PERSPECTIVE

Patients visit the emergency department (ED) with a variety of anorectal complaints. Such problems may be self-limited or may signify the presence of an underlying medical condition. A high degree of sensitivity and a professional demeanor should be maintained in interactions with these patients, who may find it difficult to discuss historical details openly and to describe physical complaints related to this area of the body and its function.

PRINCIPLES OF DISEASE

The anorectum marks the end of the alimentary canal. From its beginning at the rectosigmoid junction at the level of the third sacral vertebra (S3), the rectum follows the sacral curvature for 12 to 15 cm and then sharply turns posteriorly and inferiorly at the puborectalis muscle (Fig. 96-1). Here the anal canal begins its 4-cm course to the anal verge, the orifice whereby stool exits the body. It is supported by three muscle groups, the levator ani and the internal and external anal sphincters. Anal valves are located 2 cm proximal to the anal verge at the dentate line. Above the valves are the anal crypts, which contain mucous glands to provide lubrication during defecation. These constitute a nidus for abscess formation, if occluded. Proximal to the crypts are the columns of Morgagni, where the epithelium of the anal canal changes from pink columnar (as in the rectum) to squamous.1

The superior, middle, and inferior hemorrhoidal arteries provide the blood supply to the anorectum. They arise from the inferior mesenteric, internal iliac, and internal pudendal arteries, respectively. The superior hemorrhoidal veins drain into the portal system, and the inferior hemorrhoidal veins drain into the caval system. Lymphatic drainage is to the inferior mesenteric, internal iliac, and internal pudendal arteries, which provide the blood supply to the anorectum. They arise from the superior, middle, and inferior hemorrhoidal arteries.

Sympathetic and parasympathetic nervous systems function together to retain the contents of the rectum until evacuation is desired. Continence is maintained when sympathetic fibers from L1 to L3 (upper rectum) and presacral nerves (lower rectum) inhibit contraction of rectal smooth muscle and L5 fibers cause the internal sphincter to contract. Elimination occurs when parasympathetic fibers from the anterior roots of S2 to S4 cause the rectal wall to contract and the internal sphincter to relax. Voluntary external sphincter control is mediated by motor branches of the pudendal nerve (S2, S3) and the perineal branch of S4. The levator ani is supplied by the pudendal nerve and pelvic branches of S3 to S4 fibers. Sensory perception of rectal distention involves a signal pathway from extramural receptors to parasympathetic fibers from S2 to S4. The abundant sensory nerve endings of the distal anal epithelium perceive sensations that are transmitted by the pudendal nerve.1

Defecation begins as the rectum becomes distended, the internal sphincter relaxes, and stool enters the anal canal. At an appropriate time and place, the external sphincter is relaxed to complete the process of elimination. Sometimes voluntary straining is needed to assist in the passage of stool. When the Valsalva maneuver is performed, the abdominal muscles contract, the rectal angle straightens, and the pelvic floor descends. To postpone defecation, the external sphincter contracts voluntarily. This contraction relaxes the rectal wall and quells the urge to defecate unless there is an underlying sphincter disorder or an overwhelming volume of stool.1

CLINICAL FEATURES

History

A complete history of anorectal and gastrointestinal (GI) symptoms and the presence of systemic disease elucidate the diagnosis of most anorectal disorders (Box 96-1; Fig. 96-2). Common complaints include bleeding, swelling, pain, itching, and discharge. Standard historical questions about time and circumstances of onset, duration, quality, and exposure to radiation should be asked. Alterations in bowel habits should be noted. These include changes in color, frequency, or consistency of the stool and the presence of straining, flatus, and incontinence of solid or liquid stool. Persons with underlying GI disorders (e.g., Crohn’s disease, cancer, polyps) are predisposed to atypical presentations of anorectal problems. Similarly, those with underlying systemic diseases such as acquired immunodeficiency syndrome (AIDS), cancer, diabetes mellitus, and coagulopathy are prone to develop more serious complications of standard anorectal conditions. Finally, patients should be asked directly about sexual practices involving the anus.2

Rectal Bleeding

The color, amount, and relationship to defecation are important factors in establishing the cause of rectal bleeding. Approximately 10 to 20% of the population experiences rectal bleeding at some time.3 Pain and bright red blood signify anal fissures or hemorrhoids. Fissure pain is sharp, sudden in onset, and not associated with swelling, whereas pain from a prolapsed or thrombosed hemorrhoid is gnawing, continuous, and of more gradual onset. Painless rectal bleeding occurs with internal hemorrhoids, cancer, or precancerous lesions.
Swelling and Masses

Patients who report a swelling near the anus or have the sensation of rectal fullness often list hemorrhoids as their chief complaint. Painful swellings that bleed usually are thrombosed hemorrhoids, but other painful lesions such as abscesses, pilonidal disease, and hidradenitis suppurativa must be considered. Painless, itchy swellings may be caused by condylomata acuminata or secondary syphilis. A mass protruding through the anal orifice may signal rectal prolapse. Perianal and rectal carcinoma should be considered in older persons and those with long-standing anorectal complaints.

Pain and Itching

Severe, episodic anorectal pain that is not associated with bleeding or swelling may represent proctalgia fugax or levator ani syndrome. Perianal itching (pruritus ani) is caused by any lesion that makes hygiene difficult to maintain or may be attributed to certain foods or medications.

Physical Examination

The physical examination should take place in private, with the patient’s modesty respected. The patient can then relax the external sphincter to facilitate a complete examination. The patient is placed in the left lateral decubitus position and covered with a sheet. The buttocks are inspected for dermatologic manifestations of disease and then gently spread apart to expose the anal orifice. Elements of personal hygiene are noted, in addition to anatomic disruptions such as fissures, skin tags, lesions, protruding hemorrhoids, or abscesses. The patient is asked to strain; the integrity of the pelvic floor is assessed, and prolapse of hemorrhoids or rectal mucosa is noted. Next, a well-lubricated gloved finger is placed flat against the anal opening, exerting gentle pressure until the external sphincter relaxes and allows the finger to enter the anus. Anal sphincter tone can be assessed by asking the patient to squeeze the anal muscles against the examining finger. By sweeping the finger in a circumferential manner, accessible areas of the anorectum can be examined for masses and areas of tenderness. The cervix or prostate is palpated through the rectal wall. A bidigital examination reveals masses and tender areas at the distal portion of the anal canal and perineum. On withdrawal, the contents on the glove can be assessed for frank or occult blood, mucus, or pus.

