



A NEW CONCEPT TO TREAT HORSE SHOE FISTULA IN ANO

General Surgery

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ABSTRACT

In simple anal fistula, conventional surgical options are relatively safe and well accepted in clinical practice. However for horseshoe fistula great concern remains about damaging the sphincter, which is quite inevitable following conventional surgical treatment. The aim of this study is to check the efficacy of this new surgical technique in horseshoe fistula i.e Excision of internal opening with prominent tract around, free drainage of horseshoe tract and coring of the external fistula.

20 patients with horseshoe fistula-in- ano were enrolled and all underwent surgery with excision of internal opening and prominent tract around, free drainage of horseshoe tract and coring of external fistula promoting healing with secondary intention with sphincter preservation.

The success rate was 100% without any recurrence. There was no complaint of incontinence for flatus or liquid 5 months after operation. The pain was minimal, with all patients resuming their normal activities within 72 h of the operation.

KEYWORDS

Horseshoe fistula, Recurrence, Incontinence, Internal opening, External opening, Abscess

INTRODUCTION :

Horseshoe fistula in ano is a complex cryptoglandular origin anal fistula , more common in middle aged male, mostly transsphincteric with posterior internal opening. Surgical treatment for anal fistula should aim to eradicate sepsis and promote healing of the tract, while preserving the sphincters and the mechanism of continence and prevent recurrence.

In simple and distal fistula, conventional surgical options are relatively safe and accepted in clinical practice. Horseshoe fistula with significant proportion of anal sphincter involvement, great concern remains about damaging the sphincter and subsequent poor functional outcome, which is quite inevitable following conventional surgical treatment. In spite of several new procedures, such as anal fistula plug, ligation of intersphincteric fistula tract (LIFT), video assisted anal fistula treatment (VAAFT) there is no satisfactory treatment for complex fistula- in-ano till date. The aim of this study is to check the efficacy of this surgical technique in horseshoe fistula.

METHODS :

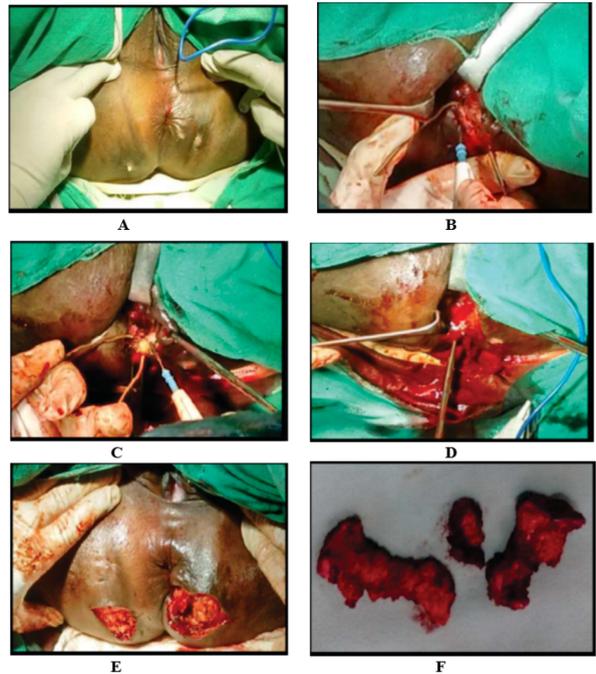
20 patients with horseshoe fistula-in- ano were enrolled for a prospective study. The median follow- up was 12 months. Simple low fistula were excluded. Informed written consent was taken from every patient. A pre-operative routine blood investigation, MR fistulogram, colonoscopy was done in every case to accurately map all the fistula tracts and rule out IBD and malignancy. All the patients were evaluated in the lithotomy position and proctoscopy was done prior to any intervention under saddle block (spinal anesthesia). Using a proctoscope, rolled gauze was placed in the anal/rectal canal. The external opening was gently probed using a standard 3mm blunt-tipped probe to identify the internal opening. The internal opening was localized by injecting hydrogen peroxide through the external opening using the stub of a 21G needle that has been broken about 3 to 5 mm from the hub. Where no definite internal opening could be localized intraoperatively, induration of the sphincter complex in the region of internal opening helped to determine the possible site of the internal opening.

Excision of internal opening and proximal prominent tract around was done with electrocautery following with free drainage of horseshoe tract and coring of the external fistula .

After cauterization, the wound was left as such and no attempt was made to close the internal opening with any suture, stapler, glue or plug to promote healing with secondary intention with sphincter preservation. Dry gauze dressing with T bandage was applied to cover the wound. Paracetamol was used as the primary analgesic drug, and if not effective, then NSAID's (diclofenac) were used. Post op Care consisted of Sitz bath, regular cleaning and emptying of the curetted

tracts once or twice a day depending upon the complexity of fistula for first 10 days. Dry gauze cover retained by fitting undergarments. After this, the patient could do the cleaning process at home. patients were seen every week and encouraged to walk as much as possible .

