

# Principles of Surgery - Anal Abscess and Fistula

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### Introduction

Professor Brygel has performed over 10,000 hernia operations, the majority performed under local anaesthesia as a day case. This article is the second on anorectal conditions, following on from haemorrhoids. There will be subsequent programs on anal fissure, pilonidal sinus and anal warts.

### Anal abscess and fistula

These conditions are not nearly as frequent as haemorrhoids but it still behoves the primary care practitioner to be able to recognize, diagnose and give appropriate advice regarding their management. It

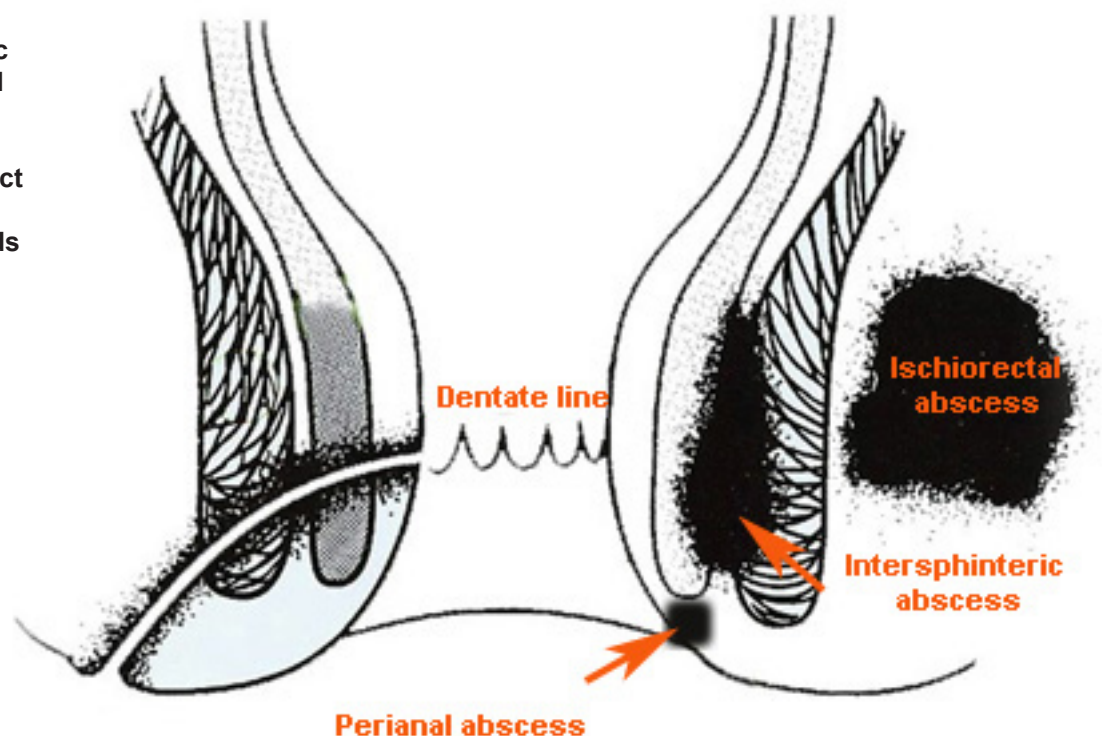
may even require, because of the special nature of the problem, referral to an appropriately experienced surgeon.

The many treatments recommended for fistula suggests the management is not always successful. Success must be measured in not just preventing recurrence, but preserving continence.

An abscess is a collection of pus resulting from an infection becoming localized.

A fistula is an abnormal communication, like a tunnel, between two epithelial surfaces. In the case of anal fistulas, between the anal canal and the surrounding skin.

**Figure 1: Intersphincteric ischiorectal abscess and trans sphincteric anal fistula. Note the internal opening of the fistula tract is just above the dentate line where the anal glands drain to.**



### Symptoms of abscess

Diagnosis is based on pain, fever, overlying erythema and tenderness. Occasionally there may only be rectal pain with the abscess then diagnosed on rectal examination. However the pain may be so severe that this examination cannot be carried out and examination under anaesthesia is required.

The common difficulty is in distinguishing this from an anal fissure where pain prevents examination.



