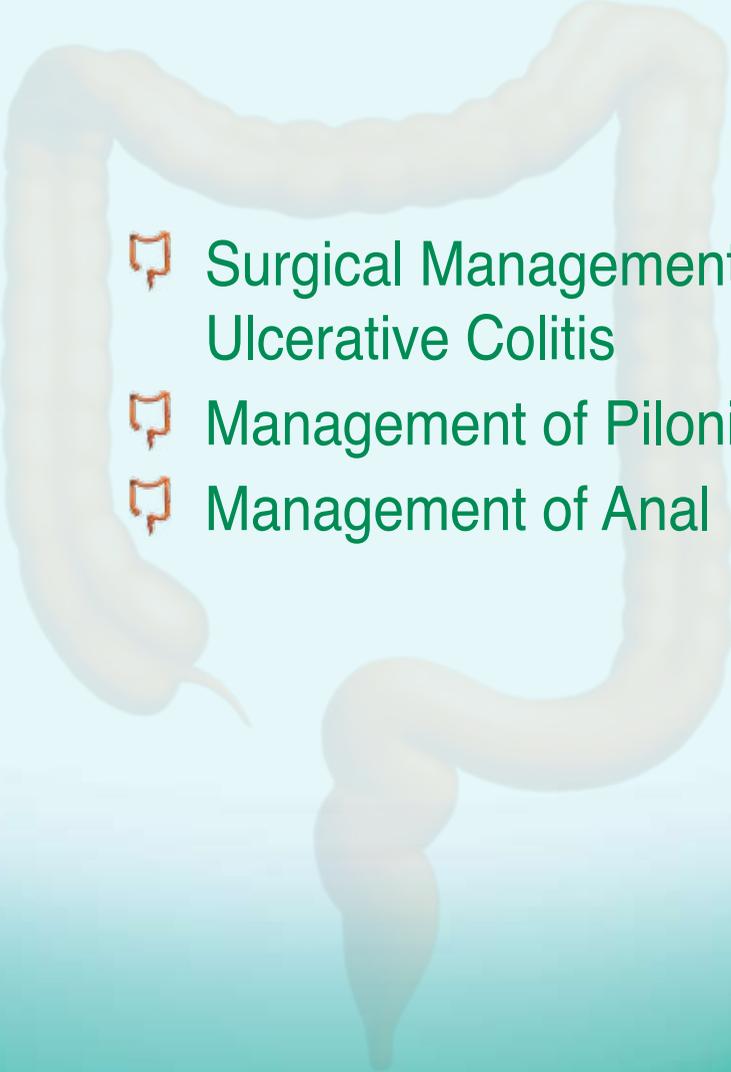




Association of Colon & Rectal Surgeons of India

Practice Guidelines

- 
- 📄 Surgical Management of Ulcerative Colitis
 - 📄 Management of Pilonidal Sinus
 - 📄 Management of Anal Fissure



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Introduction

Evidence based medicine is the need of the hour and the treatment protocol all over the world are being based on the evidences produced by the respective faculties.

In India we are proud to have vast amount of experience which shapes up to expertise. But unfortunately our experience has not been translated into evidence due to lack of publications. We need to now adopt evidence based practice guidelines and move away from pure expert guidelines.

It is imperative as an association of experts we provide standardized treatment protocols for the diseases which we deal in as a speciality it is in this concept the second issue on guidelines for treatment of Colo-Rectal diseases is being published.

These guidelines published is a combination of evidences from literature and experience from our own doyens in this field. They should provide a quick reference tool to the busy practicing surgeons as to the modalities available for the diseases which are covered in this issue. (Ulcerative colitis, Pilonidal sinus, Fissure in ano) and help in pick up the best for his patient as per his expertise and the infrastructure available.

I take this opportunity to thank all the contributors and the management of the Zydus Alidac Corza for their constant support.

Guidelines for other diseases will be published in future.

M. G. Nariani

President - ACRSI



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Practice Parameters for Surgical Management of Ulcerative Colitis

Approximately one third of patients with Ulcerative Colitis require operative treatment. Surgery is indicated either to treat the complications of the disease or because the symptoms of the disease can not be adequately controlled with medical therapy. A variety of surgical options exist in both acute and elective setting.