Direct visualization can be accomplished by anoscopy. With the patient positioned as described, the lubricated anoscope is inserted into the anus with the obturator in place. The obturator is removed to allow a circumferential view of the rectal mucosa. Attention is directed to sites of bleeding, hemorrhoids, masses, or abnormal tissue and finally the dentate line and anal epithelium.

SPECIFIC ANORECTAL PROBLEMS

Hemorrhoids

Perspective

When the Philistines defeated the Israelites, the book of I Samuel reports the fate of the avengers: “A deadly panic had seized the whole city, since the hand of God had been very heavy upon it. Those who escaped death were afflicted with hemorrhoids, and the outcry from the city went up to the heavens.” In 1815 the
Hemorrhoids occur when the anal vascular cushions become engorged. Rather than forming a continuous ring around the anal canal, the submucosa forms three distinct cushions of tissue that are richly supplied with small blood vessels and muscle fibers. Blood supply to these cushions is from the superior rectal artery, with some contribution from the middle and inferior hemorrhoidal arteries, which explains why hemorrhoidal bleeding is bright red. The muscularis submucosa cushions the anal canal during defecation to prevent injury and to aid in fecal continence.

As the supportive tissue deteriorates, often starting in the third decade of life, venous distention, prolapse, bleeding, and thrombosis may occur. Some controversy exists about whether straining and constipation cause these changes by producing venous backflow when intra-abdominal pressure increases. In pregnant women, direct pressure on a hemorrhoidal vein can produce symptomatic hemorrhoids. Up to one third of pregnant women experience hemorrhoids in the last trimester of pregnancy or the postpartum period. An increased incidence of thrombosed hemorrhoids is associated with traumatic deliveries. Some familial predisposition is recognized, but whether this is a result of genetics or acquired factors such as diet is unknown.

Hemorrhoids are not varicose veins; they are normal structures that manifest symptoms when the muscularis submucosa weakens and the anal cushions are displaced distally. Conditions that increase sphincter tone correlate with a higher prevalence of hemorrhoids. Portal hypertension does not cause hemorrhoids in adults. The incidence of symptomatic hemorrhoids is similar in patients with and in those without portal hypertension. Rectal bleeding in patients with portal hypertension may be caused by rectal varices, which are vascular communications between the superior and middle hemorrhoidal veins. A major exception to this observation occurs in the pediatric population; children with portal hypertension are susceptible to hemorrhoidal exacerbations.

**Clinical Features**

A careful history is needed to confirm the presence of hemorrhoids because many patients use this term to refer to any perianal condition. Bleeding with defecation is the most common complaint, and unless the hemorrhoids are thrombosed, it usually is painless. Patients report variable amounts of bright red blood on the toilet paper or in the toilet bowl. Many complain of swelling, itching, mucoid discharge, or simply the presence of a moist perianal area. Further history should address recent stool patterns, such as diarrhea or constipation; chronic medical problems, such as portal hypertension or bleeding disorders; and a dietary and family history.

Frequent bowel movements, prolonged sitting, heavy lifting, and straining while defecating exacerbate hemorrhoidal symptoms. Although straining is cited as a cause of hemorrhoids, it also may be a result of them when the patient is constipated from delaying defecation because of fear of pain. Physical examination should ascertain the type and degree of hemorrhoids. This can be accomplished by a visual inspection at rest and during straining. Nonprolapsing hemorrhoids can be visualized on anoscopy as a focus of bleeding or as they bulge when the patient is asked to strain while the anoscope is removed. Anoscopy is painful and not useful in cases of prolapsed or thrombosed hemorrhoids.

Hemorrhoids are classified according to their location and severity (Table 96-1). External hemorrhoids originate below the dentate line and receive their blood supply from the inferior hemorrhoidal plexus. They are covered with modified squamous epithelium (anoderm) and resemble the surrounding skin. Two syndromes are common. First, the veins beneath the skin of the hemorrhoid become dilated and the surrounding subcutaneous tissue becomes engorged, causing swelling or pressure after
**Defecation.** Painless, bright red bleeding may occur. Second, the veins can become thrombosed as clots form within them (Fig. 96-3A). This produces acute pain and tenderness to palpation. A bluish discoloration often is noted.

**Internal hemorrhoids** originate above the dentate line and receive their blood supply from the superior hemorrhoidal plexus (Fig. 96-3B). They are covered with a mucosal surface consisting of transitional or columnar epithelium that looks very different from the surrounding anoderm. They are classified according to severity (Table 96-2). Symptoms and signs range from mild, painless bleeding with defecation to irreducible prolapse with unremitting and debilitating pain. First-degree internal hemorrhoids protrude into the lumen of the anal canal, causing a feeling of fullness. Because the mucosal wall lacks sensory nerve endings, these lesions do not cause pain. Second-degree internal hemorrhoids temporarily prolapse outside the anal canal during defecation but spontaneously return to their normal position at the end of the bowel movement. Both first- and second-degree hemorrhoids are amenable to medical management. Third-degree internal hemorrhoids prolapse spontaneously or during defecation and remain outside the body until they are manually replaced into the anal canal. A throbbing, pressure-like pain may accompany bleeding and subsides when the hemorrhoids are reduced. Fourth-degree internal hemorrhoids cannot be reduced and are permanently prolapsed. Continued prolapse leads to the formation of a thrombus with possible progression to gangrene. Definitive treatment for the intense pain and thrombosis is surgical.8-14

**Management**

The symptoms of nonthrombosed external and nonprolapsing internal hemorrhoids can be ameliorated by the standard regimen—warm water, analgesics, stool softeners, and high-fiber diet (WASH)—aimed at combating the problems that led to the hemorrhoids’ formation (Box 96-2). Anal canal pressures decrease in warm water (40° C). Patients can direct a shower stream at the area for several minutes or take sitz baths. Mild oral analgesic agents reduce the pain. Several over-the-counter preparations are available for the treatment of hemorrhoidal symptoms; however, their use is directed at improved hygiene and temporary symptom relief rather than correction of the condition.15 The use of topical anesthetics, corticosteroids, astringents (e.g., witch hazel), mineral oils, and cocoa butter is controversial. Prolonged use of topical corticosteroids produces atrophic skin changes and is discouraged.7 Stool softeners can make the passage of stool easier, to prevent straining. A high-fiber diet (consumption of 20 to 30 g of dietary fiber per day) produces stool that is passed more easily.16

Patients with second- or third-degree internal hemorrhoids also benefit from this regimen; however, permanent resolution of their symptoms may require surgical intervention (Table 96-3). These patients can be discharged from the ED with the WASH regimen and referred to a surgeon for banding, sclerotherapy, or elective surgery.
Anal Fissures

Principles of Disease

The development of an anal fissure is the most common cause of intensely painful rectal bleeding of sudden onset. A superficial tear in the anoderm results when a hard piece of feces is forced through the anus, usually in patients who are constipated. Although anyone can experience an anal fissure, it is most common in the 30- to 50-year age bracket. Males and females are affected equally. Most fissures occur along the posterior midline, where the skeletal muscle fibers that encircle the anus are weakest. Anterior midline fissures are more common in women than in men. Fissures that occur elsewhere are more likely to be associated with systemic disease such as leukemia, Crohn's disease, human immunodeficiency virus (HIV) infection, tuberculosis (TB), or syphilis. Fissures not treated promptly may become chronic, with development of a classical "fissure triad" of deep ulcer, sentinel pile, and enlarged anal papillae (Fig. 96-5).

