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SIMPLIFIED TREATMENT FOR DIVERSIFIED FISTULA IN ANO

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ABSTRACT

Perianal abscesses and fistulas represent with acute or chronic manifestations of the same disease process as anal gland infection. They have troubled patients and physicians. A thorough understanding of the anatomy and pathophysiology of the disease process is critical for optimal diagnosis and management. Abscess management is fairly straight forward, with incision and drainage being the trademark of therapy. Fistula management is much more complicated. It requires a balance between rates of healing and the mechanism of continence and early return to the normal activity. This, therefore, requires much more fineness. Many techniques are now available in the endowment of the surgeon who treats fistula-in-ano. Although no single technique is appropriate for all patients and all fistula types, appropriate selection of patients and choice of repair technique should yield higher success rates with lower associated morbidity.

KEYWORDS: Abscess, Fistula, Perianal, Perirectal, Fistula-in-ano.

INTRODUCTION

A fistula-in-ano is an epithelial-lined tract connecting the anal canal to the perianal skin. Anal fistulas can have many causes but are most commonly the result of an anorectal abscess. Classification of the fistula is determined in relation to the anal sphincters. Although benign, the condition can cause significant distress and embarrassment to the patient. Treatment focuses on control of the infection and maintaining faecal continence. Many treatment

options are available, and novel treatments are steadily proposed and tested. This article will review the fundamental principles of fistula-in-ano diagnosis and treatment.

Fistula-in-ano often occurs following anorectal abscess. An anorectal abscess occurs when an anal gland becomes obstructed, resulting in infection and abscess formation. The infection is located near the sphincter complex, and therefore the fistula can traverse the sphincters. One-third of patients undergoing incision and drainage of an anorectal abscess will later develop a fistula.[1] 30% to 70% of patients diagnosed with an anorectal abscess will already have a fistula present on exam.[2]

Fistula-in-ano is one of the most common anorectal diseases. The prevalence is greater in men than women, with a rate of 12.3 cases per 100,000 and 5.6 cases per 100,000, respectively.[3] The average age at diagnosis is 38 years, with most occurring between 20 to 40 years of age.[4] Risk factors for fistula development include obesity, diabetes, smoking, hyperlipidemia, and a sedentary lifestyle.[5]

Types of fistula

Classification of anal fistulas is based on anatomy, specifically in relation to the sphincter complex.

Miligan and Morgan (1934)

Classified fistula in ano according to their relationship to the anal sphincter to the anorectal ring.

1. **Low fistula:** Opening in the anal canal at the level of pectinate line. (Submucous, Subcutaneous, Trans-sphincteric)
2. **High fistula:** All other varieties of fistulae.

Goligher (1975)

(a) Subcutaneous, (b) Submucous, (c) Low anal, (d) High anal, (e) Pelvi rectal

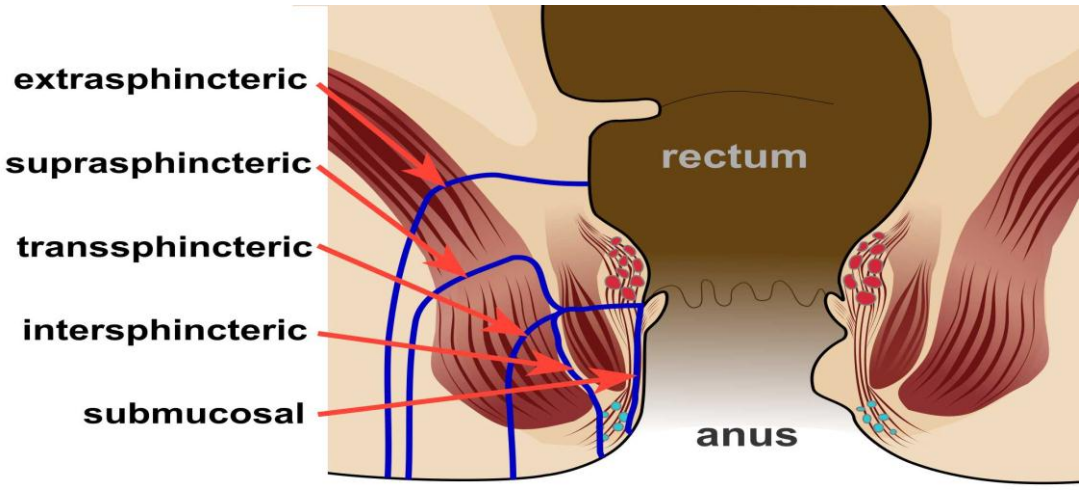
In 1976, Dr. Parks published a paper describing a classification system for anal fistulas that is still widely used today. Four types were described: intersphincteric, transsphincteric, suprasphincteric, and extrasphincteric.[7] Appropriate classification is essential for adequate treatment and conservation of the external anal sphincter to preserve fecal continence.

