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A review of proctological disorders

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Abstract. – Ano-perianal lesions are essential part of the family practice setup. Patients usually present with symptoms like pain, bleeding, pruritus, and constipation.

In the modern era, the patients prefer a conservative therapy or else they opt for a quick office procedure to get rid of the symptoms. Newer pharmacological therapies and a handful of simple and safe office procedures have emerged in the last decade for treatment of ano-perianal lesions. A judicious application of these techniques has been found successful in tackling most of the proctological ailments.

Complicated or advanced pathologies, however, require an expert opinion and it is desirable that such patients are referred to the care of colorectal clinics.

This paper describes presentation symptoms, approach towards diagnosis, and various therapeutic modalities of common anal disorders commonly seen in a developing country.

Key Words:

Proctology, Family practice, Office treatment, Ano-perianal disorders.

Introduction

The prevalence of anal pathologies in general population is probably much higher than what is seen in clinical practice, since most patients with symptoms confined to the anorectum tend to shy away and do not seek medical attention[1].

A primary care physician frequently faces difficult questions concerning the optimum management of ano-perianal symptoms. While the examination and diagnosis of certain ano-perianal disorders is challenging, most of the common disorders of the ano-rectum can be easily recognized with a careful local examination and proctoscopy[2].

On a rough estimate, more than 81% of the complaints centering on this part of human anatomy are occupied by disorders like hemorrhoids, fissures, and pruritus ani[3].

This brief treatise discusses various ano-perianal lesions and an approach to their diagnosis and treatment.

The Anal Canal

The anus is the outlet to the gastrointestinal tract, and the rectum is the lower 10 to 15 cm of the large intestine. The anal canal starts at the ano-rectal junction and ends at the anal verge. The average length of the anal canal is 4 cm. The midpoint of the anal canal is called the *dentate line*. This dentate or pectinate line divides the squamous epithelium from the mucosal or columnar epithelium. Four to eight anal glands drain into the crypts of Morgagni at the level of the dentate line. Most rectal abscesses and fistulae originate in these glands. The dentate line also delineates the area where sensory fibers end. Above the dentate line, the rectum is supplied by stretch nerve fibers and not the pain nerve fibers. This allows many surgical procedures to be performed without anesthesia above the dentate line[4]. Conversely, below the dentate line, there is extreme sensitivity, and the perianal area is one of the most sensitive areas of the body. The evacuation of bowel contents depends on action by the muscles of both the involuntary internal sphincter and the voluntary external sphincter.

Symptomatology of the Ano-Perianal Lesions

While in most of the time, patients with ano-perianal pathologies presents with typical symptoms, at times these may be misleading due to the patient's inability to explain or his understatement or underplaying of symptoms[5].

The common symptoms denoting ano-perianal pathology are listed (in order of frequency) in Table I.

A systematic approach to the patient with anorectal complaints allows for an accurate and efficient diagnosis of the underlying problem.

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Table I. Symptomatology of ano-perianal pathologies.

- Anal Pain
- Bleeding per rectum
- Pus discharge from and around anus
- Prolapse
- Anal pruritus
- Presence of swelling or lump in or around anus
- Constipation or fecal obstruction
- Difficulty in passing stool
- Incontinence to flatus or feces

The process can be divided into the interview, the examination, and conveyance of information[6]. Throughout this process, the patient must be reassured and made as comfortable as possible.

The key to diagnosis lies in the patient history, with confirmation by visual inspection and anoscopy. Expensive workups are usually not required. Based on the symptoms and possible differential diagnosis, further investigation may be necessary[7]. The common ano-perianal lesions encountered in the family practice are listed (in order of frequency) in Table II.

Anal Pain (Table III)

This is the commonest complaint among the patients attending a proctology clinic[8].

Table II. Common ano-perianal lesions.