Clinical Features

The patient reports sudden, searing pain during defecation that may be accompanied by a small amount of bright red blood in the stool or on the toilet paper. This is followed by a nagging, burning sensation that lasts for a few hours from internal sphincter spasm. Subsequent bowel movements are excruciating, and the external sphincter can exhibit a reflex spasm. Physical examination must be performed cautiously to avoid further spasm and pain. The depth of the fissure, its orientation to the midline, and the presence of a coexisting sentinel pile or edema are noted. Rectal examination during an acute exacerbation often is impossible because of pain and sphincter spasm.

Management

Specific measures for the treatment of anal fissures are summarized in Box 96-3. Treatment with the WASH regimen (see Box 96-3) performs an elliptical incision around the hemorrhoid. The thrombosed hemorrhoid is removed. From Larson S, et al [eds]: Atlas of Emergency Procedures. St Louis, Mosby, 2001.)


Table 96-3 Surgical Management of Hemorrhoids

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thrombosed external hemorrhoids</td>
<td>Excision in emergency department</td>
</tr>
<tr>
<td>Second- and third-degree internal hemorrhoids</td>
<td>Elective surgical repair</td>
</tr>
<tr>
<td></td>
<td>Banding</td>
</tr>
<tr>
<td></td>
<td>Sclerotherapy</td>
</tr>
<tr>
<td></td>
<td>Hemorrhoidectomy</td>
</tr>
<tr>
<td>Fourth-degree hemorrhoids (nonthrombosed)</td>
<td>Nonemergent hemorrhoidectomy</td>
</tr>
<tr>
<td>Thrombosed or gangrenous fourth-degree internal hemorrhoids</td>
<td>Emergent hemorrhoidectomy</td>
</tr>
</tbody>
</table>

hemorrhoidectomy. Patients with acute, gangrenous, thrombosed fourth-degree internal hemorrhoids should be referred for emergent hemorrhoidectomy.

Acutely thrombosed external hemorrhoids can be excised (not incised and drained) in the ED to provide prompt relief within the first 48 hours after the onset of symptoms (Fig. 96-4). Incision results in incomplete evacuation of the clot, subsequent rebleeding, swelling, and the formation of a skin tag. If not excised, the thrombosed external hemorrhoid resolves spontaneously after several days when it ulcerates and leaks the dark accumulated blood, with relief of associated symptoms. Residual skin tags may persist, making anal hygiene more challenging. In the ED setting, this procedure is not commonly performed in pediatric patients, pregnant women, or immunocompromised patients.

Nonsurgical therapy with topical nifedipine (0.3%) and lidocaine (1.5%) gel has been shown to alleviate symptoms when applied twice daily for 2 weeks. The purported effectiveness of this regimen for treatment of thrombosed hemorrhoids is related to the ability of nifedipine to modulate resting sphincter tone and thereby reduce the associated pain and inflammation. However, this regimen is not widely used.
Botulinum has been used successfully for adjunctive therapy. In one study, the incidence of side effects was lower directly with that of topical nitrates, the rates of healing and recurrence were similar; however, the efficacy of calcium channel blockers was compared with that of topical nitrates, the rates of healing and recurrence were similar; however, the incidence of side effects was lower in one study.

Injection of botulinum toxin by colorectal surgeons (2.5 to 5.0 units of Botox preparation) is effective in relaxing the sphincter tone by inhibiting acetylcholinesterase release but may cause temporary, reversible fecal incontinence. Injection into the external (rather than internal) sphincter muscles may reduce this undesirable side effect. It has not yet been studied as a primary treatment in the ED or primary care setting. In comparison with the topical treatments, botulinum toxin may provide some advantages in its rate of permanent healing; however, the first line of therapy is still dietary modification and the application of topical agents because of their cost, ease of application, and benign side effect profiles.

Treatment of Specific Abscesses

Perirectal and Perianal Abscesses. Perirectal and perianal abscesses are the most common (40-45%) and produce painful swelling at the anal verge that is worsened by defecating or sitting. Most patients are afebrile. Physical examination reveals localized tenderness, erythema, swelling, and fluctuance. ED management by incision and drainage with same-day discharge is possible in patients who do not have comorbidity (e.g., diabetes mellitus, extremes of age, compromised immune status). Some patients

Abscesses and Fistulae

Principles of Disease

Anorectal abscesses and fistulae occur in otherwise healthy adults when the mucus-producing glands at the base of the anal crypts occlude. Abscesses are a manifestation of inflammatory bowel disease, trauma, cancer, radiation injury, and infection (TB, lymphogranuloma venerereum, actinomycosis). Common causative bacteria are Staphylococcus aureus, Escherichia coli, Streptococcus, Proteus, and Bacteroides. An increased incidence in infants (85% in male babies) has been reported to be associated with congenital abnormalities.

Management

General Approach. Anorectal abscess is an acute disease that usually progresses to fistula formation in the body’s attempt to drain the infection spontaneously. Symptoms vary depending on the site of infection, but incision and drainage constitute the curative treatment in all cases (Table 96-4). Delay of medical management may allow extension of the infection and eventual compromise of the sphincter mechanism. Adjunctive antimicrobial therapy is indicated in patients who are immunocompromised or diabetic or have valvular heart disease. Tetanus immunization status should be verified. The sites of anorectal abscess formation are depicted in Figure 96-6. The difficulty in diagnosis is that pain often precedes physical findings of a mass or fluctuance. Approximately 34% of patients with AIDS develop anorectal abscesses and fistulae, which may include opportunistic organisms in addition to the usual ones. HIV-infected patients appear to be more likely than their seronegative cohorts to have an incomplete fistulous tract. This condition prevents adequate spontaneous drainage, highlighting the urgency of treating these patients promptly. A small incision is desirable, when possible, because wound healing in general may be impaired.