OPERATIVE PICTURES :



A—MULTIPLE EXTERNAL OPENINGS, B and C—EXCISION OF INTERNAL OPENING AND PROXIMAL TRACT, D and E — WIDE FREE DRAINAGE OF HORSESHOE TRACT, F – SPECIMEN OF EXCISED INTERNAL OPENING WITH PROXIMAL TRACT AND CORED OUT EXTERNAL LATERAL TRACTS.

RESULT :

- 20 patients with horseshoe fistula-in- ano were enrolled for a prospective study.
- The median follow-up was 1 year (5-15 months). The mean age was 40± 10 years. Male:female ratio was 4:1. Fistula was recurrent in 14, had an associated abscess in 7, was anterior in 2, the internal opening was not found in 3 and 1 had a supralelevator extension.

- 3 patients were excluded (1 lost to follow up, 2 with tuberculosis leading to fistula-in-ano). The success rate was 100% without any recurrence. There was no complaint of incontinence for flatus or liquid till 5months after operation. The pain was minimal with all patients resuming their normal activities within 72 h of the operation.
- All patients were questioned regularly for any symptom of anal incontinence at their routine visits and none of them complained of permanent anal discharge. Digital anal examination also revealed satisfactory anal tone in all patients.

Table 1 : Characteristics of the 20 patients with horse shoe fistula

Characteristics	No. of Cases (%)
• Age (Mean Age)	40± 10 years
• Sex	
Men	16 (80%)
Women	4 (20%)
• Presentation	
Primary	7 (35%)
Recurrent	13 (65%)
• Associated Abscess	
Present	7 (35%)
Absent	13 (65%)
• Location of tract	
Anterior	2 (10%)
Posterior	18 (90%)
• Palpable Internal Opening	
Present	17 (85%)
Absent	3 (15%)
• Complications following Surgery	
Recurrence	Nil
Permanent Anal Incontinence	Nil

DISCUSSION :

Cryptoglandular abscess develops in the intersphincteric space which may spread via vertical, horizontal or circumferential routes.[1] Circumferential spread may occur in the intersphincteric, ischiorectal or supralevator compartments to form horseshoe fistulas. [2]

Abscesses perforating the external anal sphincter anteriorly or posteriorly enter the preanal or postanal spaces [2], and internal opening may be identified on the anterior or posterior midline at the level of dentate line. If the abscesses are not drained either surgically or spontaneously at this stage, they spread extensively into the ischiorectal spaces, may results in anterior and posterior horseshoe abscesses. Incomplete or semi-horseshoe fistula develops when one arm of horseshoe abscess spontaneously drains into the skin, while drainage of both arms results in a complete horseshoe fistula. There may be associated transsphincteric fistula. Undoubtedly, the internal opening is the prime culprit in a fistula-in-ano by allowing ingress of the bacteria from the anal canal into the fistula tracts. However, once the tracts are formed and are lined by the infected epithelium, then it is a mutually propagating situation. The patent internal opening keeps the tracts infected. MR fistulogram has sensitivity and specificity for detecting fistula tracts as 100% and 86% respectively, and internal openings as 96% and 90%, respectively . [3],[4]. Accuracy rates of clinical examination, endoanal US, and hydrogen peroxide-enhanced US for horseshoe fistulas as 81%, 81%, and 92%, respectively. [3] MRI is superior to anal endosonography. The aim was to ensure wound healing by secondary intention so that the internal opening was sealed by granulation tissue. Passage of a probe from both the external and the internal aspects is the most reliable technique to demonstrate the course of the fistulous tract. Injecting hydrogen peroxide is the best technique for identifying the internal opening, since the pressure created by the bubbles may be sufficient to penetrate even a stenotic tract. Injection of various substances such as methylene blue, indigo carmine, hydrogen peroxide or even milk has been described and widely used [5]. Probing should be gentle, otherwise it easily results in creation of a false route which may further complicates the operative procedure. Identification of internal openings is very important. Failure to identify the internal opening during the operation (seen in up to 15-20% of case) perhaps happens because of the temporary closure of the internal opening due to debris or the oblique course of tract through sphincter. Induration of the sphincter complex in the region of internal opening helps to determine the possible site of the internal opening. Post operative care is very crucial for good outcome.

CONCLUSION :

This procedure is a new effective method for horseshoe fistula, effective even in supralevator fistula-in-ano and where the internal

opening is non- localizable.

The aim was to ensure that the wound is healed properly by secondary intention so that the internal opening gets sealed by the granulation tissue, and to achieve adequate sphincter preservation with no recurrence .We conclude that the success rate of this noble technique was 100% without any recurrence. There was no complaint of incontinence for flatus or liquid till 5months after operation. The pain was minimal with all patients resuming their normal activities within 72 h of the operation.

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