4. Make an elliptical incision in the overlying skin (distal to the anal verge).
5. Excise the clot or clots through this opening.
6. To control bleeding, place a small piece of gauze or absorbable gelatin sponge (Gelfoam) into this opening and cover with a pressure dressing.

The patient should remove the dressing in 6 hours, at the time of the first sitz bath.

**DISPOSITION**

Most patients with hemorrhoids can be discharged home. Immediate surgical consultation should be obtained for patients with strangulated fourth-degree internal hemorrhoids or bleeding hemorrhoids and severe anemia.

Patients with second-degree, third-degree, or nonstrangulated fourth-degree internal hemorrhoids should be referred to an outpatient surgeon for possible sclerotherapy, rubber band ligation, infrared coagulation, or excisional hemorrhoidectomy.

Patients who have undergone ED excision of thrombosed external hemorrhoids should be referred for follow-up with a surgeon.

**HIDRADENITIS SUPPURATIVA**

**PATHOPHYSIOLOGY**

Perianal hidradenitis suppurativa is a disease of the skin and subcutaneous tissue that arises from occlusion of the apocrine glands with keratin. It tends to be chronic, recurrent, and primarily localized to areas with the highest density of apocrine sweat glands (groin, axilla, and mammary regions). Sequelae include inflammation, infection, and eventual rupture of the gland with secondary cellulitis of the...
Fig. 41.9 Schematic of the technique for excision of thrombosed external hemorrhoids. A, For the unroofing technique, make an elliptical or triangular incision to remove a piece of the overlying skin. To prevent skin tags, do not use a simple linear incision. B, Blood clots may extrude spontaneously, but remove the remaining ones with forceps or express them with the fingers (C). D, Frequently, multiple clots are present, and they should all be removed. Ask an assistant to provide exposure with forceps if necessary. (From Roberts JR, Hedges JR. Clinical procedures in emergency medicine. 5th ed. Philadelphia: Saunders; 2009.)

Fig. 41.10 Diagram for taping the buttocks.

surrounding tissue. The disease ultimately leads to the formation of chronic draining sinuses.

PRESENTING SIGNS AND SYMPTOMS

Patients with the early stages of perianal hidradenitis suppurativa typically have a painful boil in the perianal region. Classically, the abscess is deep and round without any central necrosis or fluctuance. The patient may describe similar episodes that resolved spontaneously. Later, more chronic stages of the disease may be manifested as open draining fistulas and sinuses (Box 41.1).

**DIFFERENTIAL DIAGNOSIS**

The differential diagnosis of perianal hidradenitis suppurativa consists of carbuncles, lymphadenitis, infected sebaceous cysts, noninflamed cysts, other infectious processes (abscesses, fistulas), and Crohn disease.

**TREATMENT**

Medical treatment of perianal hidradenitis suppurativa consists of weight loss, smoking cessation (if applicable), and the use of antibiotics. Clindamycin, 300 mg twice daily, has been shown to be effective in suppression, but the disease often returns when use of the antibiotics ceases; topical clindamycin cream is similarly effective. Retinoids may also be tried. Acitretin, 25 mg daily, decreases keratin production and has been shown to reduce the number of outbreaks. Hormonal therapy may also be effective; finasteride was shown to induce remission in a small case study.

Surgical drainage provides only short-term relief because the condition has a 100% recurrence rate. Radical excision of the inflamed apocrine tissue carries a recurrence rate of 25%.

**DISPOSITION**

All patients with perianal hidradenitis suppurativa should be referred to a dermatologist for long-term management.

**PILONIDAL DISEASE**

**PATHOPHYSIOLOGY**

Pilonidal disease is a common disorder that generally affects young adults—those between the ages of 15 and 24 years—with a 3:1 male preponderance. Pilonidal disease often causes a considerable amount of suffering, inconvenience, and time away from work. An estimated 40,000 to 70,000 patients are treated annually, mostly as outpatients. The term pilonidal is a combination of the words pilus, meaning “hair,” and nidus, meaning “nest.” The condition is believed to arise from hairs in the natal cleft that because of their location, grow inward rather than outward. The shafts of these hairs penetrate the skin, thereby leading to a condition of chronic inflammation and eventual infection. Chronic infection results in the formation of sinus tracts and recurrent disease.

**BOX 41.1 Characteristics of Hidradenitis Suppurativa**

- **Age at onset:** puberty
- **Female-to-male ratio:** 3:1
- **Associated conditions:** acne, comedones, obesity, hirsutism
- **Sites affected:** (in descending order of frequency): axillary, inguinal, perianal and perineal, mammary and inframammary, buttock, pubic region, chest, scalp, retroauricular, eyelid

All patients with perianal hidradenitis suppurativa should be referred to a dermatologist for long-term management.
PRESENTING SIGNS AND SYMPTOMS

The initial signs and symptoms of pilonidal disease are usually pain and swelling in the sacrococcygeal region with inability to sit on one side of the buttocks or perhaps an inability to tolerate a sitting position at all. Systemic involvement is rare. Physical examination generally demonstrates either a tender fluctuant mass over the coccyx or sacrum or a larger area of inflammation with multiple draining tracts.