Treatment of Specific Abscesses

Perirectal and Perianal Abscesses. Perirectal and perianal abscesses are the most common (40-45%) and produce painful swelling at the anal verge that is worsened by defecating or sitting. Most patients are afebrile. Physical examination reveals localized tenderness, erythema, swelling, and fluctuance. ED management by incision and drainage with same-day discharge is possible in patients who do not have comorbidity (e.g., diabetes mellitus, extremes of age, compromised immune status). Some patients

### Table 96-4 Types of Abscesses of the Anorectum

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>PERIANAL</th>
<th>ISCHIORECTAL</th>
<th>INTERSPHINCTERIC</th>
<th>SUPRALEVATOR</th>
<th>POSTANAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence</td>
<td>40-45%</td>
<td>20-25%</td>
<td>20-25%</td>
<td>&lt;5%</td>
<td>5-10%</td>
</tr>
<tr>
<td>Location</td>
<td>Outside and verge</td>
<td>Buttocks</td>
<td>Lower rectum</td>
<td>Above levator ani</td>
<td>Deep to external sphincter</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Painful perianal mass</td>
<td>Buttock pain</td>
<td>Rectal fullness</td>
<td>Perianal and buttock pain</td>
<td>Rectal fullness Pain near coccyx</td>
</tr>
<tr>
<td>Fever, ↑ WBCs</td>
<td>−</td>
<td>±</td>
<td>±</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Associated fistula</td>
<td>++</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>−</td>
</tr>
<tr>
<td>ED incision and drainage</td>
<td>+</td>
<td>±</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
</tbody>
</table>

*See Box 96-2.

ED, emergency department; WBCs, white blood cells; −, does not occur; ±, occurs sometimes; ++, occurs often; ++++, usually occurs.
may be unable to tolerate the procedure without general or regional anesthesia. The WASH regimen (see Box 96-2) may alleviate postprocedure discomfort. Antibiotics are unnecessary in healthy adult patients except in cases involving associated cellulitis.35,39

Ischiorectal Abscess. Approximately 20 to 25% of abscesses form outside the sphincter muscles in the buttocks, and patients report severe pain. The diagnosis is obvious if an indurated mass is seen on the buttocks but is more difficult if the abscess is deep. Patients often have fever and leukocytosis. If there is no induration, a needle aspirate can confirm the presence of pus. Although many of these abscesses will require drainage performed with the patient under general anesthesia, superficial abscesses can be treated in the ED as for perianal abscess. If the patient is febrile, a short course of antibiotics, such as cephalexin, may be considered, beginning with a parenteral dose before drainage, followed by 3 to 7 days of an oral agent.39,40

Intersphincteric Abscess. One fourth of abscesses form in the space deep to the external sphincter and inferior to the levator ani. The infection tracks cephalad and may appear to be a mass in the rectum and can be confused with a thrombosed internal hemorrhoid. Patients report continuous rectal pressure and a throbbing pain exacerbated by defecation or sitting. They may have fever and leukocytosis. External evidence of inflammation may be lacking, but rectal examination reveals an erythematous, indurated, sometimes draining mass. Associated fistulae and inguinal lymphadenopathy are common. Drainage in the operating room is required so that the entire abscess and fistula network can be evaluated and treated.35

Supralevator Abscess. Accounting for less than 5% of abscesses, supralevator abscesses cause perianal and buttock pain associated with fever and leukocytosis. External evidence of this disease usually is absent, which often delays the diagnosis. Approximately 23% of patients with this condition are obese or have diabetes mellitus, and others have concurrent disorders such as Crohn’s disease, pelvic inflammatory disease, or diverticulitis. A tender mass may be palpated on rectal or pelvic examination. Emergent surgical treatment is indicated to drain the abscess and excise the fistulous network.35,39

Postanal Abscess. Postanal abscesses are uncommon and occur posterior to the rectum, deep to the external sphincter, and inferior to the levator ani. Patients experience severe rectal discomfort and coccygeal pain. They usually are febrile and have continuous pain that does not change with position. Rectal examination is painful, but anal drainage is rare. Many of these abscesses are missed on initial presentation, and the patient may be misdiagnosed as having lumbosacral strain, proctalgia fugax, sciatica, or coccygodynia. Patients often return in a few days with an abscess draining at the skin. Treatment is surgical.

Horseshoe Abscess. Occasionally a large, communicating, horseshoe-shaped abscess forms in the ischiorectal, intersphincteric, or supralevator space. Surgical management is necessary.

Necrotizing Infection. A delay in management of an anorectal abscess may lead to the destruction of tissue, especially in diabetic or immunocompromised patients. Widespread cellulitis, necrotic tissue, and gas on radiography suggest the possibility of necrotizing fasciitis. Fournier’s gangrene, or tetanus. Wide surgical débridement, broad-spectrum antibiotics with anaerobic coverage, and tetanus prophylaxis are required.

Treatment of Fistulae

A fistula (Latin for “pipe”) is a connection between two epithelium-lined surfaces. Anorectal fistulae develop in 50 to 67% of patients with ischiorectal abscesses.37 Other causes include Crohn’s disease, trauma, foreign body reactions, TB, and cancer. Evidence to support these diagnoses should be sought because the anorectal complaint may be the presenting symptom of the underlying disease. Patients notice a recurrent or persistent perianal discharge that becomes painful when one of the openings becomes occluded. Bidigital rectal examination may reveal a tract in the perineum or canal. Probing of fistulous tracts is not recommended because the danger of creating a new tract outweighs the benefit of identifying the path of the existing fistula. Spontaneous resolution of fistula in ano is rare. Although symptoms resolve when antibiotics are administered (e.g., ciprofloxacin, metronidazole), they commonly return as soon as therapy is discontinued. Increasingly, definitive treatment of the fistulous network at the time of incision and drainage of the abscess is advocated to prevent ongoing progression of the disease continuum. Fistulectomy and application of fibrin glue are commonly accepted practices of colorectal surgeons.35,39,40,41 Nonsurgical treatments that have been proposed for some patients, especially those with Crohn’s disease, are administration of infliximab, a monoclonal antibody, or cyclosporine and hyperbaric oxygen therapy.35
Pilonidal Disease

