

## 1: Inflammatory and Neoplastic Disorders of the Anal Canal | Clinical Gate

*Benign anal disorders can present with a broad variety of symptoms, ranging from itching to anal pain to profuse bleeding. With such a wide array of symptoms, many of which can portend more malignant disease, it is important for the practitioner to be familiar with the more common benign anal conditions so that the patient can be efficiently.*

**Anal fissure** Definition An anal fissure is a linear tear or superficial ulcer of the anal canal, extending from just below the dentate line to the anal margin Anatomy of the rectum and anal canal. It usually occurs in the midline posteriorly, or sometimes anteriorly in females, particularly after a pregnancy. Anatomy of the rectum and anal canal. Aetiology Although the precise aetiology is unknown, it is usually related to constipation and trauma to the anal canal from a hard stool. Hypertonia of the internal anal sphincter with an associated raised anal resting pressure is common. Symptoms The cardinal symptoms are severe anal pain during and immediately after defecation and anal outlet bleeding. The pain is so intense that the patient is afraid of and consequently avoids opening the bowels. The pain has been attributed to spasm of the internal sphincter. Diagnosis The diagnosis is readily made on inspection. Anal fissure may be acute or chronic. Chronic anal fissure is associated with a sentinel skin tag at the anal margin and a hypertrophied anal papilla at the upper end of the anal canal. If the diagnosis is suspected on history and visual inspection of the anus, then it is important not to proceed to digital examination of the rectum: Inspection is the most important step in the diagnosis of anal fissure. This is performed with the patient in the left lateral position with the buttocks protruding well beyond the edge of the examining table. Good light must be made available. The buttocks are gently stretched apart and, providing the examiner is looking, a fleeting glimpse of the fissure will be obtained before sphincter contraction causes it to be withdrawn from view. These fissures are deep, with indolent edges, tend to be multiple and occur at atypical sites; they are relatively painfree. Neoplastic ulcers are usually due to squamous cell carcinoma. The ulcer is deep and has heaped-up edges. Other conditions that may have to be considered include sexually transmitted diseases syphilis and HIV. Treatment The principal aim is to relax the internal sphincter, thereby relieving pain which is due to spasm of that sphincter. Conservative treatment Conservative treatment includes the application of topical anaesthetic and hydrocortisone ointment, and a high-fibre diet to increase stool bulk so that the stool itself dilates the sphincter. Glycerine trinitrate paste 0. It may also cause severe headache. More recent examples of chemical sphincterotomy include the use of calcium channel blockers and botulinum toxin. Surgical treatment Lateral internal anal sphincterotomy is the procedure of choice for chronic anal fissure or an acute fissure that remains severely symptomatic after a prolonged course of non-operative measures. The aim of surgery is to break the vicious cycle of internal sphincter spasm. The distal internal sphincter, up to but not above the dentate line, is divided under anaesthesia Lateral sphincterotomy for chronic anal fissure. This procedure offers almost immediate relief of pain. The large sentinel skin tag and hypertrophied anal papilla are excised. After sphincterotomy, the patient should be put on a high-fibre diet. In this regard, sphincterotomy performed through the base of the fissure is best avoided. Lateral sphincterotomy for chronic anal fissure. Some surgeons have advocated anal dilatation using six or eight fingers instead of sphincterotomy. This technique is imprecise and associated with a high prevalence of incontinence of both faeces and gas. It has no place in the modern management of anal fissure. Perianal abscess Aetiology Perianal abscess is a common condition that is usually due to a blocked anal gland Spread of infection A from the primary anal gland abscess and B to the perianal region. The abscess may discharge spontaneously to the skin, and if a communication to the skin is established then a fistula may result. Spread of infection A from the primary anal gland abscess and B to the perianal region. Classification Although most abscesses are perianal, sepsis can occur either above or below the levator muscle, in the intersphincteric space, submucosally or in the ischiorectal space Types of perianal abscess: A ischiorectal, B perianal, C intersphincteric, and D submucosal. Abscesses that involve the upper portion of the anal sphincters are complex and require specialist management. Types of perianal abscess: Diagnosis The diagnosis is readily made from a history of throbbing pain and visual inspection, which demonstrates localised swelling, tenderness and redness. A large or a deep-seated abscess, such as an ischiorectal abscess, often presents with