SURGICAL INDICATIONS:

Emergency:

There are only three situations where a patient requires emergency surgical treatment:

1. Toxic Colitis : Patient is acutely ill with fever, tachycardia and Leucocytosis and exhibits abdominal tenderness and distension Dehydration, and hypotension. Nutritional imbalance, electrolyte Aberrations and anemia may also occur.
2. Toxic Megacolon: Despite aggressive medical therapy, some Patients with toxic colitis may progress to toxic megacolon where Colonic perforation may occur.
3. Excessive hemorrhage.

Elective:

The indications for surgical treatment are:

1. Intractability leading to chronic disability or adequate functional life requiring continuous levels of medical agents that are associated with unacceptable side effects.
2. Carcinoma, high grade dysplasia and in certain cases low grade dysplasia. Colorectal carcinoma occurrence is approximately 0.5% per year after first decade.
3. Total colonic involvement, onset in childhood or adolescence and dysplasia.
4. Colonic stricture, refractory anemia, extra intestinal manifestations and severe growth retardation

SURGICAL OPTIONS:

Emergency [within 24 hours of hospitalization]:

Deterioration, or lack of objective improvement within 48 or 72 hours or less, of aggressive treatment including intravenous fluids, systemic parenteral steroids and antibiotics with parenteral nutrition, warrants emergency colectomy. Colonic dilatation [Toxic megacolon] predicts imminent colonic perforation and gas in the colonic wall are absolute indications for emergency operation. Barium enema, narcotics and anti-diarrheal agents must be avoided in severe colitis.

Two basic options exist in emergency setting:

1. Total abdominal colectomy with Brooke end ileostomy with a rectal or rectosigmoid Hartmann stump or a recto-sigmoid mucus fistula. This option is preferable because it eradicates the disease and requires no bowel anastomosis or deep pelvic dissection, while allowing the patient to wean off from medical agents. In addition, it does not preclude subsequent surgical intervention for anatomical restoration.



2. Turnbull Blow-hole Procedure by creating a quick skin level Transverse Colostomy and Loop Ileostomy, in severely ill patients with severely diseased thinned out colon. Definitive surgery can be performed later.

Total Restorative Proctocolectomy is not recommended in emergency setting.

Elective:

There are 4 elective surgical options:

1. Total Proctocolectomy with Brooke Ileostomy
2. Total abdominal colectomy with ileoproctostomy
3. Total Proctocolectomy with continent ileostomy [Kock Pouch]
4. Restorative Proctocolectomy with ileoanal reservoir

ADVANTAGES, DISADVANTAGES, INDICATIONS AND CONTRAINDICATIONS:

Total proctocolectomy;

It completely eliminates all disease and obviates the risk of malignancy. It eliminates the need for medical therapy and offers patient a single operation with relative rapid return to family and vocation.

It is disadvantageous due to need of a permanent stoma with attended physiological complications, the potential for pelvic nerve injury during pelvic dissection and potential for a delayed perineal wound healing.

Currently indicated in relatively elderly patients, patients with distal rectal adenocarcinoma, patients with severely comprised anal sphincter functions and people who desire a single operation for cure.

Relative contraindications include emergency setting complicated by major rectal hemorrhage and if restorative proctocolectomy is to be potentially offered.

Ileo-rectal anastomosis;

The advantages include, minimal risk of pelvic nerve dysfunction, avoidance of both a permanent stoma and a perineal wound.

The disadvantages of this procedure include retention of diseased rectum with its potential subsequent malignant transformation. Another possible disadvantage is anastomotic complication.

Current indication for this procedure are presence of predominantly colonic disease with a relatively spared and compliant rectum. Other relative indication is a palliative procedure for patient with chronic UC complicated with metastatic colonic carcinoma.

Contraindications include a severely diseased rectum, dysplasia or non-metastatic colorectal carcinoma, severely weakened anal sphincters, and lack of patient compliance for subsequent surveillance.

Continent Ileostomy [Kock Pouch] :

It has the advantage of avoidance of need for an appliance over the stoma.

This procedure is associated with numerous complications like nipple valve slippage and pouchitis along with those associated with total proctocolectomy.

The main indication is that patient who underwent a total proctocolectomy with Brooke Ileostomy and desires to have a continent stoma or patient with severe treatment resistant incontinence following a restorative proctocolectomy. The other potential indication is the patient who has weak anal sphincter.



The main contraindications are a pre-operative diagnosis of Crohn's Disease, morbid obesity, excessive adhesions, short bowel syndrome and high output stomas.

If properly counseled, the continent ileostomy will seldom be selected by the patient with intact anal sphincter complex.