DIFFERENTIAL DIAGNOSIS

Other diseases manifested as an infection or fistula must be excluded, such as rectal or perirectal abscess, Crohn disease, and hidradenitis suppurativa.

DIAGNOSTIC TESTING AND EXAMINATION

The classic clinical signs and symptoms of pilonidal disease are sufficient for diagnosis. Imaging is not useful for a typical manifestation of this condition.

TREATMENT AND DISPOSITION

Treatment is both medical and surgical. ED treatment generally consists of incision and drainage of the abscess. Simple incision plus drainage results in healing in 58% of patients within 10 weeks; of these patients, 40% have no further symptoms and 20% experience only minor symptoms. Antibiotics should be prescribed to treat any secondary cellulitis. In one study, metronidazole, 500 mg orally four times per day for 14 days, resulted in more rapid healing than did no antibiotics.

Patients with pilonidal disease can be discharged from the ED with arrangements or instructions for follow-up with a surgeon.

PROCTALGIA FUGAX

PATHOPHYSIOLOGY

Proctalgia fugax is severe, episodic anal pain. The disorder is poorly understood and difficult to treat. The pathophysiology of this condition is unclear, although it is believed to be caused by spasm of either the anal sphincter or the muscles of the pelvic floor.

PRESENTING SIGNS AND SYMPTOMS

Proctalgia fugax is usually characterized by sudden episodes of intense pain around the anal ring that can occur at any time and may last from 20 minutes to several hours. Typically, the pain occurs at night and often awakens the patient. The sensation may be associated with an urge to pass stool or flatus. Some patients may experience only one episode in their lifetime. The lifetime prevalence of this condition is 14%.

DIFFERENTIAL DIAGNOSIS

Other conditions that commonly cause rectal pain should be considered in the differential diagnosis of proctalgia fugax, such as anal fissure, hemorrhoids, perirectal abscess, and proctitis.

TREATMENT AND DISPOSITION

No specific treatment exists for proctalgia fugax. Anecdotal evidence supports the use of warm baths, topical treatment with glyceryl trinitrate, benzodiazepines, topical anesthetics, and botulinum toxin. Hot packs or direct anal pressure has also been recommended.

Patients with recurrent disease should be referred to a gastroenterologist.

PROCTITIS

PATHOPHYSIOLOGY

Proctitis is defined as inflammation of the rectal mucosa. It can involve actual loss of mucosal cells, as well as damage to the endothelium of the small arterioles supplying the mucosa. The condition may improve spontaneously, depending on the cause, or may progress with resulting tissue ischemia, mucosal friability, bleeding, ulcers, strictures, and fistula formation. Causes of proctitis are listed in Box 41.2.

PRESENTING SIGNS AND SYMPTOMS

The signs and symptoms of proctitis include fecal urgency, sensation of rectal fullness, rectalgia, pruritus, rectal bleeding (spotting), and a mucoid or purulent rectal discharge. The patient may also describe a change in bowel habits (diarrhea or constipation) and abdominal pain. Ulcers, vesicles or pustules, and strictures may be found on rectal examination.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of proctitis consists of anal fistula, anal fissure, rectal foreign body, diverticulosis, and vulvovaginitis.

DIAGNOSTIC TESTING AND EXAMINATION

Anoscopy in a patient with proctitis identifies erythema, friability, bleeding, edema, ulcers, and vesicles; rectosigmoid-
oscopy demonstrates similar findings. The following laboratory tests should be performed:

- Stool: culture and testing for ova, parasites, fecal leukocytes, and *Clostridium difficile* toxin
- Gonorrhea and chlamydia cultures and Gram stain of anorectal swabs
- Venereal Disease Research Laboratory or rapid plasma reagin test if syphilis is suspected

**TREATMENT**

Most cases of proctitis can be treated medically. The underlying cause, if known, should also be treated. All forms of the disorder may benefit from the following measures:

- Sitz baths
- Antispasmodic agents
- Low-residue diet
- Stool softeners

**PRURITUS ANI**

Pruritus ani is a recurrent and unpleasant itching sensation in the anal canal or perianal, perineal, vulvar, scrotal, or buttock areas. Approximately 1% to 5% of the population seeks medical attention for this condition during their lifetime. More men than women experience the disorder, which is more common in the fifth and sixth decades of life. Because of the social stigma involved, many patients attempt self-treatment before seeking care. The condition is often poorly understood and improperly treated by health care providers.