Commonest

- Hemorrhoids (internal or external)
- Anal fissures (acute or chronic)
- Anal fistula (low or high)
- Abscesses (perianal, ischio-rectal, submucus)
- Polyps (adenomatous, fibrous anal)
- Anal skin tags or sentinel pile
- Ano-perianal sepsis (hydradenitis suppuritiva, AIDS, syphilis)

Less Common

- Sacro-coccygeal pilonidal sinus disease
- Neoplasms (benign or malignant)
- Condylomas
- Connective tissues masses like papilloma, fibroma, and lipoma
- Antibioma (organized abscess)
- Inflammatory conditions (anal cryptitis and papillitis)
- Hypertrophied anal papillae.

Uncommon

- Strictures of anal canal
- Incontinence (flatus or feces)

Table III. Causes of anal pain.

- Anal fissure (acute or chronic)
- Perianal hematoma
- Anal sepsis
- Prolapsed and thrombosed hemorrhoids
- Anal fistula
- Anal malignancy
- Thrombosis in internal hemorrhoids (acute attack of piles)
- Functional disorders (proctalgia fugax and Levator ani syndrome)
- Presence of foreign bodies in the anus

Pain during bowel movements that is described as "similar to one caused by a cut with sharp glass" usually indicates a fissure. The acute onset of pain with a palpable mass is usually due to a thrombosed external hemorrhoid (perianal hematoma). Anorectal pain that begins gradually and becomes excruciating over a few days may indicate infection. Anal pain accompanied by fever and inability to pass urine signals perineal sepsis[9].

Bleeding per Rectum

There is no overemphasis when it is said that all cases of rectal bleeding ought to be evaluated and the cause identified. Causes of bright red rectal bleeding are listed in Table IV.

Pus Discharge

Discharge of pus from or around the anus is another disturbing symptom. The commonest cause of pus formation (Table V) is anal and perianal suppuration, presenting as a fistula or burst abscess[10].

A thorough evaluation of the patient is necessary to establish the actual cause of pus discharge. While abscesses and fistulae are obvious

Table IV. Causes of bleeding per rectum.

- Hemorrhoids
- Anal fissures
- Polyps
- Malignancy
- Inflammatory bowel disease (IBD)
- Rectal prolapse
- Anal fistula
- Solitary rectal ulcer
- Arterio-venous malformations

Table V. Causes of pus discharge.

- Anal fistula
- Anal fissure with suppuration or fistula formation
- Submucus or perianal antibioma [aseptic abscess]
- Proctitis
- Inflammatory bowel disease (IBD)
- Anal malignancy
- Solitary rectal ulcer
- Suppuration in thrombosed hemorrhoids

on inspection and palpation, other lesions may need a careful search to reach to the source of suppuration. Sigmoidoscopy, examination of the discharge, biopsy, and endoanal ultrasonography may be required in such attempt[11].

Pruritus Ani (Anal Itch)

Pruritus ani is an extremely common and annoying symptom, associated with a wide range of mechanical, dermatological, infectious, systemic, or certain unidentifiable conditions[12]. Regardless of the etiology, the itch/scratch cycle becomes self-propagating and results in chronic pathologic changes that persist even if the initiating factor is removed.

In a belief that pruritus ani is caused by poor hygiene, patients become overzealous in keeping the perianal area clean (Table VI). Excessive cleaning, particularly using brushes and caustic soaps, irritates the sensitive anal and perianal region to exacerbate the symptoms further. The perianal area may be highly sensitive to perfumes, soaps, clothes, fabrics, dietary intake, and superficial trauma. Any pruritic lesion that persists even after adequate treatment should necessarily be subjected to biopsy to arrive at an appropriate conclusion.

Table VI. Causes of anal pruritus.

- Discharge and soiling (from anal fistula/anal fissure)
- Allergy (drugs, clothes, local applications)
- Anal skin tags, anal papilloma
- Mucus leak from hemorrhoids or prolapse
- Various skin conditions (dermatitis, psoriasis, lichen, scabies)
- Worm infestation
- Condyloma (anal warts)
- Following surgical procedures in and around anus
- Anal incontinence

Table VII. Causes of prolapse from the anus.