Principles of Disease

Little nests of hair in the sacrococcygeal area were first described in 1847 by Anderson (Latin pilus, “hair”; nidus, “nest”), who originally believed the lesions to be scrofula.42 More than 150 years later, physicians have yet to agree on the cause and best mode of treatment. Pilonidal abscesses and subsequent sinus tracts afflict young adults with a 4:1 male predominance and are more common in obese and hirsute persons. The disease is rare in people older than 40 years, even among those who were affected in their youth. The lesions arise in the midline of the sacrococcygeal area in the natal cleft and should not be confused with anal fistulae, perirectal abscesses, hidradenitis suppurativa, or granulomatous diseases (syphilis, TB).41 Much of the current understanding of pilonidal disease comes from the experience in World War II, when the condition was rampant among jeep drivers and was therefore dubbed “jeep-driver’s disease.”43,44

The debate between congenital predisposition and acquired disease seems to favor the latter.44-46 This theory asserts that bacteria enter the usually sterile hair follicle and produce inflammation and edema, thereby occluding the opening to the skin surface. The contents expand until the hair follicle ruptures, and the material spreads into the subcutaneous fatty tissue, where a foreign body reaction leads to abscess formation. The purulent material subsequently tracks cephalad and drains to the skin through a laterally displaced, epithelialized tract. Diagnosis is made by establishing the presence of a painful, fluctuant area in the presacral skin. In chronic or recurrent disease, visible or palpable tracts 2 to 5 cm in length may be identified with openings approximately 5 cm above the anus. These sinuses usually contain hairs and cellular debris.43,44

Management

Treatment options vary, ranging from conservative therapy to extensive surgical excision.43,44,47 Antibiotics can supplement incision and drainage in cases accompanied by cellulitis but are not effective as the primary mode of treatment. ED management of pilonidal disease involves drainage of the acute abscess for relief of symptoms. To prevent reaccumulation of debris and to minimize inflammation in the midline, a longitudinal incision lateral to the sacral midline should be made. To decrease the usual 40% recurrence rate, the patient can be referred for follicle removal and unroofing of sinus tracts after the acute inflammation subsides (usually 1 week). An alternate noninvasive strategy of shaving the hairs in the natal cleft every 3 weeks has been reported. For patients whose disease is recalcitrant, unroofing and marsupialization or wide excision techniques are used.47

Hidradenitis Suppurativa

Perianal hidradenitis suppurativa is an infection of the apocrine glands. It is most common in young adults and is related to poor skin hygiene, hyperhidrosis, obesity, acne, diabetes mellitus, and smoking. The condition commonly is misdiagnosed as pilonidal disease or fistula in ano. Other considerations in the differential diagnosis include sebaceous cysts, furuncles, granulomas (from TB or syphilis), and Crohn’s disease. Occluded apocrine ducts may be infected with strains of Staphylococcus, Streptococcus, E. coli, or Proteus. Extension through the dermis spreads the infection to neighboring ducts, and a network of sinus tracts forms. This cycle leads to extensive scarring.40,48

Patients report one or more tender, draining pustules in the perianal area, which may be associated with fever, leukocytosis, and malaise. Local lymphadenopathy and surrounding cellulitis are common. Treatment begins with careful attention to perianal hygiene, warm compresses, and broad-spectrum antibiotics. Recently, infliximab has been found to be effective, resulting in rapid clinical improvement.49 Drainage of isolated lesions may provide symptomatic relief, but the recurrence rate approaches 40%. Referral to a surgeon for wide excision of tissue involved in advanced chronic disease may be necessary.50-52

Proctalgia

Perspective

Anorectal pain (proctalgia) that does not arise from one of the organic disorders described earlier can be severe and difficult to treat.53,54 The two most common causes are levator ani syndrome and proctalgia fugax. These disorders can be distinguished by their patterns of affliction. Other causes of pelvic pain, such as tumors, cauda equina syndrome, and endometriosis, must be considered.55

Levator Ani Syndrome

A constant, dull pressure in the sacrococcygeal region that is precipitated by defecation or prolonged periods of sitting suggests levator ani syndrome. The patient usually has tenderness of the levator muscles, which may be firmly contracted on examination. It affects both men and women. No standard treatment regimen has been studied, but anecdotal reports indicate that sitz baths, levator ani muscle massage, and muscle relaxants can provide some relief.53,54

Proctalgia Fugax

Proctalgia fugax is an intensely painful spasm in the rectal area that begins abruptly and lasts for several minutes. It is attributed to a sudden spasm of the levator muscle complex or the sigmoid colon. People who frequently visit the toilet are at greatest risk, and women are more commonly affected than men. A psychogenic predisposition is described by Pilling and colleagues, who found that professionals, managers, and perfectionists are more likely to be affected.56

Proctalgia fugax can begin abruptly during sleep, defecation, urination, or intercourse. The nature of the pain has been compared to a "charley horse." It lasts less than 30 minutes and may radiate to the coccyx or perineum. Symptoms during recurrent episodes are consistent for the affected person, and each patient has a unique constellation of symptoms.53 Treatment often is unrewarding, but recommendations include bowel cleansing regimens, upward manual pressure on the anus, diazepam, and topical nitrates.54

Fecal Incontinence

Perspective

Fecal incontinence is an embarrassing condition that affects parous women, elderly persons, and patients with a variety of neurologic or traumatic disorders. The delicate balance among the pelvic floor muscles, sphincters, and anorectal sensation is disrupted in this condition. Complete incontinence is the inability to control passage of solid feces. Partial incontinence is characterized by loss of control of the passage of flatus or liquid feces.

Principles of Disease

Multiple causes of fecal incontinence have been described (Box 96-4).55,57,58 Injury to muscles and nerves may result from
accidental trauma or surgery for anorectal disorders. Similarly, injury or stretching during childbirth can cause immediate or delayed problems. Spinal cord and cauda equina lesions and the autonomic neuropathy of diabetes mellitus can cause progressive incontinence. Liquid feces may seep around tumors or foreign bodies of the rectum or anal canal. A common "foreign body" is dysentery. Skin becomes irritated. Patients scratch vigorously in an effort to relieve the itching, creating a vicious circle that results in greater irritation and excoriation. The causes of pruritus ani are summarized in Box 96-5.

Clinical Features

The physical examination should address the local and systemic factors described previously. The anorectum should be assessed for masses, hemorrhoids, evidence of previous surgery, and neuromuscular function. The anocutaneous reflex, or "anal wink," is elicited by touching the skin near the anus with a pin and observing the resulting constriction. Sphincter function is assessed by asking the patient to "squeeze" the examiner's finger.