**1: Peri anal abscess. Starting to point. Not very obvious inflammatory changes but as not very large. In emergency situation e.g no beds available, remote area, could be drained under local anaesthetic in the office.**



**2. Another perianal abscess. It is not an infected Bartholins cyst which would be much closer and within vagina. When suitable could also be drained in office. Appropriate informed consent might include patient's choice of venue. Based on insurance status, bed availability, patients pain threshold, health.**



**3. The abscess and site of incision for drainage has been marked. The local lignocaine with adrenaline is infiltrated superficially.**



4. The cruciate incision has been made to drain abscess. Blood appears but as the forceps are plunged in blood and the pus discharges with a gush.



5. The ischio-rectal abscess is deeper and larger usually than a perianal abscess and is more prone to cause systemic symptoms.

### Treatment of abscess

Initially antibiotics are often used but once an abscess develops these usually only contain the infection rather than cure it. Antibiotics may partially control the fever and also the spread of infection into the general circulation - septicemia.

Thus surgical treatment and drainage is required.

For a small superficial abscess - perianal - this can be done under Local Anaesthetic in the surgeon's office. A larger abscess such as an ischio-rectal requires hospitalisation and drainage under General Anaesthesia.

At surgery an incision, which may be cruciate - like a cross - is made and the abscess drained. A cruciate incision is less likely to heal over quickly. This prevents the abscess quickly recurring. Theoretically the abscess should be cultured for antibiotic sensitivities. After drainage the defect is packed to keep the wound open to prevent recurrence and bleeding.

The dressing may be removed a day or two later; baths taken and repacked gently with a gradually decreasing sized pack. The wound is allowed to heal - second intention healing.

There may be no further problems, but in up to 30-50% of cases a fistula will result as the internal orifice and communication persist. Attempts to prevent this at the time of drainage of the abscess by obliterating the internal opening are frequently unsuccessful because identification is difficult because of the oedema. A false tract may also result. Attempts to prevent a fistula may result in incontinence because of damage to the sphincters.

### Fistula - fistula in ano

An anal fistula is a tunnel-like tract between the lining of the anal canal and the skin around the anus. A fistula forms usually after an anal abscess has drained spontaneously or following surgical drainage. Because the tract is lined with chronic infection it tends not to heal and there is a persistent discharge of pus. This may settle temporarily with or without antibiotics but then recurs. A fistula title is descriptive of its position in relationship to the sphincters such as superficial or deep, intersphincteric, transsphincteric, suprasphincteric. The higher and more complex the fistula the more difficult to treat.

Abscesses and fistulas can also occur in association with other conditions such as inflammatory bowel disease e.g. Crohn's disease or ulcerative colitis. The management of these is quite different. Surgery is avoided.

When a fistula is present the clinician should think of the possibility of underlying Crohn's disease.

For complex fistulas endoanal ultrasound can be helpful in identifying the site and number of tracts.

**Clinical features of a fistula**

There may be recurrent staining of the underwear with pus or blood. The patient may also complain of pain and notice a lump.

Examination shows a single or multiple small volcano like protrusions with established fistulas. A little like a keratoacanthoma of the skin with its central core plug of keratin. These are at variable distances from the anal verge. Palpation may discern a thickened pencil like ridge deep to the skin between the volcano and anal canal. Some pus can often be expressed.

Rectal examination may palpate the retracted depressed inner opening of the tract.

A fistula seldom heals spontaneously permanently. The fistula may close but another abscess develops, erupts or is drained .

There are a variety of ways of treating fistulas depending on their number, size, length, complexity.

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 This shows the type of steps being undertaken to improve the results of fistula treatment Many would consider it experimental.



Exposing the fistula opening by retracting the large haemorrhoidal tag which is partially obscuring the view. This fistula is discharging close to the anal verge. It is a simple superficial fistula which can readily be treated by fistulotomy.



This shows the pus drainage from the same fistula in the 3 o'clock position. Notice the large haemorrhoidal tag. The gloved finger is palpating the internal orifice. Although it appears healed it can readily flare up forming a small abscess which then bursts.



A fistula is discharging pus in the 3 o'clock position



A probe is inserted into a tract from the 6 o'clock position before performing a fistulotomy.



A bridge of skin has grown across a midline posterior fissure to form a superficial fistulous tract in the midline posterior.



This shows the tract being palpated and no pus protruding



The fistula has healed temporarily but may recur.