Restorative Proctocolectomy;

The advantages of this procedure are avoidance of a permanent stoma, maintenance of anal route of defecation, eradication of disease, elimination of potential for malignant transformation and the ability to discontinue medical therapy.

Disadvantages include complexity of procedure, the potential for pelvic nerve injury, the need for multiple operations, the possibility of septic sequelae, pouchitis, frequent evacuation, the possibility of incontinence, and the possible need for surveillance.

Indications include patients with intractable disease, frustration with side effects of medications, dysplasia, malignancy except in lower third of rectum, patients with ileoproctostomy who have developed dysplasia or malignancy in upper third of retained rectum or who continue to be symptomatic with proctitis and patients who have undergone preliminary total abdominal colectomy and Brooke ileostomy.

Contra indications to Restorative Proctocolectomy include patients with untreatable anal incontinence, carcinoma of distal rectum invading anal sphincters, or patients who have a personal preference for one of the other surgical options.

Summary:

Choice of operation in ulcerative colitis depends on several variables including the indication for surgery, its elective or urgent status, state of anal sphincter muscles, certainty of diagnosis, and patient preference after full and complete information is given of the current knowledge. Ultimately, all decisions may need to be altered because of intra operative findings, like pelvic hemorrhage, anastomotic tension and operative blood loss.

The patients should have an opportunity to speak with other patients who have had the desired operation so they will be best able to make a decision. The surgeon must either be personally versed in all surgical options or be prepared to refer the patient to the appropriate specialist.



Practice Parameters: Pilonidal Sinus

Sacrococcygeal pilonidal sinus is a common disorder among young adults. Observed most commonly in people aged 15-30 years, it occurs after puberty, when sex hormones are known to increase the activity of the pilosebaceous gland and change healthy body hair growth. The onset of pilonidal disease is rare in people older than 40 years. (1)

Aetiology:

Pilonidal disease is now widely considered to be an acquired disorder, based on the observations that congenital tracts do not contain hair and are lined with cuboidal epithelium. The recurrence of the disorder even after complete excision of the disease tissue down to the sacrococcygeal fascia and the high incidence of chronic pilonidal sinus disease in patients who are hirsute further support an acquired theory of pathogenesis.

Other factors affecting the disease's incidence are increased sweating activity associated with prolonged sitting and buttock friction, poor personal hygiene, obesity, and local trauma. (2) Other causative factors known to be family history, occupation requiring prolonged sitting like driver, IT professionals, and the presence of folliculitis or a furuncle at another site on the body (3).

Treatment options are now available that provide a rapid rate of cure and a lower recurrence rate, and that minimize the number of hospital admissions. Although numerous randomized clinical studies have evaluated different treatments, no clear consensus has been reached as to the optimal medical or surgical treatment of pilonidal disease.

Clinical presentation:

1. Pilonidal Abscess: in 50 % people
Pus formation
No pus formation, only cellulitis. (Can resolve with Antibiotics)
2. Chronic Pilonidal Sinus: presents as discharging sinus / sinuses de novo or may occur after an acute Pilonidal abscess is drained. Some may be associated with an chronic abscess cavity.
Tract lined by granulation & chronic inflammatory tissue.
Tract lined by squamous epithelium.
The congenital pits are invariably in the midline whereas the secondary openings are usually placed laterally. The tract usually travel cranially upwards and is felt as an indurated cord under the skin.
3. Recurrent / Complex Pilonidal sinus / Unhealed midline wound: in those who have been operated in the past.
4. Endoanal Pilonidal sinus: Endoanal pilonidal sinus is a rare variety of pilonidal disease that affects the perianal skin directly or may occur circumferentially around the anus, involving the skin of the anal. (4)

Differential diagnosis:

Fistula-in-ano,

Hidradenitis suppurativa



Furunculosis,
Syphilitic granuloma,
Tubercular granuloma,
Osteomyelitis of the underlying sacrum with a draining sinus.

Investigations:

Routine preoperative panel as per the hospital schedule including HIV and Hepatitis profile and tests to assess the operative fitness of the patient.

USG to know the status of the abscess.

MRI fistulography is usually reserved for recurrent disease.

Treatment:

The ideal treatment for a pilonidal sinus varies according to the clinical presentation of the disease.

Non operative treatment :

1. Unwilling for surgery.
2. Unfit due to medical co morbidities.
3. Mild disease / minimally symptomatic.
4. Cannot take sufficient rest for recovery.