Intersphincteric (45%):– The fistula penetrates through the internal sphincter but spares the external sphincter.

Transphincteric (30%):– The fistula passes through both the internal and external sphincters.

Suprasphincteric (20%):– The fistula penetrates through the internal sphincter and then extends superiorly in the plane between the sphincters to pass above the external sphincter before extending to the perineum. This classification includes horseshoe abscesses.

Extrasphincteric (5%):– This fistula is very rare. It forms a connection from the rectum to the perineum that extends laterally to the internal and external sphincter. These can be the most difficult to treat due to the need to preserve the sphincter complex. The classification of the fistula is often diagnosed during an exam under anesthesia in the setting of a simple fistula. Evaluation of complex fistulas, including recurrent disease and fistulas in the setting of perianal Crohn disease, may benefit from pre-operative imaging. MRI, endoanal ultrasound, fistulography, and CT are all proven to contribute to an accurate diagnosis, with MRI being the most sensitive (>90%). A combination of two imaging modalities increases the diagnostic accuracy to 100%.[2]



Different treatments for fistula in ano

Most fistulas are treated surgically, through a variety of different procedures depending on external and internal sphincter involvement. Complex fistulas, particularly those caused by Crohn disease, are treated medically. The most common options will be discussed in detail.

Fistulotomy:– Fistulotomy entails opening the fistula tract and possibly dividing sphincter muscle. This surgical treatment is very effective for simple fistulas with minimal sphincter involvement resulting in healing in 90% of properly selected patients.[8] Marsupialization of the fistulotomy edges has proven to decrease bleeding and improve post-operative pain control.[9]

Endorectal advancement flap:– This procedure is technically more challenging than fistulotomy. The endorectal advancement flap procedure involves closure of the internal opening of the tract, debridement of the tract, and mobilization of anorectal mucosa to cover the defect. The sphincter is not divided during this procedure but can be compromised during the flap with reports of incontinence up to 35%.[10] The results of healing vary significantly between studies but are reported between 66% to 87%.[8,1] Failure is associated with Crohn disease, malignancies, and a history of previous repair attempts.[11,12]

Seton placement:– Seton drain placement is often reserved for complex fistulas and used in a two-stage technique. Initial placement is used to gain source control, while the second stage often includes fistulotomy. Setons can be classified as 'draining' or 'cutting.' A draining seton is placed through the fistula tract and tied loosely in place to maintain long term drainage. Many materials can be used, including vessel loops, sutures, or newly available drain devices. A cutting seton is tied tightly around the fistula tract to slowly divide the sphincter complex as it can be tightened over time. This allows for the slow division of the sphincter with decreased risk of incontinence. A completion fistulotomy would then be performed. This two-staged technique will allow for complete healing of the fistula in 94% of patients.[13] The rate of fecal incontinence following seton placement varies but has been documented as high as 12%.[14]