Management

The approach to management of fecal incontinence depends on the cause. Structural and inflammatory conditions may be diagnosed with anoscopy. In cases of transient incontinence caused by diarrhea, a high-fiber diet along with brief therapy with loperamide or opioids has been shown to solidify stool and enhance rectal compliance.77

Neuromuscular causes of fecal incontinence can be diagnosed by anorectal physiologic testing. In addition to conservative treatment measures described for transient incontinence, Kegel exercises, biofeedback training, or surgical repair may be necessary.57,58,62

Pruritus Ani

Principles of Disease

Patients with pruritus ani complain of an uncontrollable urge to scratch the perianal area. Approximately 1 to 5% of the population seeks medical attention for this condition during their lifetime. Others rely on self-treatment to soothe less severe symptoms. The period of peak incidence is during the fifth and sixth decades of life, and it occurs more often in men. The condition is more common in the summer months and is more noticeable at night. The sensation of itching arises when the richly innervated perianal skin becomes irritated. Patients scratch vigorously in an effort to relieve the itching, creating a vicious circle that results in greater irritation and excoriation. The causes of pruritus ani are summarized in Box 96-5.

The most common cause is the presence of feces on the perianal skin. Conditions ranging from poor personal hygiene to anatomic disorders of the anorectum allow feces to accumulate in the area. Patients may not clean the area thoroughly after defecation. Disruptions in the anorectal anatomy can lead to uncontrollable fecal accumulation on the perianal skin. Obesity, deep perianal clefs, copious hair, hemorrhoids, posthemorrhoidal skin tags, rectal...
Anorectal transmission of STDs is of particular concern in the patient with HIV infection. For patients who are sexually active, the history should ascertain whether sexual practices involve anal penetration and whether condoms are used. As a means of public health prevention of disease and patient safety, education regarding transmission of STDs and the efficacy of barrier methods is important. Semen has a concentrated viral load, and the damaged epithelium of ulcerated anoderm makes an easy portal for entry of the virus. Syphilis, gonorrhea, and chlamydial infection have been documented among men who have sex with men. For this reason, routine STD screening is indicated. A summary of common infections and treatment guidelines is presented in Table 96-5.

Surgical repair for benign anorectal conditions in HIV-positive patients should be undertaken early in the course of the disease, when potential wound healing and overall patient health are at their best. Empirical therapy is indicated for patients who have recently practiced anal-receptive intercourse and have a rectal discharge. The recommended regimen is a single dose of ceftriaxone 250 mg intramuscularly plus doxycycline 100 mg twice a day orally for 7 days. Patients with anorectal infections should be referred for HIV testing. The possibility of sexual assault should be considered and managed appropriately. The health care provider should report STDs and new diagnoses of HIV infection in accordance with state and local health department regulations.

### Treatment of Specific Sexually Transmitted Diseases

#### Gonorrhea

Gonorrhea is caused by the gram-negative diplococcus *Neisseria gonorrhoeae*. Proctitis (inflammation of the rectum) results from anal intercourse or autoinoculation from vaginal secretions and becomes symptomatic after a 5- to 7-day incubation period. Symptomatic patients report pruritus ani, tenesmus, and bloody or thick, purulent yellow drainage. Anoscopy reveals proctitis and mucus in the anal crypts. Recovery of the organism directly from the crypts doubles the likelihood of identifying the organism on Gram stain. Water should be used to lubricate the anoscope because many lubricants contain an antibacterial agent. Signs and symptoms of disseminated gonococcal infection may include arthritis, skin lesions, perihepatitis, endocarditis, and meningitis.

#### Chlamydial Infection and Lymphogranuloma Venereum

Infection with *Chlamydia trachomatis*, an intracellular organism that is endemic to the tropics, is a common STD in the United States. It causes proctitis in people whose sexual practices include anal intercourse or oral-anal contact. Common signs and symptoms include mucoid or bloody rectal discharge and tenesmus. Some people are asymptomatic carriers of the organism. Lymphogranuloma venereum is a more serious manifestation caused by specific strains of *C. trachomatis* and starts as a painful anal or perianal ulceration. Prognostic unnoticed lymph nodes coalesce to form a bubo, which must be distinguished from the granuloma of secondary syphilis. Patients often have systemic complaints of fever and malaise. Anoscopic examination reveals an erythematous, friable mucosa. Rectal cultures generally are unreliable because the organism is intracellular. Diagnosis is best achieved by immunofluorescent antibody testing. In the final stage, rectal strictures and rectovaginal fistulae may form.

#### Herpes Simplex Virus Infection

Herpes proctitis is caused by both HSV-1 and HSV-2, but HSV-2 is responsible for approximately 90% of cases, especially in the HIV-positive population. Herpes genital infections occur in people whose sexual practices include oral-anal contact or anal...
## Table 96-5 Sexually Transmitted Diseases of the Anorectum

<table>
<thead>
<tr>
<th>DISEASE OR CONDITION (WITH SPECIFIC PATHOGEN WHEN KNOWN)</th>
<th>FINDINGS</th>
<th>TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ulcerative Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGV</td>
<td>Unilateral inguinal adenopathy</td>
<td>Doxycycline 100 mg PO bid × 21 days For pregnant patients or those allergic to tetracyclines: Erythromycin 500 mg PO qid × 21 days</td>
</tr>
<tr>
<td>HSV infection</td>
<td>Rectal pain, tenesmus, constipation</td>
<td>First episode: Acyclovir 400 mg PO tid 7-10 days or Acyclovir 200 mg PO 5×/day × 7-10 days or Famciclovir 250 mg PO bid × 7-10 days or Valacyclovir 1 g PO daily for 7-10 days</td>
</tr>
<tr>
<td>Early (primary) syphilis <em>(Treponema pallidum)</em></td>
<td>Chancre Tenesmus, pain, mucoid drainage Inguinal lymphadenopathy</td>
<td>Benzathine penicillin G 2.4 million units IM once</td>
</tr>
<tr>
<td><em>Chancroid (Haemophilus ducreyi)</em></td>
<td>Inflammatory lesion progresses to ulcer Inguinal adenitis—bubo</td>
<td>Azithromycin 1 g PO once or Ceftriaxone 250 mg IM once or Ciprofloxacin 500 mg PO bid × 3 days or Erythromycin 500 mg PO tid × 7 days</td>
</tr>
<tr>
<td>Idiopathic (usually HIV positive)</td>
<td>Eccentric, deep, poor healing, multiple lesions</td>
<td>Symptomatic relief or surgical referral</td>
</tr>
<tr>
<td><strong>Nonulcerative Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condylomata acuminata <em>(HPV)</em></td>
<td>Keratinized vegetative growths in anus or skin Asymptomatic, or pruritus ani, or bleeding</td>
<td>Podofilox 0.5% topically, or cryotherapy</td>
</tr>
<tr>
<td>Gonorrhea <em>(Neisseria gonorrhoeae)</em></td>
<td>Pruritus ani Tenesmus Purulent yellow discharge</td>
<td>Ceftriaxone 250 mg IM once or cefixime 400 mg PO once</td>
</tr>
<tr>
<td>Chlamydial infection <em>(Chlamydia trachomatis)</em></td>
<td>Maculopapular rash Condyloma latum</td>
<td>Azithromycin 1 g PO once or Doxycycline 100 mg PO twice per day × 7 days</td>
</tr>
</tbody>
</table>