- Hemorrhoids
- Rectal prolapse (mucosal or complete)
- Polyps (rectal, fibrous anal polyp)
- Neoplasms (melanoma, angioma, papilloma)
- Intussusception

Prolapse from the Anus

Protrusion of "something" from the anus is a symptom, which denotes various pathological conditions of the ano-rectum. The prolapse may occur during defecation getting reduced spontaneously or manually. In other situations, there could be found a permanently prolapsed mass outside the anus[13].

Few common lesions presenting with prolapse are listed (in order of frequency) in Table VII.

Swelling or Lump Around Anus (Table VIII)

Anal or perineal "lumps" are indicative of lesions that may or may not be related to the pathology of the ano-rectum. Lumps or masses of a recent origin or those that are painful have an infective or hemorrhagic etiology like an abscess, a perianal hematoma, or thrombosis and should call for a thorough examination[14].

Constipation

The term constipation can have a variety of meanings. 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 feeling of an incomplete evacuation or prolonged straining at toilet. In general, a condition is regarded as constipation when a person encounters fewer than three bowel movements per week while continu-

Table VIII. Lump or mass in or around anus.

Painful masses

- Abscess * Perianal hematoma *Anal fistula
- Antibioma (aseptic abscess, organized abscess)
- Thrombosed hemorrhoids * Inflamed sentinel pile of anal fissure.
- Malignancy of anal canal

Painless masses

- *External anal tags *Condyloma acuminata
- Venereal warts (molluscum contagiosum) *Fibrous anal polyp
- Papilloma *Neoplasms (leiomyoma, angiomyxoma)

Table IX. Causes of constipation.

- Habitual or dietary
- Senile
- Drug induced
- Fecal impaction
- Functional disturbances
- Systemic disease
- Neurological conditions
- Lazy colon (colonic inertia)

ing a daily consumption of at least 19 g of fiber. This condition could be due to multiple reasons. It is imperative that the clinician rule out possibility of obstructing lesions or other painful anal lesions before undertaking the treatment of constipation[15].

In few cases, the situation may take a more serious turn in the form of fecal impaction or fecolith obstruction. This is an acute condition and needs an urgent attention.

The common causes of constipation are listed in Table IX.

Passage of Mucus (Table X)

Passing mucus or "slime" from the anus is a disturbing symptom. Mucus discharge mostly denotes a pathology causing irritation of the colon, but it could be a part of certain anal conditions too. The mucus may be a part of the stool passed or it may occasionally pass in isolation. The consistency may vary and at times, it may contain blood in it.

An extensive evaluation is necessary to rule out any specific pathology behind this symptom. This includes colonoscopy, microscopic and cytological examination of the mucus[16].

Incontinence (Table XI)

This is the inadvertent passage of flatus, liquid or solid stool. Fecal incontinence can seriously impair or restrict normal activities to make one's life miserable.

Table X. Causes of mucus discharge per rectum.

- Inflammatory bowel disease (IBD)
- Rectal prolapse
- Mucus colitis
- Hemorrhoids
- Solitary rectal ulcer
- Drugs containing liquid paraffin
- Hypertrophied anal papillae or fibrous anal polyps

Table XI. Causes of anal incontinence.

- Debilitating conditions, in elderly, mentally ill and parous women
- Obstetrical injury
- Neurological disorders
- Birth injury
- Neuropathy like in diabetes
- Post-operative
- Rectal prolapse
- Diarrhoeal conditions
- Radiation injury to rectum
- Overflow incontinence with fecal impaction

Normal continence depends on many interrelated factors, including stool volume and consistency, colonic function, rectal compliance, rectal sensation and sphincter function[17].

The incontinence may be partial or complete. It is, however, important to rule out fecal impaction with overflow before seeking a pathophysiologic cause for uncontrolled passage of liquid stool.

Anal Stenosis or Stricture

The patients complain of difficulty in passing stool or may feel that the "opening" has gone small. Most commonly, stricture or stenosis of the anal outlet occur secondary to interference with the anal canal either by surgery or by underlying pathologies (Table XII)[18].