One can see a volcanic like eruption, suggesting a fistula has not healed

## Surgery

Fistulas are usually readily treated surgically. The deeper more complex ones are a more difficult problem as attested to by the high incidence of recurrence and the number of alternative more recently semi surgical methods being used to treat them. A HIGH DEGREE OF EXPERIENCE AND JUDGEMENT IS REQUIRED

**Fistulotomy:** unroofing the fistula

**Fistulectomy:** cutting out the fistula, not advised because of sphincter damage.

A General Anaesthetic is usually required. A fine probe is manoeuvred through the entire length of the tunnel like tract. This may be tricky and care is required to prevent formation of a false tract. Dye ( Evans blue) may be used to help identify the tract and any branches. The tract is completely opened up, packed and allowed to heal from its depths by what is termed second intention healing. This process does take some time and cannot be hastened by suturing.

This is termed laying open the fistula as opposed to excising the fistula-fistulectomy

As the fistula passes through the muscle this muscle has to be divided. This makes the operation a little tricky because there is a risk that if too much muscle is divided there can be permanent incontinence to flatus, fluid or faeces. Thus particular care is required with this procedure.

It is because of the risk of incontinence that other measures are undertaken.

These include setons, glues and plugs.



Seton in place

### Setons

A loop of flexible string like or rubber material is passed through the tract and the ends tied over the skin.

There are 2 techniques with a seton.

#### 1- draining seton

This is tied loosely and used for the badly infected fistula to allow drainage and an operable tract to later develop.

#### 2- cutting seton

This is tied more firmly.

The idea is that as it slowly cuts through the muscle less damage is done allowing regeneration of scar tissue and less damage to muscle. A mature tract may develop thus allowing fistulotomy.

With time this may cut through to the skin as it is further tightened and permits the fistula to heal.

### Fibrin Glues or Plugs

They are injected or placed into the tract.

These do not cut muscle but are less successful, but successful in some cases.

They have the advantage of not burning bridges and surgery can be attempted later.

### LIFT procedure: Ligation of Of Intersphincteric Fistula Tract

Some consider this a significant development in the management of fistulas.

It involves ligating the fistula in the Intersphincteric space, coring out the fistula from internally proximal to this, then closing the internal opening

**The VAAFT technique** is a novel, minimally invasive and sphincter-sparing technique performed for the surgical treatment of complex anal fistulas and their recurrences, VAAFT is performed under direct endoluminal vision and allows identification of the internal opening, secondary tracts and abscess cavities followed by endoluminal management of the fistula tract, and finally closure of the internal opening. This is still considered experimental.



**Ischioanal rectal abscess draining**



## Practice tips



The importance of the message of this figurine is that it shows 'if you do not put your finger in you put your foot in'. This means if you don't examine the patient properly you'll have problems. The other figure could be called the minister of health or the medical board - he is big brother looking over your shoulder.

The importance is that the anorectal region is a very sensitive area and the patient will complain if it is not adequately treated or is not given due respect.

In summary we are carrying out this series of programmes to familiarise general practitioners with the current diagnosis and treatment of ano rectal conditions. Unfortunately the trainee doctor is not exposed to these conditions sufficiently to be confident in their management however this program is an attempt to improve this situation by stressing how important it is to take a history and do the adequate examination.

One of the positive features about working in this area that a positive diagnosis can usually be made just by taking a history and simple examination.

For example on examination of the Perianal region we asked the patient to strain. This may demonstrate haemorrhoids protruding. In addition to the rectal examination we would hope that you would do an abdominal examination as well.

## Conclusion

We have attempted to provide clinical information regarding these conditions particularly as they apply to the general practitioner. The management of Fistulas is complex and should only be in the realm of an experienced surgeon as in western society they are a common cause of litigation should incontinence occur. It is for this reason before embarking on the surgery a comprehensive informed consent is required.

To this end we have provided illustrations and clinical examples mostly from the author's own practice.

This article is only to provide information rather than to recommend a particular form of treatment.

## References

Further information is available on [www.hernia.net.au](http://www.hernia.net.au).

Melbourne hernia clinic  
[www.melbourne haemorrhoid and rectal bleeding clinic](http://www.melbourne-haemorrhoid-and-rectal-bleeding-clinic.com)