*HIV, human immunodeficiency virus; HPV, human papillomavirus; HSV, herpes simplex virus; IM, intramuscularly; LGV, lymphogranuloma venereum; PO, orally.*

Intercourse. Symptoms appear 1 to 3 weeks after exposure. Those with proctitis may have severe rectal pain, bloody mucoid discharge, tenesmus, constipation, sacral paresthesias, or urinary difficulties. Systemic complaints may include fever, malaise, and myalgias. Physical examination and anoscopy may be impossible without anesthesia. Single or coalesced vesicles and ulcerations occur in the perianal area and rectum, and anoscopy reveals an erythematous, friable, ulcerated rectal mucosa. Chronic mucocutaneous HSV infection is considered diagnostic for AIDS. Definitive diagnosis with viral or immunofluorescent staining relies on proper collection of fluid and scrapings from the base of the vesicle.

**Syphilis**

Syphilis is caused by *Treponema pallidum*, a motile spirochete. During anal intercourse, the organism enters the rectal mucosa or anoderm and forms an ulcer (chancre) within 2 to 6 weeks. The chancre heralds the primary phase of syphilis and may resemble an anal fissure. Patients may experience discomfort during defecation, tenesmus, mucoid discharge, and inguinal adenopathy. Primary syphilis can be confused with lymphoma, but the diagnosis can be made by visualizing spirochetes on darkfield microscopy from scrapings taken from the base of the ulcer. Serologic testing is useful several weeks after the appearance of the chancre. Treponemal tests such as the fluorescent treponemal antibody test yield a positive result earlier than does the Venereal Disease Research Laboratory (VDRL) or rapid plasma reagin (nontreponemal) test. Patients with AIDS have a high incidence of neurosyphilis regardless of the stage of syphilis at the time they seek treatment.

If the chancre goes unnoticed, patients may have secondary syphilis on presentation, marked by a maculopapular rash that characteristically involves the palms and soles. Condyloma latum is a spirochete-laden, weeping, verrucous lesion in the perianal area that emits a foul odor. It is easily distinguishable from condyloma acuminatum, which has a drier, more keratinized appearance. Serologic testing results usually are positive. Tertiary syphilis is rare but may manifest as a rectal gumma with severe perianal pain and paralysis of the sphincters, which may be mistaken for anal cancer.

**Chancroid**

Chancroid is caused by the gram-negative bacillus *Haemophilus ducreyi* and begins as an inflammatory pustule or macule that ruptures to form an irregularly shaped ulcer. In several days, painful inguinal adenitis develops. Chancroid often is a diagnosis of exclusion.

**Condyloma Acuminatum**

Condyloma acuminatum, the most commonly encountered anorectal STD, is caused by human papillomavirus. These lesions, also called genital warts, most often are found in homosexual men but can be seen in heterosexual men, women, and children. The mode
of transmission is primarily through sexual intercourse, but transmission can occur through close personal contact, as often happens in pediatric cases in which an infected person is changing a diaper and transmits the virus to the infant because of poor handwashing techniques. It is incumbent on the evaluating physician to consider sexual abuse in such cases. Because one half of HIV-positive patients have anal warts, HIV testing is recommended in patients with this diagnosis.67

The pink-to-gray warts are a result of hyperplastic epithelial growth and appear as vegetative papilliform growths (Fig. 96-7). They may coalesce to form a massive patch that obscures the anal verge.67 Many patients are asymptomatic or report pruritus ani, a “hemorrhoid,” or bleeding. Evaluation should include anoscopy because the warts often grow within the anal canal. Failure to treat the internal lesions results in recurrence.67,70 The differential diagnosis includes the condyloma latum of secondary syphilis and squamous cell carcinoma. Progression to intraepithelial neoplasia has been reported to be related to the level of immunosuppression. Preferred treatment is cryotherapy, but outpatient treatment with 0.5% podofilox solution or gel can be successful in limited cases.67

Ulcerative Lesions in the Patient with HIV Infection

The practice of anal intercourse has led to a proliferation of anorectal STDs. Most patients who are HIV seropositive have current or past infection with an STD, which may be the initial reason for seeking medical attention. One third of anorectal complaints in this population fall into three categories: (1) routine proctologic conditions as seen in the general population, (2) STDs, and (3) opportunistic infections (Box 96-6). The treatment of routine conditions and common STDs is similar to that in other patients except that wound healing may be slower in HIV-infected patients.

In immunocompromised patients, the differential diagnosis of ulcerative anorectal lesions should include opportunistic infections, lymphoma, and Kaposi’s sarcoma. Patients with AIDS often exhibit idiopathic anal ulcerations with pain and bleeding. Before this diagnosis is made, other possible causes of the lesions must be considered (see Box 96-6). Symptomatic relief can often be achieved with the WASH regimen (see Box 96-2), but recalcitrant lesions may require surgical excision.67,70

Radiation Proctitis

Radiation-induced injury of the rectum is often caused by treatment of gynecologic, urologic, and GI malignancies. Immediate radiation proctitis usually is self-limited and responds to symptomatic treatment. Delayed radiation proctitis can manifest up to 2 years after the exposure to radiation and may predispose the patient to subsequent rectal malignancies as a result of damage to DNA.

Signs and symptoms of radiation proctitis include bleeding ranging in severity from spotting to hemorrhage, tenesmus, diarrhea, pain, fistula in ano, and rectal strictures. Diagnosis is achieved by rectal mucosal biopsy, a procedure best performed with the patient under sedation or anesthesia.

Treatment regimens include the use of anti-inflammatory agents, botulinum toxin injection, enemas with short-chain fatty acids, oral sulcrate therapy, hyperbaric oxygen therapy, and sclerosing therapy.72-75 Supportive therapy can be given for symptoms that the individual patient experiences.