Presentation of Ano-Perianal Pathologies at a Glance

As discussed earlier, the ano-perianal lesions can present in variety of forms. The demographics of patients attending a proctology clinic and presentation of symptoms are shown in Figures 1, 2, 3.

Table XII. Causes of anal stenosis or stricture.

- Surgery
- Radiation
- Neoplasm
- Sepsis
- Inflammatory bowel disease (IBD)
- Anal fissure
- Trauma (iatrogenic or accidental)

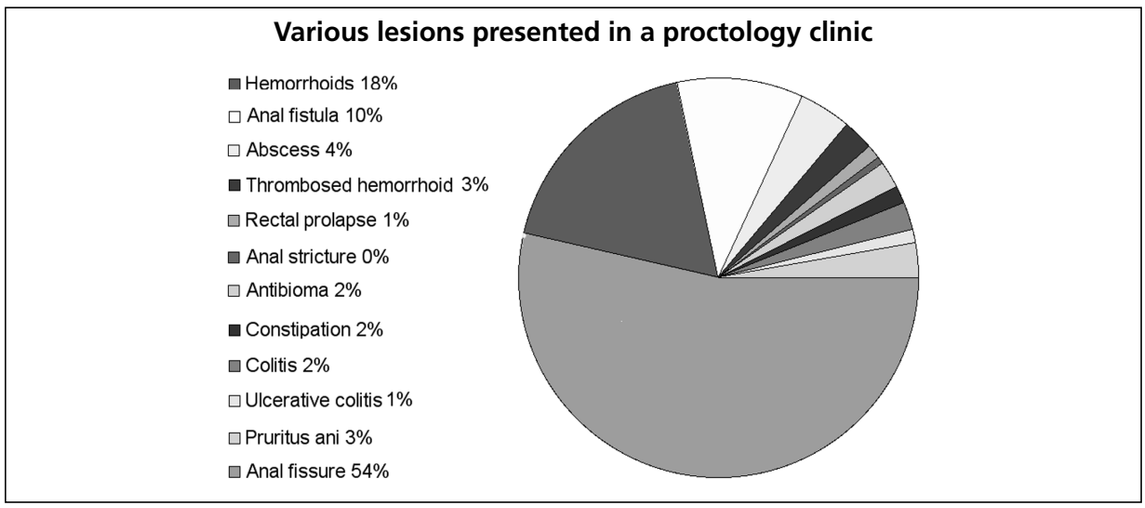

Figure 1. Distribution of various ano-rectal lesions in consecutive 1000 patients attending a proctology clinic in India. (Source: Fine Morning Hospital and Research Center, Nagpur, India).

Investigating a Case of Ano-Perianal Lesions

The patient's history, inspection, and palpation of the anorectum remain the basic, essential features of diagnosis. A successful interaction with the patient can lead to a correct diagnosis and a treatment plan, which would be acceptable to the physician and the patient himself[19].

Anoscopy (proctoscopy) remains a key maneuver in detection of anal pathologies. When a more proximal lesion is suspected, sigmoidoscopy or a colonoscopy along with biopsy is needed. Determination of anorectal physiology using endoanal ultrasonography, anal manometry and defecography are the essential investigative tools for the colorectal workup.

Fistulograms, Magnetic Resonance Imaging, and tomographic scanning are few other investigations to mention.

Treatment of Aano-Perianal Diseases

Family physicians could manage most of the common anorectal disorders they see in office practice. Most cases could be treated by conservative medical treatment with dietary changes, sitz baths, analgesics, antibiotics, stool softeners, hemorrhoidal creams and suppositories, or will need an instrumental procedure, which could be carried out in the office[20].