systemic symptoms of sepsis and fever. Investigations A full blood count and blood glucose level measurement should be performed. Treatment The most common practice is to incise and drain the abscess under local anaesthesia. Antibiotics are used if the sepsis is extensive or if the patient is immunocompromised. There is little role for antibiotics in the primary management of perianal abscess of cryptoglandular origin. It is usual to leave a small drain or packing gauze in the abscess cavity for a few days postoperatively. Bigger and deeper abscesses, such as an ischiorectal abscess, are drained under general anaesthesia. Perianal abscesses must be drained with optimal preservation of underlying anal sphincters. A sigmoidoscopy to examine the rectal mucosa should be performed in this situation. It is important to recognise these complex or horseshoe ischiorectal abscesses so as not to damage the anal sphincter. Simple drainage will suffice, followed in a few weeks by a more sophisticated test such as an endorectal ultrasound, and a further examination under anaesthesia if discharge persists. Should this happen, an examination under anaesthesia should be performed after the abscess has been drained to determine whether a fistula is indeed present.

**Fistula-in-ano Definition** A fistula is an abnormal communication between two epithelial-lined surfaces. A fistula-in-ano implies a communication between the anorectum and the perineal skin.

**Aetiology** The causes of fistula-in-ano are given in Aetiology of fistula-in-ano.

**Aetiology of fistula-in-ano Idiopathic.** In most patients the exact cause cannot be determined but is probably related to anal gland infection. An anal gland abscess may spontaneously track and discharge onto the perineal skin. Some fistulas, especially those with a high internal opening, may be caused inadvertently during drainage of a perianal abscess or fistula surgery. Occasionally a chicken or fish bone may get stuck in the anal canal and cause a fistula.

**Classification** The most important determinant of a fistula-in-ano is whether its internal opening is below or above the anorectal ring

**Types of perianal fistulas:** A intersphincteric, B trans-sphincteric, C supra-sphincteric, and D extra-sphincteric. Those below are low fistulas and those with an internal opening above the levator are high fistulas. In general terms, low fistulas tend to be either idiopathic or associated with anal gland infection, and high fistulas have other, more serious aetiological associations.

**Types of perianal fistulas:** The line of communication between the internal and external openings is not always direct, and may indeed be very tortuous. Goodsall observed that when the external opening was anterior to the anus, it communicated directly with the internal opening; while when the external opening was posterior to the anus, the internal opening tended to occur in the midline posteriorly. This may produce complex fistulas with a horseshoe configuration with blind tracks on either side communicating with the anus in the midline posteriorly, and probably result from an abscess in the postanal space.

**Symptoms** The patient may present with recurrent perianal abscesses or with a bloody and purulent discharge. Pain and discomfort are usual. A careful history may elicit symptoms of inflammatory bowel disease or other conditions.

**Diagnosis** The diagnosis is usually confirmed by examination. An external opening is usually readily visible. The track leading to the internal opening is sometimes palpable and, with experience, the internal opening may sometimes be identified on rectal examination. Whenever possible, it is important to determine by examination the level of the internal opening in relation to the levator mechanism.

**Investigations** Sigmoidoscopy is necessary to examine the mucosa of the rectum to exclude inflammatory bowel disease. If the latter is suspected then colonoscopy and a small bowel series should be performed to determine the extent of the disease. Examination under anaesthesia is very useful, especially in patients with complex or high fistulas. A fistulogram may be useful in identifying the extent of complex fistulas. Endoluminal ultrasound and magnetic resonance imaging MRI are proving very useful in patients with complex fistulas as they clearly demonstrate the relationship of the fistula track to the levator mechanism and anal sphincters.