Local hygiene, shaving, avoid sitting for long hours, reduce weight etc

Phenol treatment with 80 % phenol to destroy the lining has been used with a success rate of about 60 to 90 %. (5)

Contraindications:

Acute infection with cellulitis is a relative contraindication for carrying out definitive surgery. Such cases should be drained only to release the pus.

Severe co morbidities that surgery under local anaesthesia is also unsafe.

*** Disease usually burns out after the age of 40 yrs hence one should keep in mind that the cure should not be worse than the disease.

Surgical:

Acute Pilonidal Abscess:

Incision and drainage under local or general anaesthesia.

Keep the opening close to the midline but not in the midline.

Scrape the lining and the hairs to reduce the recurrence.

Antibiotics are not mandatory unless medical reasons like having implants / prosthesis or Valvular heart disease.

60 to 85 % will recur after the drainage. (7)

Chronic Pilonidal Sinus: a pilonidal sinus that is associated with a chronic discharge without an acute abscess. (7)

There are many options in such cases

1. Excision with Saucerisation
2. Excision with Marsupialisation



3. Excision with primary closure (Midline or otherwise)
4. Excision with asymmetric closure (Karydakis, Bascom) and
5. Excision with plastic procedures like Z plasty, V – Y plasty, Rhomboid flap (Limberg), The use of asymmetrical or oblique elliptical incisions in an attempt to keep incisions out of the natal cleft, where wound healing is poor, and to prevent unnecessary tension on the closure of the wound. The goal of the asymmetrical incision is to reduce the depth of the gluteal fold, thereby eliminating the frictional forces between the two opposing skin edges (7, 16, 17)

Saucerisation: The Pilonidal sinus is excised and the tract is laid open to allow healing by secondary intention. The disadvantages of laying the tract open are the inconvenience to the patient, with frequent dressing changes, and close observation of the wound to ensure proper wound healing and to avoid premature closure of the skin edges. The average time for wound healing to occur is approximately 6 weeks. Laying the tract open is always appropriate when a cellulitis is surrounding the pilonidal sinus. Wounds may require 4-6 months to heal, but on average, the healing time is approximately 2 months. The recurrence rate ranges from 8-21%. The reduced recurrence rate is due to the more broad-based, flattened, and hairless scar produced by secondary intention This prevents buttocks friction, hair penetration, and hair follicle infection.(8,9)

Marsupialisation: By suturing the wound to the deeper tissue, wound infection is prevented and the subcutaneous tissue is covered, resulting in reduced healing time. Healing is usually complete by 6 weeks, and the recurrence rate has been reported to be 4-8%. It avoids closure of a contaminated wound and combines shorter healing times with a lower recurrence rate. The patient still needs to pay meticulous attention to personal hygiene, with daily wound cleansing and frequent hair shaving and removal. (10)

Recurrent Pilonidal sinus: Patients with recurrent pilonidal disease or complex, unhealed pilonidal wounds present a challenge to the surgeon. Tissue loss from previous attempts at excision further complicates the surgical management and limits options. The causes of recurrence are an unrecognized / missed sinus / side tract, at the time of the initial excision; repeated infections of the scar causing abscess; or an intergluteal cleft anatomy that promotes the accumulation of perspiration, friction, and the tendency for hair to grow into the scar. The midline scar is the most susceptible to the recurrence of pilonidal disease and poor wound healing.

The techniques developed for recurrent disease and unhealed wounds generally involve the use of a flap procedure to achieve primary closure and to obliterate the deep natal cleft. This relocates hair follicles away from the midline and prevents the frictional forces associated with the principal etiologic factors in the development of pilonidal disease. Reserve the use of a flap closure for complex or recurrent pilonidal disease that has failed to respond to the simple, conservative operative techniques that are initially used to treat chronic pilonidal disease.

A wound that has failed initial therapy must be reexcised down to the sacrococcygeal fascia. The reexcision must include the unhealed wound, scar, and granulation tissue. A flap procedure is then performed to achieve primary wound closure. The techniques available include

- (1) Bascom's cleft closure,
- (2) Advancement flap (Karydakis procedure),
- (3) Local advancement flap (3-plasty Rhomboid / Limberg's flap or V-Y advancement flap)



- (4) Rotational flap (Gluteus maximus myocutaneous flap), and
- (5) Single or Multiple Z Plasty. (11, 12, 13, 14, 15, 16, 17, 18).