Procidentia

Rectal prolapse, or procidentia, is a disease of persons at the extremes of age. Prolapse is complete if all bowel layers protrude and incomplete if only the mucosal layer is involved. In adults, complete procidentia is most common among older women with a history of excessive straining while defecating. The cause is a laxity of attachment structures, and the rectal prolapse often is accompanied by uterine prolapse or cystocele. Patients report an anal mass that protrudes during defecation, coughing, or sneezing. Findings may include fecal incontinence, bloody or mucoid discharge, and a foul odor. In some cases the patient is able to reduce the prolapse manually, whereas in others the tissue becomes edematous and a red, ulcerated mass protrudes from the anus (Fig. 96-8). Sphincter tone may be weakened. Reduction may be attempted; when this is successful, the patient should be discharged with agents to relieve constipation. Surgical repair often is necessary.76,77

In children up to 4 years of age, procidentia often is associated with chronic constipation or diarrheal disease. However, it may herald the presence of malnutrition, parasitic infection, or cystic fibrosis.78 Children usually have a mucosal prolapse. The parent reports protrusion during defecation with small amounts of mucus or blood. This condition must be distinguished from a protruding juvenile polyp and intussusception. Gentle reduction may be attempted. Conservative medical management aimed at the cause of procidentia often is successful because of the self-limited nature of the condition in children. Increasing the dietary fiber and fluid intake frequently is successful as a first line of therapy.77,78
Box 96-6  Anorectal Lesions in the Patient with HIV Disease

**Common Conditions**
- Anal fissure
- Abscess and fistula
- Hemorrhoids
- Pruritus ani
- Pilonidal disease

**Common STDs**
- Gonorrhea
- Chlamydial infection
- Herpes
- Chancroid
- Syphilis
- Condyloma acuminatum

**Atypical Conditions**

**Infectious**
- TB, CMV infection, actinomycosis, cryptococcosis

**Neoplastic**
- Lymphoma, Kaposi's sarcoma, squamous cell carcinoma

**Other**
- Idiopathic anal ulcer

*CMV, cytomegalovirus; HIV, human immunodeficiency virus; STD, sexually transmitted disease; TB, tuberculosis.*

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**Anorectal Foreign Bodies**

### Perspective

Anorectal foreign bodies may result from the use of the anus for sexual gratification, although they also are found in children, psychiatric patients, and victims of assault or iatrogenic injury. Most objects are introduced directly into the anus, but some become lodged there after oral ingestion. It is important to identify and remove foreign bodies to prevent mucosal lacerations, intestinal perforation and obstruction, sepsis, and peritonitis. In many cases, removal can be done safely in the ED.

### Clinical Features

**Objects Inserted into the Anus.** Rarely, a foreign body such as an enema tip or broken rectal thermometer is introduced iatrogenically. In most cases the foreign body is placed deliberately by the patient or a partner for medicinal or sexual purposes. Objects that are commonly retrieved include fruits and vegetables; household items, especially those whose dimensions resemble the penis; and items purchased specifically with an anal erotic intent. By the time patients arrive at the ED, sometimes days after the introduction of the foreign body, they have likely tried to remove it at home. The history of the injury often is reluctantly given or is vague and inconsistent. The initial ED evaluation, conducted in a nonjudgmental manner, attempts to ascertain the type of foreign body involved, how long it has been there, what attempts have been made to remove it, and whether the patient has fever, abdominal pain, or rectal bleeding. The possibility of assault should be considered.

Physical examination of the anorectum begins with an external examination for signs of trauma followed by digital rectal examination and anoscopy, which may reveal the foreign body, a lax sphincter, or a mucosal injury. Abdominal examination may demonstrate signs of perforation or obstruction. The foreign body may be visible on abdominal radiographs, or its presence may be inferred by a nonspecific gas pattern, free air, or signs of intestinal obstruction. If perforation is suspected, water-soluble contrast material can be introduced to delineate radiolucent foreign bodies.

**Orally Ingested Foreign Bodies.** Some foreign bodies that are ingested orally, especially toothpicks and fish or chicken bones, pass through the GI tract and subsequently become lodged in the rectum or anal crypts. Patients at highest risk for ingested foreign bodies are children, especially those in the first 2 years of life; psychiatric patients; and body packers who ingest condoms containing drugs.

### Management

Optimal treatment depends on the location and type of object found. In general, objects that are soft and low-lying (less than 10 cm from the anal verge) can be removed safely in the ED. Large, hard, fragile objects and those that have migrated proximally are difficult to remove without anal dilation and instrumentation to assist in the passage through the sacral curve and sphincters. These are best performed with the patient under general anesthesia. As a rule, however, the patient should remain awake to assist in expulsion by performing the Valsalva maneuver at the appropriate time, and premedication with a benzodiazepine is helpful to relax both the sphincter and the patient. With the patient in the lithotomy position, suprapubic pressure can assist in removal (Fig. 96-9). Other positions may be more appropriate for a particular foreign body.

Several methods are effective for removal. The easiest is to grasp an edge of the foreign body with forceps and apply traction while the patient bears down. Most foreign bodies in the rectum do not have a convenient place to grasp, and other methods are needed. A Foley catheter can be placed beside the foreign body and the balloon inflated proximal to it (Fig. 96-10). This breaks the suction of the rectal wall mucosa and provides a way to guide the object out of the rectal vault. Hollow objects may be filled with plaster of Paris, with an inset, inflated Foley catheter to be used as a handle.

Other creative ways to remove foreign bodies in the ED have been successful, and an individualized strategy for each patient is essential. After the removal of the foreign body, all patients should undergo sigmoidoscopy to look for mucosal tears and perforations. Discharge instructions should warn the patient about signs and symptoms of perforation, peritonitis, and sepsis.
Patients who seek treatment for nonspecific anorectal complaints should be evaluated for the presence of underlying systemic disease (e.g., cancer, diabetes mellitus, immunodeficiency) because disorders of the anus may herald associated conditions.

Patients with any STD should be evaluated for HIV infection and questioned about the use of the anus for sexual purposes.

Anorectal conditions can be differentiated according to an algorithm (see Fig. 96-2) that addresses the presence or absence of pain, bleeding, swelling, and pruritus, in combination with an assessment of the patient’s overall health.

Most anorectal conditions can be symptomatically improved by adherence to the WASH regimen (warm water, analgesics, stool softeners, high-fiber diet).

The references for this chapter can be found online by accessing the accompanying Expert Consult website.
References