**Treatment** Spontaneous healing of perianal fistula is rare. Surgical treatment is usually required. The key to management includes identification of the fistulous tracts and their relationship with the anal sphincters. This allows the track to heal by secondary intention. Special assessment of the adequacy of the sphincter mechanism should be considered in females who have had several vaginal deliveries because occult injuries to the anal sphincters and pudendal nerve may already be present.

**High fistula** Fistulotomy is contraindicated if the internal opening is above the levator mechanism. In these patients fistulotomy would include division of the levator, which would result in incontinence. Caution should be exercised when more than one-third of the external anal sphincter needs to be divided. To avoid this serious complication it is useful

to insert a seton between the two openings: The seton may act as a drain and if it is progressively tightened it may gradually divide the muscle while allowing it to heal by fibrous tissue formation. Alternatively, the seton downstages the sepsis and facilitates subsequent repair of the fistula with an advancement rectal flap. Occasionally, with more complex fistulas, a proximal stoma is constructed to divert the faecal stream, in addition to other local surgical manoeuvres. Anovaginal and rectovaginal fistulas Special mention is made of anovaginal and rectovaginal fistulas because they are not uncommon and are usually very distressing to the patient. Aetiology Obstetrical trauma is the most common cause. This may be related to either a tear during delivery or an inappropriately sited episiotomy or one that may not have been expertly repaired.

### 2: Perianal Gland Tumor in Dogs - Symptoms, Causes, Diagnosis, Treatment, Recovery, Management, Co

*In addition, many other diseases and disorders may be responsible for anorectal pain, including anal fissure, proctitis, solitary rectal ulcer, and coccygodynia. Gynecological conditions and urologic disorders (e.g., chronic prostatitis) may also be confused with chronic proctalgia.*

J Am Board Fam Pract ;4: Patients may use the term to indicate the lack of an urge to defecate, a decreased frequency of bowel movements, difficulty in passing hard scybalous stools, the sensation of incomplete evacuation or prolonged straining at toilet. In general, constipation is regarded as fewer than three bowel movements per week in a person consuming at least 19 g of fiber daily. This condition can be due to diet, medications, functional disturbances, endocrine and metabolic disorders, collagen vascular disease, central or peripheral neuromuscular disorders or colonic inertia. It is imperative that the clinician rule out obstructing lesions or painful anal lesions. It is common in bedridden or nursing home patients or after a cerebral vascular accident and is the most common gastrointestinal disorder occurring in patients with a spinal cord injury. Medications such as narcotics predispose to this problem, and it is a common complication of anorectal procedures as a result of reflex spasm of the anal sphincter. The patient may present with acute abdominal pain or chronic large-bowel obstruction. Rectal examination reveals hard, bulky stool. Medical therapy is usually attempted first in an otherwise ambulatory patient. Careful administration of one or two enemas Fleet into the bolus to soften and hydrate the stool should be followed one hour afterward by the administration of a mineral oil enema to assist in passage of the softened stool. Manual disimpaction is required in most patients. This may require a circumanal block of the anal musculature with local anesthetic. A four-quadrant field block allows for complete muscle relaxation and a painless disimpaction. If impaction recurs, it is important to rule out an anatomic cause of obstruction such as an anal or rectal stricture or tumor. Normal continence depends on many interrelated factors, including stool volume and consistency, colonic function, rectal compliance, rectal sensation and sphincter function. Patients may be partially or completely incontinent. It is important to rule out fecal impaction with overflow before seeking a pathophysiologic cause for uncontrolled passage of liquid stool. Patients at risk for fecal incontinence include the elderly, mentally ill and parous women, particularly those with a history of sphincter damage during delivery. Fecal incontinence with significant decrease in sphincter tone can be caused by any prior anorectal operative procedure or birthing injury. Obstetric injury can include direct sphincter disruption usually anterior or injury to the pudendal nerves. Not uncommonly, these may occur simultaneously. Neuropathy, particularly that associated with diabetes mellitus, can result in fecal incontinence. Other causes include rectal prolapse, diarrheal states, radiation injury to the rectum and overflow fecal incontinence secondary to impaction. Digital examination of the patient with fecal incontinence includes palpation for muscle defects of the sphincter, assessment of resting and squeeze pressures of the sphincter, and testing of the sensory anocutaneous reflex. In selected cases, additional studies may include anal manometry to objectively measure sphincter pressures, endo-anal ultrasonography to morphologically visualize the sphincter searching for discrete defects, and electromyelographic or pudendal nerve terminal motor latencies to assess denervation injury. Treatment is generally directed at the underlying cause and minimizing symptoms. Discrete muscle injuries are usually best treated by surgical sphincter repair. Fecal incontinence secondary to neuropathy is treated with bulking and antimotility agents. Pelvic floor strengthening with biofeedback is also a useful modality. Read the full article. Get immediate access, anytime, anywhere. Choose a single article, issue, or full-access subscription. Earn up to 6 CME credits per issue.