The cleft closure technique involves excising the wound using a triangular incision, with the apex of the incision lateral to the apex of the natal cleft. The inferior margin becomes crescent shaped, with its point positioned towards the anus. A skin flap involving only the dermis is created on the convex side of the lower wound margin. Prior to beginning the procedure, the line of contact of the buttocks is marked to define the lateral edge of the raised skin flap. The two skin edges are then overlapped, and the excess skin is excised. This creates a primary closure that is off midline and obliterates the intergluteal cleft. The wound is closed in multiple layers over a closed suction drain. The recurrence rate is reported to be 3.3%.

The advancement flap or Karydakis procedure begins by excising the wound, with the sinuses removed en bloc with an elliptical specimen of overlying skin. The incision is made off midline. Once the wound is excised, a full-thickness flap is created on the opposite side of the semilateral incision. This allows the opposite side to be mobilized in order to allow primary wound closure, thus avoiding a midline wound. The wound is closed in multiple layers over a closed suction drain. This technique has been used as a primary procedure for the surgical management of pilonidal disease. The disadvantage is that the dissection is too extensive for an outpatient setting. The recurrence rate is reported to be 1.3%.

Local advancement flaps, such as the 3-plasty rhomboid flap or V-Y advancement flap, are methods of covering defects resulting from recurrent pilonidal disease. However, such flaps in the pilonidal area may be at risk for compromised vascularity due to continued infection, external compression, cigarette smoking, and tension on the flap. Accordingly, whenever an advancement flap is contemplated, a myocutaneous flap should be considered.

Complex wounds are reconstructed using muscle and myocutaneous flaps, because these flaps typically heal well and cover areas of extensive skin loss. Compared to skin flaps, these flaps are less susceptible to infection and have a predictable vascular supply that promotes safe elevation and better wound healing. These techniques are technically demanding and produce reliable results (with recurrence rates of 6-20%); however, they require prolonged hospitalization and longer operating time and are associated with more serious complications. A failed flap is a significant problem that ultimately leads to more extensive skin loss and a wound that is difficult to manage. These procedures are reserved for the surgical management of complex, recurrent wounds when more conservative procedures have failed.

Procedures not recommended:

1. Wide deep excision upto / including the post sacral fascia
2. Tension sutures
3. Split skin grafting.



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Practice Guidelines for Management of Anal Fissure

Definition

Anal fissure is an ulcer or tear in the vertical axis of the squamous epithelium of the anus located between the dentate line and the anal verge. It is common in the posterior midline. Second common location is anterior. It may occur at any age. Both sexes are equally affected.

Acute fissures are superficial, may deepen to expose the underlying internal sphincter and a duration of less than 6 weeks.

Chronic fissures are associated with secondary changes which include sentinel tag, hypertrophied anal papilla, induration of the lateral edges of the fissure, relative stenosis secondary to spasm or fibrosis of the internal sphincter and a fissure of more than 6 weeks duration. A sentinel tag may be associated with a fistula which extends from the base of the fissure to an external opening distal to the tag.

Preceptitating factors

Constipation or Diarrhoea. When anal fissure occurs in an aberrant site the following disease should be ruled out- Crohn's disease, Neoplasm, Ulcerative colitis, trauma, Tuberculosis, Chemotherapy, Chlamydia, gonorrhoea, herpes, syphilis and AIDS. Biopsy, culture, Serology and gastro intestinal evaluation are indicated

Symptoms – Severe pain during and after defaecation, bright rectal bleeding, swelling, discharge and itching, Constipation and Faecal impaction.

Diagnosis is mainly by inspection. Palpation, anoscopic and procto sigmoidoscopic examination (narrow bore instruments is used) are necessary to rule out other dreaded diseases like carcinoma or inflammatory bowel disease.

Findings

Crack in the anal mucosa, sentinel tag, hypertrophied anal papilla, induration of the edges of the fissure, Sphincter spasm, fibrosis of the internal sphincter, fistulous opening.

Management of Acute Fissure

Conservative 1st Line medical therapy

Constipation and Diarrhoea should be managed to prevent recurrence. Dietary modification, Stool softeners, Sitz Bath, Analgesics, Topical anaesthetic agents to relieve pain, Antibiotics, Anti-ameobic & Anti-helminthetics if associated with infection.