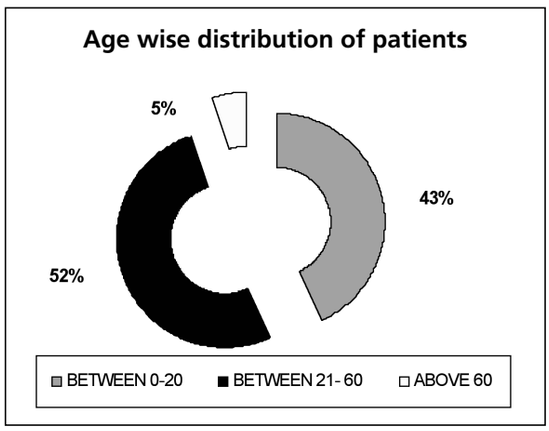

Figure 2. Patient demographics attending an ano-rectal clinic in India. (Source: Fine Morning Hospital and Research Center, Nagpur, India).

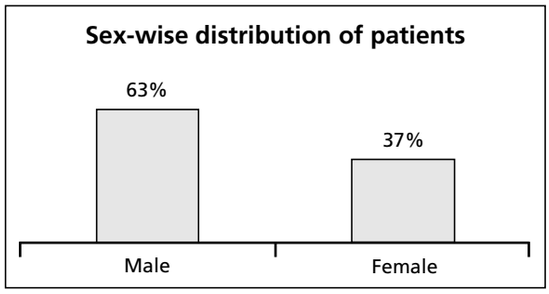

Figure 3. Sex-wise distribution of patients attending a proctology clinic in India. (Source: Fine Morning Hospital and Research Center, Nagpur, India).

Anal Fissures

Acute anal fissures are superficial and may be multiple. They respond well to conservative therapies like warm water sitz bath, application of various 'hemorrhoidal' creams, analgesics, and dietary modifications. Proper anal hygiene and regularization of bowel could prevent recurrence of such fissures.

Chronic anal fissures are mostly found on the posterior or anterior midline. They may have associated lesions like the sentinel pile, anal papillae, fibrous polyps or hemorrhoids. Therapies useful for acute fissures could only provide a short-term relief in chronic form of the disease. An internal sphincter manipulation is needed to promote healing of chronic anal fissures. A variety of surgical and non-surgical approach has been proposed[21].

Despite the initial success with these pharmacological agents in the treatment of chronic anal fissures, a growing concern is developing about their use. Increase in the incidences of adverse effect and decrease in the long-term efficacy have been the major drawbacks of such therapies.

Surgery remains a more reliable method to be offered to patients with relapse or therapeutic failure of the pharmacological treatment. There is a consensus that a controlled lateral internal sphincterotomy is the best surgical procedure for chronic anal fissure. Both open and closed methods are equally effective[22].

Treatment of Hemorrhoids

It has been estimated that 50% of the population develops hemorrhoids by the age of 50 years[23]. Although patients often consider the condition to be a single simple disease, it may not be so. Hemorrhoids share their symptoms with a whole series of other diseases and it is this lack of specificity that calls for a thorough examination to reach a precise diagnosis.

Medical therapy of hemorrhoids (Table XIII). While conservative treatment do have a role in the early stages of the disease and in attending the complications of hemorrhoids, their sustainability in controlling the symptoms on a longer duration is in question[24]. They however, can be proposed in patients who are not willing for, or who are waiting/unfit for a definitive surgical treatment.

The various instrumental and surgical treatment options for hemorrhoids include:

Table XIII. Medical treatment of hemorrhoids.

- Relieving constipation using bran, mucilage, lactulose or bulk forming laxatives
- Increasing daily intake of fibers
- Avoidance of colonic stimulants like coffee, tea and spices
- Use of flavonoid derivatives (Diosmin) and Calcium Dobisilate
- Use of hemorrhoidal creams, ointments and suppositories
- Use of anti-pruritics
- Adequate local hygiene

- Sclerotherapy
- Infra red photocoagulation
- Bicap
- Doppler guided hemorrhoidal artery ligation (DGHAL)[25]
- Radiofrequency ablation[26]
- Rubber band ligation
- Heater probe
- Ultroid (direct current probe)
- Stapler hemorrhoidopexy[27] (PPH)
- Surgery (conventional, diathermy, harmonic scalpel, laser)

Treatment of Ano-Perianal Sepsis

The anorectal area could be involved in several infectious and inflammatory processes. Abscesses often have their origin in an anal crypt or in the anal glands. The suppurative process then tracks through the various planes in the anorectal region. This manifests itself either at the anal verge as a perianal abscess, or within the anal canal. These abscesses could easily be drained in the office under local anesthesia.