### 3: Benign Diseases of the Anus and Rectum | Mount Sinai - New York

*Ano-rectal disorders are common but symptoms are under-reported. In one study, 2% of general practice consultations were booked due to anal symptoms, but 10% of patients reported anal symptoms following questioning at consultation.*

Often a urinalysis is performed, as well as blood work that can reveal an elevated blood calcium level, a sign of these types of growths. Many perianal gland tumors will be benign, but a small percentage of these growths can be malignant. A tissue sample by a fine-needle aspirate or by a surgical biopsy will be examined under the microscope to determine what kind of tumor your dog has. Chest and abdominal X-rays and ultrasounds can also help to determine if the tumors have spread, such as to the lymph nodes or prostate gland. Treatment of Perianal Gland Tumor in Dogs Treatment for these tumors can vary, and can be more difficult if they have spread. For intact, male dogs, the primary treatment is the removal of one or both testes. This eliminates much of the testosterone, which can result in regression of small and benign tumors. Your dog is monitored after castration to assess if further removal is necessary. In both male and female dogs, small tumors can also be removed with cryotherapy, which freezes off the masses. For larger or malignant tumors, surgical removal may be necessary. Fecal incontinence can result from surgery due to damage to the sphincter muscle which is next to the perianal gland. Chemotherapy and radiation therapy may also be prescribed in addition to castration, and are generally given over several weeks. Estrogen therapy can be administered to shrink tumors, and is used especially in cases where castration is not an option in male dogs. A side effect of estrogen therapy is a life threatening condition of bone marrow suppression. Supportive treatments can include soothing creams for irritated anal skin, and medications to reduce blood calcium levels, improve kidney function, and alleviate pain and nausea. Your dog may need post-operative care, and should be seen by your veterinarian in 1 to 3 months to monitor tumor regression. In a small percentage of cases, tumors may recur, but can be treated. If your dog has a malignant tumor, post-operative care may be longer and more intense. You may need to monitor your dog for complications, such as infections and fecal incontinence. Your dog may need frequent veterinary visits for treatments. Recovery is poor, as many dogs can die from the effects of the tumors within a year from diagnosis, or are euthanized.

### 4: PPT " Benign Anorectal Diseases PowerPoint presentation | free to view - id: 3ffcZGFmN

*Benign anorectal conditions produce anal pain, rectal bleeding, or discharge from the perianal region, which are highly prevalent symptoms in the general population. Hemorrhoidal disease, anal fissure, perianal abscess, proctalgia syndromes, and pruritus ani are the most common clinical disorders.*

Many Americans have difficulty moving their bowels. Many things contribute to this problem. Some causes include diet and activity level and others are unknown. This article will describe some of the more common bowel problems.