**PATHOPHYSIOLOGY**

In 50% of cases of pruritus ani, the cause is unknown. Potential causes (especially malignancy) must be excluded before the symptoms can be classified as idiopathic (Table 41.2).

**PRESENTING SIGNS AND SYMPTOMS**

Patients typically describe an itching sensation that is worse at night and during the summer months. As the patient scratches, the perianal skin is further irritated and the condition worsens. Physical findings vary with the duration of the condition and include:

- Erythema
- Whitening or cracking of the perianal skin
- Bleeding in severe cases

**DIFFERENTIAL DIAGNOSIS**

See Table 41.2. Fecal contamination of the perianal skin is the most common cause of pruritus ani.

**DIAGNOSTIC TESTING AND EXAMINATION**

Evaluation should include a careful history of potential exposures, examination of the perianal skin, digital rectal examination, anoscopy, and directed testing to exclude specific suspected causes.

**TREATMENT**

Most cases of pruritus can be treated conservatively with the following measures:

- Gentle cleansing and attention to hygiene of the perianal skin
- Modifications in diet and medications
- Brief courses of topical steroids (long-term steroid therapy should be avoided because it may thin the perianal skin and further exacerbate the condition)
- An oral antipruritic medication such as hydroxyzine or diphenhydramine

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**Table 41.2 Differential Diagnosis of Pruritus Ani**

<table>
<thead>
<tr>
<th>Differential Diagnosis</th>
<th>Fissures</th>
<th>Proctitis</th>
<th>Hemorrhoids</th>
<th>Abscess</th>
<th>Fistula</th>
<th>Malignancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorectal disease</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Dermatologic disease</td>
<td>Lichen planus</td>
<td>Lichen sclerosis</td>
<td>Lichen atrophicus</td>
<td>Eczema</td>
<td>Psoriasis</td>
<td>Seborrhea</td>
</tr>
<tr>
<td>Infectious disease</td>
<td><em>Candida albicans</em> dermatophytes</td>
<td><em>Staphylococcus aureus</em></td>
<td><em>Corynebacterium minutissimum</em></td>
<td>Group A β-hemolytic streptococci</td>
<td>Human papillomavirus</td>
<td>Herpes simplex</td>
</tr>
<tr>
<td>Medications</td>
<td>Colchicine</td>
<td>Quinidine</td>
<td>Mineral oil</td>
<td>Neomycin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systemic disease</td>
<td>Diabetes mellitus</td>
<td>Renal failure</td>
<td>Lymphoma</td>
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<tr>
<td>Foods</td>
<td>Tomatoes</td>
<td>Citrus fruits</td>
<td>Nuts</td>
<td>Chocolate</td>
<td>Coffee</td>
<td>Tea</td>
</tr>
<tr>
<td>Irritants</td>
<td>Fecal contamination</td>
<td>Excess moisture</td>
<td>Soap</td>
<td>Aggressive anal wiping</td>
<td>Scented toilet paper</td>
<td></td>
</tr>
</tbody>
</table>

RECTAL PROLAPSE

PATHOPHYSIOLOGY

Rectal prolapse or procidentia is a circumferential protrusion of all layers of the rectum through the anus (Fig. 41.11, A). The cause is largely unclear, although the condition seems to be more common in elderly women with a female-to-male preponderance of 6:1. Predisposing factors include pelvic floor laxity, pelvic floor neuropathy, persistent straining, chronic constipation, rectal tumors, and dysfunction of the anal sphincter.

PRESENTING SIGNS AND SYMPTOMS

Actual protrusion of the rectum is the most common manifestation. Other symptoms may include anorectal pain or discomfort during defecation, sensation of incomplete evacuation, rectal and urinary incontinence, and rectal bleeding or discharge.

DIFFERENTIAL DIAGNOSIS

The EP should differentiate this condition from external hemorrhoids, prolapsed internal hemorrhoids, rectal tumors, and uterine prolapse.

DIAGNOSTIC TESTING AND EXAMINATION

Imaging is not necessary in making the diagnosis of rectal prolapse. Colonoscopy should be performed in all patients after reduction to clarify the diagnosis and further define the anatomy.

TREATMENT AND DISPOSITION

Every effort should be made to reduce the prolapsed rectum in the ED to prevent the complications of strangulation, ischemia, ulceration, or perforation. Various methods have been described for reduction, including ice packs, injection of diluted epinephrine, and manual reduction under conscious sedation or general anesthesia (Fig. 41.11, B). Applying ordinary granulated table sugar to the prolapsed tissue, a technique borrowed from veterinary medicine, has been used successfully to quickly reduce the edema and aid in reduction.16

SUGGESTED READINGS

Vincent C. Anorectal pain and irritation. Prim Care 1999;26:53-66.

REFERENCES

References can be found on Expert Consult @ www.expertconsult.com.
REFERENCES