Recurrence ranges from 30% – 70% if the high fibre diet is abandoned after fissure is healed. This rate is reduced to 15-20% if patient continuous to remain on high fibre diet. Hence lifelong dietary modification is recommended.

Second line medical therapy

Anal fissures may be treated with topical Nitrates. Topical Glyceryl Trinitrate is metabolized at the cellular level to release nitric oxide which in turn relaxes the internal sphincter via guanylate cyclase



pathway, causing chemical sphincterotomy. This improves the anodermal blood flow through its vasodilatation property relieving pain and promoting healing.

GTN (Glyceryl Trinitrate) (0.2%) 500mg applied peri-anally with a gloved finger 2 to 3 times a day for 8 weeks. Pain free duration was 2hrs – 6hrs. Healing rate was 70 to 80% which was better than the placebo. Dose escalation or Specialized dose – delivery device 0.75ml of 0.3% GTN ointment (2.25mg) 3 times intra anal application using a cannula or transdermal patch has been shown not to improve the healing rate.

Headache was the main side effect of the Glyceryltrinitrate. Other side effects are Syncope, Tachyphylaxis, Rebound hypertension, Relapse, Cresendo angina, hypotension, allergic dermatitis. Recurrence is higher than the surgical treatment. Patients who are not showing any improvement with topical nitrates should be referred for surgical treatment.

Anal fissure may be treated with calcium channel blockers. Diltiazem(DTZ) is a calcium channel blocker, which lowers the resting anal pressure and promotes the healing of the anal fissure and also has lower incidence of adverse effects especially head ache than nitrates but superior to placebo in healing fissures. Topical Diltiazem 2% gel is used twice a day applied perianaly for 8 weeks. Healing rate was 50%. Side effects are headache, drowsiness, mood swings, perianal itching. Oral Diltiazem 60mg was found to be inferior to the topical diltiazem, 38% and 65% healing rate respectively and oral diltiazem has more side effects.

Nifedepine is an another calcium channel antagonist used to treat the anal fissure - which cause smooth muscle relaxation and vasodilatation. Oral Nifedepine retard 20mg twice daily for 8 weeks or topical Nifedepine 0.3% with Lidocaine ointment 1.5% twice daily for 6 weeks can be used. oral nifedepine has less healing rate and higher incidence of side effects when compared to topical application. With topical nifedepine cure rate is 94.5%.

Bethanechol Cream 0.1% - A parasympathomimetic drug – reduce resting anal pressure in the anal canal. Heals fissure in 60% without side effects.

Topical sildenafil (Viagra) – Phosphodiesterase(PDE) 5 inhibitor- phosphodiesterase (PDE), the enzyme involved in degradation of cyclic nucleotides, contains a number of different isoenzymes. PDE-5 is located primarily in smooth muscle and is integral to the degradation of cGMP. Sildenafil, a PDE-5 inhibitor, produces inhibition of PDE-5 more selectively than other isoenzymes, resulting in increased intracellular concentrations of cGMP and increased smooth muscle relaxation (induced by NO). through indirect enhancement of nitric oxide which is responsible for degradation of cyclic CGMP resulting in increased concentration of the cellular level mediator for smooth muscle relaxation. Available as 0.75ml of 10% cream (75mg) applied to anal canal from 1ml pre loaded syringe. Side effects are transient anal itching and burning.

Botulinum Toxin - BNT is a powerful poison that inhibits neuromuscular transmission. Muscle paralysis occurs in hours lasts for 3 to 4 months until the nerve endings regenerate. Healing rate superior to placebo. There is inadequate consensus on dosage, precise site of administration, number of injections or efficacy.

Dose 0.2ml 10u/15u/20u/50u either side of the fissure or anteriorly in the internal sphincter. Cure rate 60-80% after 2 months 100% after 2 injections. More study is needed to optimize the dose and site of injection. Side effects are increased urinary residual volume, heart block, skin and allergy reaction,



muscle weakness, postural hypotensions and changes in heart rate and BP. Transient incontinence for flatus is not unusual (10%).

The ideal topical treatment for anal fissure should reduce pain, heal the fissure with minimal recurrence, without impairing the continence and with low side effects.

Surgical Management

If fissure does not heal after 8 weeks inspite of 1 & 2nd line therapy and in chronic anal fissure with sentinel tag or hypertrophied anal papilla or with sub cutaneous fistula and fissure with severe persistent pain and bleeding. Patient is advised to under go Surgery.