Bacterial, viral, and protozoal infections could be transmitted to the anorectum via anoreceptive intercourse. Ano-perianal sepsis is a medical emergency requiring immediate hospitalization and treatment, including surgical debridement and high dosages of broad-spectrum antibiotics. Rarely, perineal sepsis can occur as a complication of rubber band ligation or sclerotherapy of internal hemorrhoids[28].

Potential rectal complications arising out of Human Immunodeficiency Virus include infectious diarrhea, acyclovir-resistant strains of HSV2, Kaposi's sarcoma, lymphoma, and squamous cell carcinoma.

Treatments of Anal Fistula

Patients with anal fistula are mostly referred to a specialist for treatment. In addition to fistulotomy, treatments include insertion of cutting or draining setons, endo-anal mucosal advancement flaps, sliding cutaneous advancement flaps, fistulectomy with muscle repair and injection of fibrin glue in the fistulous tract.

Treatment of Pilonidal Abscess and Sinuses

Pilonidal abscess could be drained under local anesthesia in the office. Sinuses could be laid open in the similar manner. Presence of hair in the wound is one of the prime causes of incomplete healing or recurrence. The hair should be meticulously shaved at regular intervals. Care should be taken that the wound continues to remain free of hair all the time.

Multiple or recurrent pilonidal sinuses should preferably be dealt at specialty centers.

Treatment of Malignancies of the Anal Canal

Cancer of the ano-rectum could manifest with symptoms identical to more common lesion of the anal canal like hemorrhoids or colitis, or it may be incidentally found during a digital rectal examination. Pain in the early stages is usually absent and the pathology may generally be presumed and treated as "piles" because of intermittent bleeding per rectum. An external or internal mass may be palpable. Anal cancer can present as an ulcer, as a polyp, or as a verrucous growth. Most anal cancers respond well to treatment with combined chemotherapy and pelvic radiation.

Treatment of Anal Warts (Condylomas)

They present as warty growths in or around the anus. Their size and number vary from a small and single wart to a crop growth of different sizes extending in the perineum and genitals. While it commonly spreads through unsafe and unnatural sexual practices, it can be found in patients with no such history. The infection in such patients is believed to occur by pooling of secretions in the anal area from elsewhere.

Anal warts can lead to anal pruritus, soiling, bleeding, and thus become a constant source of irritation.

Various office procedures are available for tackling anal warts (Table XIV).

Table XIV. Treatment of anal warts.

- Application of 85% Trichloroacetic acid (TCA)
- Cryotherapy or oral interferon and flurouracil
- Radiofrequency ablation or Laser removal or electrodessication or surgery

Treatment of External Anal Tags

These are usually asymptomatic. They are mere remnants of old thrombosed external hemorrhoids. But when such tags cause symptoms like itching, anxiety, or hygienic problems, they should be removed under local anesthesia. If they are too extensive, excision may be needed under a short general anesthesia.

Treatment of Anal Stenosis or Stricture

A conservative approach using stool softeners, osmotic agents, and lubricants that ensure smooth passage of stool is found effective in most of the cases. Regular anal dilatation using a metal dilator is another option in anal strictures of recent origin. If the above treatment fails, then surgical correction is needed. Treatment includes laxatives and excision in appropriate cases.

Treatment of Incontinence

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. Recent approaches to the surgical therapy of incontinence include use of an artificial bowel sphincter, and the electrical stimulation of sacral nerves to modify pelvic floor function[15].

Treatment of Constipation

It is a symptom, which is not measurable scientifically. It has more emotional components than physical and should therefore, be dealt with in a holistic manner.