#### Anatomy and physiology

The large bowel consists of the colon 5 feet long and the rectum 8 inches long. Many times the rectum is referred to as the opening where stool emerges, but that is actually the anus. The rectum is 4 inches long and just upstream from the anus. Just upstream from the large bowel is the small bowel. The rectum coordinates the process of evacuation. Normally, a person can pass up to grams of solid stool daily. However, there is a lot of variation in the amount of stool a normal person passes. This can vary from 3 times daily to 3 times per week. These are the most common problems affecting the colon and rectum. The direct cause is frequently unknown.

#### Constipation

Constipation is defined as small, hard, difficult, or infrequent stools. Constipation may be caused by: Inadequate "roughage" or fiber in the diet Not enough oral fluid Poor habits, especially delaying using the toilet

#### Movement problems in the large bowel, including slow or uncoordinated movement

A person who is constipated may strain during a bowel movement or just pass very hard stool. Passage of hard stool may contribute to the development of anal problems such as fissures painful cracks in the anal tissue lining or hemorrhoids.

#### Irritable bowel syndrome sensitive colon; spastic colon

Irritable or sensitive bowel is a condition in which the colon muscle contracts in an abnormal fashion, which may lead to several problems. Some patients have predominantly diarrhea ; others have constipation; and others alternate between constipation and diarrhea. The abnormal contraction can lead to high pressure that builds up in the colon causing abdominal cramps , gas , bloating, and sometimes extreme urgency. Treatment includes avoiding foods that make the problems worse, tailoring diet to the particular symptoms, managing stress , and medications.

#### Structural disorders

Structural disorders are those in which there is something visually abnormal that may need to be removed, altered, or repaired by an operation. These may include removing a portion of the colon for diverticulitis or for a cancer.

#### Anal disorders

##### Internal hemorrhoids

Internal hemorrhoids are normal blood vessels that line the inside of the anal opening. We are born with them. They are thought to be the fine-tuning mechanism that allows us to contain gas and avoid passing it until we feel it is socially acceptable. When they become enlarged as a result of straining or pregnancy , they may become irritated and start to bleed. Occasionally internal hemorrhoids can become enlarged enough to protrude outside the anal opening. New treatments are being developed all the time. Traditional care has included improving bowel habits, using elastic bands to pull the internal hemorrhoids back into the rectum, or removing them surgically. There are new devices that use sound waves to discover exactly where the excessive blood flow is occurring into these vessels and allow the doctor to specifically tie off the area. Doctors can examine patients and pick the treatment that would best treat their problems.

##### External hemorrhoids

External hemorrhoids are veins that lie just under the skin on the outside of the anus. Usually they do not cause any symptoms. Occasionally a blood clot can form and can be very painful. Many times this will get better on its own. These are not dangerous blood clots that can travel to other organs. The biggest concern they raise is pain.

#### Anal fissure

An anal fissure is a split or tear in the lining of the anus that occurs after trauma, which can be from a hard stool or even diarrhea. As a result, the person experiences bleeding and intense burning pain after bowel movements. The pain is caused by spasm of the sphincter muscle, which is exposed to air by this tear. The pain with bowel movements has been described as the feeling of passing razor blades. Fissures are the anal problem misdiagnosed most commonly. They frequently are mistaken for hemorrhoids. Fissures often get better by themselves. In certain cases, surgery may be recommended if the tear does not heal due to excessive sphincter spasm.

#### Perianal abscess

Our anal region has tiny glands that open on the inside of the anus and probably aid in passage of stool. When one of these glands becomes blocked, an infection may develop. When pus forms, there is an abscess a pocket of pus. This is termed a fistula-in-ano.