Sphincter stretch:

This procedure, a controlled anal stretch or dilatation under general anesthesia. This is performed because one of the causative factors for anal fissure is thought to be a tight internal anal sphincter, stretching it helps to correct the underlying abnormality, thus allowing the fissure to heal. The number of fingers used and the amount of time the stretch is applied varies among surgeons. While the sphincter stretch does provide symptomatic relief from the anal fissure, it is rarely performed today because of the high complication rate. Impaired continence is observed in 12-27% of patients because of the uncontrolled stretching and subsequent tearing of both the internal and external sphincter.

Sphincter stretch may also be complicated by bleeding, perianal bruising, strangulation of prolapsed hemorrhoids, perianal infection, Fournier's gangrene, bacteremia, and rectal procidentia. Sphincter tear after anal dilatation was assessed by endoanal ultra sonography. Fragmentation of internal sphincter is seen and in addition, defects are also seen in external sphincter.

Fissurectomy: In the treatment of chronic anal fissures, the surgeon may choose to excise the fissure. Take care to not include the internal sphincter with the excision which results in Key hole deformity. Excise the hypertrophied papillae and the skin tag and do lateral internal sphincterotomy, leave the fissure to heal on its own.

Lateral internal sphincterotomy is the surgical treatment of choice for refractory anal fissures. This is the current surgical procedure of choice. The procedure can be performed with the patient under general, spinal anesthesia, local anesthesia. The purpose of an internal sphincterotomy is to cut the hypertrophied internal sphincter, thereby releasing tension and allowing the fissure to heal. Sphincterotomies are normally performed in the lateral quadrants (right or left, depending on the comfort or handedness of the surgeon). In a properly performed lateral internal sphincterotomy, only the internal sphincter is cut, the external sphincter is not cut and must not be injured. The sphincterotomy can be performed in either an open or a closed manner. There is no significant changes in the outcomes of open and closed internal sphincterotonics. LIS is found to be superior to posterior midline sphincterotomy and fissurectomy and healing is faster and pain is less and post operative incontinence is less.

An advancement flap must be performed to cover the defect in the mucosa. This can be performed either at the time of the sphincterotomy if the surgeon does not think the fissure will heal or as a second procedure if the fissure does not heal.

Complication after Lateral internal sphincterotomy - Incontinence -12-27%, Infection – 1-2%, Bleeding, Fistula – 1%, Ecchymosis, Haematoma, Perianal abscess 1% -, Recurrence 1-6%.



Surgery may be considered even without trial of chemical sphincterotomy after failure of conservative treatment as it entails higher cure rates which eliminates need for any further treatment & has substantial satisfaction of the patients with reasonably acceptable complications.

Outcome and prognosis

When a patient develops a recurrence after a sphincterotomy, it could be from recurrent disease or from an incompletely performed sphincterotomy. Medical managements should be tried again; but, if no relief is obtained, the surgeon must evaluate whether the original sphincterotomy was adequate. Evaluation can be performed by palpation during examination under anesthesia or by performing an endoanal ultrasound. If the sphincterotomy was incomplete, it can be completed on the initial side or redone on the opposite side. If the first sphincterotomy was complete, a second sphincterotomy can be completed on the opposite side.

Fissure with associated anal conditions:

Fissure With I & II degree piles - Lateral internal sphincterotomy , Sclerotherapy or RBL

Fissure with III degree piles - Haemorrhoidectomy & int. sphincterotomy

Fissure with stenosis - stenosis and fissure may present after haemorrhoidectomy when excess anal mucosa is removed. In these patients depending on the age and tone of the internal sphincter, any one of the following procedure can be performed- Anoplasty, Lateral internal sphincterotomy or advancement flap.

Anal fissure with crohn's disease - In these type of fissures it is usually associated with diarrhoea and abdominal pain. Before proceeding for surgery a complete GI evaluation and Biopsy should be done. Conservative medical treatment is the choice of treatment and if it fails the lateral internal anal sphincterotomy can be performed.

Anal Fissure in the homosexual - Any fissure or perianal ulcer should be cultured and a biopsy performed. If no cause found aggressive debridement, and intralesional steroid therapy is may be useful. If medical management fails Lateral internal sphincterotomy can be performed.

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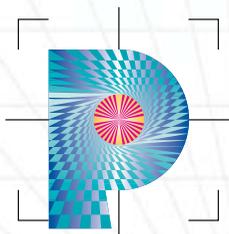
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