Lift:– The ligation of intersphincteric fistula tract (LIFT) procedure can be used for the treatment of simple and complex fistulas with an average success rate of 71%.[15] The procedure involves identification of the internal opening with suture ligation of the intersphincteric portion of the fistula. The tract and infected gland are then excised and the wound debrided with curettage. No portion of the external sphincter is divided, so fecal incontinence is rare. The LIFT procedure can be performed following seton placement as part of a two-stage technique.[2]

Fibrin Plug and Glue:– A fibrin plug is a treatment option that involves a collagen matrix used to block or plug the internal opening of the fistula tract. The treatment is appealing as it does not involve dissection or division of the sphincter complex and therefore, should not contribute to incontinence. Unfortunately, the treatment is less than 50% successful in the treatment of fistula-in-ano.[16] Similarly, fibrin glue has also been trialed to promote the healing of fistula tracts. This also preserves sphincter function but has low success rates varying from 14% to 69%.[17,18] Both have been initially discarded as ineffective, but more

recent studies have involved a combination of surgical fistula treatment in combination with fibrin plugs and fibrin glue, which may develop into a viable treatment option following more research.[2]

Specific treatment plans for different fistula in ano

There are various types of treatment modalities which is mainly based on fistula classification but our treatment plan is mainly treat the fistula as an abscess which was proceeded through anal gland infection.

There are two things one is primary site of infection (Anal gland) and second is its extension (secondary infection sites) present as perianal abscess.

So our treatment is planned as-

1. Drainage of secondary infection sites (perianal abscess).
2. Treatment of primary site of infection (anal gland).

A perianal abscess should be treated in a timely manner by incision and drainage. The drainage should be performed as close to the anus as possible to shorten the length of any possible subsequent fistula tract. In addition to adequate drainage, one should endeavour to prevent acute recurrence of an abscess by either excising the overlying skin, inserting a suitable drainage device, catheter, or placing a loose seton.

Most perianal abscesses can be treated in the one setting. Some conditions, such as cellulitis without fluctuance, failed drainage in the one setting, abscesses with associated systemic signs of sepsis, or extensive abscesses, are more appropriately treated in the operation theater, where a thorough examination under anesthesia can ensure optimal diagnostic evaluation and drainage.

In case of acute abscess seven days of drainage is sufficient and in chronic case not with tough of its wall fifteen days of drainage is sufficient but in case of abscess with fibrosed cavity one month drainage is sufficient. Accessed the cavity collapse with time by palpation and per rectal examination.

There are various types of treatment to treat primary source of infection which is anal gland infection but kshara sutra is best, by accessing the exact position of internal opening retrograde probing is done and connect the window and ligate kshar sutra, in this manner some sorts of sphincter involve but should not exceeded more than the one third of total

sphincter. By kshar sutra ligation graded cutting of anterior tissue and graded fibrosis or healing of posterior tissue. Thus the sphincteric loss will be minimized.

Thus in this procedure we treat the primary site of infection by kshar sutra application and secondary sites by drainage system.

Benefits of this - We do not create any big wound.
We do not cut the any sphincter.
Reduced time duration of treatment.
Patient early returns to the normal activity.

In Ayurveda-As shushrut says in whichever the direction tracks lead and wherever pocket (utsanga) are presents, at all those places incision should be made so that no pus remains.

यतो यतो गतिं विद्यादुत्संगो यत्र यत्र च |

तत्र तत्र व्रणं कुर्याद यथा दोषोन तिष्ठति || (सु.सू.5/12)

After successful drainage of a perirectal abscess, pain relief is usually immediate. Instruct patients to use warm tub soaks, bulk-forming fiber laxatives, and analgesics. Bleeding and drainage usually subside within a few days. The wounds should heal over a matter of a few weeks. Surgical follow-up is encouraged because acute abscess recurrences occur in 10%, and development of chronic fistula-in-ano occurs in up to 50% of patients.[19]

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