Fistulas drain mucous fluid onto the skin and blood. They rarely heal by themselves and usually need surgery. Other perianal infections Between the anal area and the tailbone, hair in this region can burrow under the surface and causing infection. This is called pilonidal disease. It may present as abscess in this area just below the tailbone or small draining openings. Usually surgery is needed to treat this problem. Sexually transmitted diseases that can affect the anus include herpes , AIDS , chlamydia , and gonorrhea. Anal warts that are small growths on the anal skin that look like tiny pink cauliflowers and are caused by a virus HPV. Colon and rectal disorders Diverticular disease Colonic diverticula are little out-pouchings or sacs in the bowel lining that occur when the lining gets pushed through weak spots in the muscle of the bowel wall. They usually occur in the sigmoid colon, where the large bowel exerts the highest pressure. Diverticular disease is very common in Western societies and may be due to low-fiber Western diets. Diverticula rarely cause symptoms unless one of the sacs gets blocked and infected. Occasionally, bleeding will occur in this area. Surgery is needed in about half the patients who have complications of their diverticula. Polyps and cancer Cancer of the colon and rectum is a major health problem in America today. It occurs when there is a complete loss of control of the way lining cells of the large bowel grow and divide. Many things contribute to this loss of control. Some of these things are in our environment, some are contained in our diet, and some are in our genetics what we inherit from our parents. The first abnormality seen in this pathway when the control of the lining cells is first affected is a polyp. A polyp is a small growth that may look like a mushroom protruding from the lining tissue of the large bowel. There are many types of polyps and not all are the type that can turn into cancer. However, removing these polyps before they develop severe changes and grow can prevent the progression to cancer. When cancer develops surgery is required for removal. Chemotherapy may be recommended for cancer of the colon or rectum. Certain cancers of the rectum may require radiation treatment. With prompt, expert treatment, most people can be cured of colorectal cancer. Many people are worried about the risk of having a colostomy or bag on the abdominal skin to collect stool. Hardly anyone needs a permanent colostomy. Because colorectal cancer comes from polyps, colonoscopy can prevent colorectal cancer by finding and removing polyps. People at special risk for colorectal cancer include those who have had polyps or cancers in the past, or those who have a history of colorectal cancer in their family. Indeed, the decreased incidence of colorectal cancer in the U. Colitis Colitis is a group of conditions that cause inflammation of the large bowel. There are several types of colitis, including: Treatment depends on the diagnosis, which is made by colonoscopy and biopsy. Summary Many diseases of the colon and rectum can be prevented or treated by seeking prompt medical care. Most importantly, colon cancer is a preventable disease. The most important risk factor is having a direct family member who had colon cancer. Discussion with your doctor can determine when you need an evaluation usually a colonoscopy to look for polyps. For people with no family history and no symptoms, the current recommendation is that everyone should have their first colonoscopy at age People who have symptoms of any of these conditions should consult their doctor without delay.

### 5: Digestive Diseases: Rectal & Colon Diseases | Cleveland Clinic

*Chapters cover the entire range of benign disorders such as hemorrhoids, fissure, fistula-in-ano, anorectal injuries, anal incontinence, rectal prolapse, pelvic floor disorders, benign tumors and ulcers, and strictures.*

### 6: Anal and perianal disorders - SurgWiki

*This chapter describes common benign anorectal disorders and their medical (and surgical) treatment. These disorders include anal fissure, anal stenosis, anal abscess, constipation, fecal incontinence, hemorrhoids, hidradenitis suppurativa, nonrelaxing puborectalis syndrome, perianal Crohn's.*

### 7: Common Anorectal Conditions: Part I. Symptoms and Complaints - - American Family Physician

*Pruritus ani, known as perianal dermatitis, is a benign condition that presents with intense perianal itching and burning. It*

*is the second most common anorectal condition after hemorrhoids and affects up to 5% of the US population. 2,9,11,*

### 8: Bayside Animal Hospital, Inc. - Veterinarian In Cambridge, MD USA :: Perianal Tumors

*Common anorectal conditions include hemorrhoids, perianal skin tags, fissures, pruritus ani, perianal abscess, and condyloma. Most are benign and can be managed in the primary care setting. Before a provider can competently diagnose and treat anorectal conditions, however, a comprehensive history and physical examination must be conducted.*

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