The daily dietary fiber intake should be increased and bulking agents like psyllium (Fybogel), mineral oil (paraffin liquid), methylcellulose, bran, karaya gum or similar preparations that are useful in facilitation of the defecatory process should be prescribed.

Lactulose (Duphalac), sorbitol, and lactilol have minimum known side effects and are considered safe in pregnancy and in children. They could also be prescribed to the elderly patients.

Senna, bisacodyl, sodium picosulphate, and magnesium salts should be used with caution as they could cause symptoms like bloating, colicky pain, and purging. Low doses of polyethylene glycol and sodium phosphate could be used for intermittent lavage of the bowel.

Drugs like Cisapride, Mosapride, Itiopride, and Docusates are known to improve intestinal motility and could be prescribed for a prescribed duration.

For patients with intractable constipation, behavioral techniques to modify pelvic floor and intestinal function can be considered. Combination of bowel training, dietary management, and regular exercise could possibly help achieving a satisfactory relief from the symptoms.

Role of "Hemorrhoid Creams" or Suppositories in Proctology

Ointments containing opiates, xylocain, amethocain, and cinchocain to relieve pain, belladonna to alleviate sphincter spasm and silver nitrate to promote healing have all had been in vogue since long[29]. These mixtures are introduced either with the finger or through a short rectal bogie to ensure a thorough application over the affected part of the anus. Recent reports of topical application of Solcoderm, Ketanserin gel, a eutectic mixture of 5% Prilocain and 5% Lidocain or combination of Policresulen and Cinchocain (Faktu by Ranbaxy Crossland, India) has shown good symptomatic relief in anal pain.

Topical nifedipine and isosorbide dinitrate ointment, which at present are being used for treatment of cardiovascular disorders, have been reported to be useful in the treatment of anal fissures and acute strangulated internal hemorrhoids[30].

The best practice of using these preparations is to insert them over an anal dilator, which also helps relieve the sphincter spasm. Alternatively emollient suppositories containing some of the above preparations could be used with identical results.

The possible complication with such ointments and creams is local and systemic allergy and loss of the anal dilator in the rectum. Nitroglycerine ointment is known to cause severe headache after application.

While the above treatise describes the various ano-perianal pathologies in general, certain geographical and dietary factors, availability of advanced medical services and social circumstances that do influence the prevalence and presentation of the disease have to be given due weightage. In the developing countries, Tuberculosis (TB) is an important public health problem, which also has an influence in the causation and progression of ano-perianal sepsis. HIV is the most significant risk factor for progression from subclinical infection with Mycobacterium tuberculosis to active TB[31].

The prevalence of benign anorectal diseases in the general population from developing countries has been difficult to establish, either because the individual diseases themselves were difficult to characterize in surveys or because of bias in the selection of the survey population. In a randomly selected population, more than 80 percent of the subjects with symptoms of benign anorectal disorder have not consulted a physician regarding their illness[32]. Fear of impotence following surgery and misplaced belief in herbal remedies are some of the reasons for not consulting a physician despite an advanced ano-perianal problem[33].

A relatively low incidence of cancer, ulcerative colitis, adenomatous polyps, and diverticular disease of the colon have been noticed in these developing countries in comparison to the patients from developed nations[34]. Similarly, the causes of upper GI bleeding in children in developing countries are different from those in developed countries (variceal bleeding due to extrahepatic portal venous obstruction is the most common cause, while peptic ulcer is rare). However, the spectrum of lower GI bleeding is similar to that of developed countries[35].

Traditional treatment is dispensed according to the type of illness and is mainly used by adults. Children are treated more quickly than adults. Cost of and distance from health services often hampers use of modern medicine[36]. Interestingly, Khat chewing, a very common habit of the population in Mediterranean region has been found to have a significant role in development of hemorrhoidal disease[37]. Green banana is being used as an astringent in the treatment of hemorrhoids, while lotions prepared from essential oil like the myrrh are frequently used for application on hemorrhoids.

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