ANAL FISSURE

Abstract
Anal fissure is a tear of the muco-cutaneous part of the anal canal. Most of the time the anal fissure is present in the midline posteriorly. Exact cause is not known why the fissure lies in the midline posteriorly. Acute anal fissure is a suddenly appearing tear in the anal canal. It is deep and painful. History is very suggestive of the disease. Clinical examination is confirmatory of the diagnosis. Lateral Subcutaneous Sphincterotomy is the operation to cut the internal anal sphincter at the lateral aspects. It is the most favourable operation for this problem at present. The complications associated with other surgical procedures are more than lateral sphincterectomy.

Key Concepts
- Definition of Anal Fissure
- Pathology of Anal Fissure
- Features of Anal Fissure
- Management of Anal Fissure

Key words: Anal fissure, GTN ointment, Lateral sphincterotomy, Lord's Procedure

ETIOLOGY
Exact cause is not known why the fissure lies in the midline posteriorly. It is possible that rectum and anal canal are unsupported posteriorly and when the patient strains during defecation, a tear appears in the midline posteriorly.

The anterior tears are more common in women specially the multiparous women. It may be due to lack of support to the anterior wall of the anal canal due to weak or dam-
aged pelvic floor muscles. Constipation is always a predisposing factor in the causation of the anal fissure. Tight anal sphincter and anal stenosis following haemorrhoidectomy or after any procedure on anal canal also causes the fissure-in-ano formation. Anal fissure can also occur after trauma but these are usually acute and heal early. Anal fissure can be secondary to ulcerative colitis, Crohn’s disease, pruritus, tuberculosis, syphilis and leukaemia.

Maximal basal pressure and maximum contraction pressures of the anal fissure patients are significantly raised as compared to normal (87±39) mm of Hg (Control 71 ± 25 mm of Hg) on anal manometric studies3.

PATHOLOGY
Anal fissure can be;
• Acute
• Chronic

Anal fissure can also be;
• Specific  
  (due to Crohn’s disease, ulcerative colitis, tuberculosis, syphilis, leukaemia and pruritus).
• Non specific

ACUTE ANAL FISSURE
Acute anal fissure is a suddenly appearing tear in the anal canal. It is deep and painful. It heals early or changes into a chronic fissure.

CHRONIC ANAL FISSURE
Chronic anal fissure is a tear with inflamed and indurated margins. It is present over a longer period. The granulation tissue formation occurs at the base and a skin tag is present at its distal margin. The skin tag is called sentinel pile. The ulcer is elliptical with its long axis along the long axis of the anal canal. The anal sphincter is usually tightly closed. It is a very painful condition. The patients suffering from this problem learn to remain constipated out of fear of the pain following defecation. Specific chronic fissures are less painful.

CLINICAL FEATURES
PAIN
There is severe and agonizing pain at the beginning of the defecation. The pain is so severe that patients reflexly try to stop defecation and get constipated. The thought of pain also depresses the urge to defecate reflexly and the patient gets constipated more and more. The reflex spasm of the anal sphincter and severe constipation make the anal fis-
sure even more painful.

**BLEEDING**
Usually a line of blood is seen on the hard stool.
Occasionally more bleeding may occur but it is rarely very severe.

**DISCHARGE**
Slight degree of serous discharge may be present.

**IRRITABILITY**
The patients with fissure in ano are irritable and anxious.

**DIAGNOSIS**
History is very suggestive of the disease. Clinical examination is confirmatory of the diagnosis. Inspection of the perineum should be performed at first.

The fissure is clearly visible or the anal sphincter is very tightly closed over the fissure. The sentinel pile may also be present guarding the fissure.

Digital examination should never be performed without proper anaesthesia. Once the anal fissure is treated surgically, the tissue should be sent for histological examination to find out the cause of fissure.

**TREATMENT**

**CONSERVATIVE**
High fiber diet rich in indigestible fiber should be used such as vegetables, fruits and whole wheat. This will help in proper evacuation of the faeces and healing of the ulcer.

**LAXATIVES**
Mild laxatives, such as liquid paraffin, cremaffin, agarol, celevac and duphalac should be used to keep the bowels working. These should be given in doses enough to keep the stools soft but never watery as excessive purgation and loose stools make the condition even worse.

**LOCAL ANAESTHETIC CREAMS**
Creams having local anaesthetic agents can be used to achieve symptomatic relief. These are very helpful but have only temporary effect. Solcoderm topical applications have been found to be simple safe, cost effective and without systemic side effects.

**GLYCERAL TRINITRATE (GTN) PASTE**
This paste is applied to increase the local blood supply. It leads to healing of the ulcer. It has 90% success rate when applied for 4-8 weeks. The main disadvantage is severe headache which occurs because of dilatation of cerebral vessels but headache can be treated with use of oral aspirin.

**ANAL DILATATION**
Anal dilators can be used in anal fissures of lesser duration, mild degree and those associated with less fibrosis. These should be used after the local anaesthetic has anaesthetized the area.

The smallest size anal dilator is lubricated and introduced gently into the anal canal. The large size dilators are gradually introduced into the anal canal. The dilator is kept in the anal canal for at least half an hour.

The anal dilatation is continued for two to three weeks and it is performed twice or three times daily.

**SURGERY**

**LORDS’ PROCEDURE**
*(MAXIMUM ANAL DILATION)*
It is the maximum anal dilatation. It is performed under general or spinal anaesthesia. It helps to stretch the anal sphincter and break it at many places. It helps in the healing of anal fissure. It should be performed gently and over a period of 3-5 minutes. It may be used as first line treatment of the anal fissure. It gives satisfactory pain relief. This procedure has been abandoned by most of the surgeons because of its complications such as partial fecal or wind incontinence.

FISSURECTOMY AND DORSAL SPHINCTEROTOMY
It is excision of the ulcer or fissure and cutting of the anal sphincter posteriorly. It helps in the healing of the wound and fissure. This operation is minimally used these days.

LATERAL SUBCUTANEOUS SPHINCTEROTOMY
It is the operation to cut the internal anal sphincter at the lateral aspects (3’0 or 9’0 Clock position).

It is the most favourable operation for this problem at present. The fissure may also be excised. The wound heals nicely and chances of infection are few. Its results are effective and it gives significantly less post operative discomfort. The complications associated with other surgical procedures are more than lateral sphincterectomy.

ANOPLASTY
When the anal fissure is associated with stenotic anal opening, a longitudinal incision is given across the stenotic area to open the anal canal wide. It is stitched transversely to make the anal opening wider. It is a very simple operation and achieves very satisfactory results.

REFERENCES