



One stage fistulectomy for high anal fistula with reconstruction of anal sphincter without fecal diversion

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Introduction



- Anal fistulae affect 1 in 10,000 of the normal population every year. Eighty percent of anal fistulae are secondary to cryptogenic abscesses arising from infected anal glands which then can spread to other parts of the perianal region. Infection can then track in many directions to other epithelized surfaces such as vagina forming ano-vaginal fistula or perianal skin forming perianal fistula.

Corson JD, Williamson RCN, eds. Surgery. London: Mosby 2001: 12-14.



- The treatment of anal fistulas is a major therapeutic challenge. The main challenge is to eradicate the inflammatory process to minimize the incidence of recurrence without affecting anal continence.
- With more radical approaches, the recurrence rate decreases, but the risk of incontinence increases.

Arroyo A et al Ann Surg 255:935–939.



- Fistulotomy has been described as the treatment of choice for subcutaneous and inter-sphincteric anal fistulas with or without marsupialization with very good healing rates. However, the risk of incontinence rises with the amount of external sphincter muscle that has been divided.

Arroyo A et al Ann Surg 255:935–939



- Fistulectomy with primary sphincter reconstruction is a cutting procedure with promising results but in a small number of publications.

Perez F et al, J Am Coll Surg 200:897–903



- Definitive management options include
 - 1- Setons (temporary draining, cutting).
 - 2- Fistulotomy or Fistulectomy (primary or staged, with or without [sphincteroplasty](#)).
 - 3- Endorectal advancement flap or Anocutaneous advancement flap.
 - 4- Fistula plug or fibrin glue.
 - 5- Electrocauterization of tract/laser (fistula laser closure [\[FiLaC\]](#) ??)
 - 6- Ligation of intersphincteric fistula tract (LIFT).
 - 7- Video-assisted anal fistula treatment (VAAFT).



Aim of study



- The aim of this study is to assess feasibility of one stage fistulectomy with primary reconstruction of anal sphincter to permanently eliminate high trans-sphincteric and supra-sphincteric anal fistula to achieve healing while preserving anal canal function and continence.



Patients and methods

- One hundred seventy five patients, 112 males and 63 females, between the ages of 18 and 60 years diagnosed with high anal fistula were included in the study.

- **Inclusion criteria:**

Patients with high complex trans-sphincteric anal fistula. We mean by high complex fistula is the high trans-sphincteric perianal fistulae which we define as the fistulae which involve more than 50% of the external anal sphincter and the supra-sphincteric perianal fistulae which we define as the fistulae which extended completely above the external anal sphincter



- **Exclusion criteria:**

1. Patients with simple anal fistula.
2. Patients with preoperative incontinence.
3. Patients with comorbidity and chronic illness affecting healing process such as, patients diagnosed with any immune system compromising disease and patients diagnosed with chronic inflammatory bowel diseases.
4. Patients diagnosed with acute anal sepsis.



- Proper history taking , General examination and local digital per rectal examination was commenced for assessment of anal canal continence and identification of external and internal openings.
- M.R.I. Fistulogram was used as a standard method for proper identification of the fistulous tract and its relation to the sphincter complex to select the patients which fall under our inclusion criteria.
- Also all patients were assessed for continence using Wexner score for incontinence before the operation, any patient with impaired fecal continence were excluded from the study



Operative technique

- Patients were anaesthetized with general anesthesia, put in lithotomy position and the skin was then draped.
- After identification of the external fistula orifice probing of the fistula tract with identification of the fistulous tract and internal orifice by injecting of diluted methylene blue in the tract. Fistula was laid open and fistulectomy then conducted and dissected with diathermy cautery help



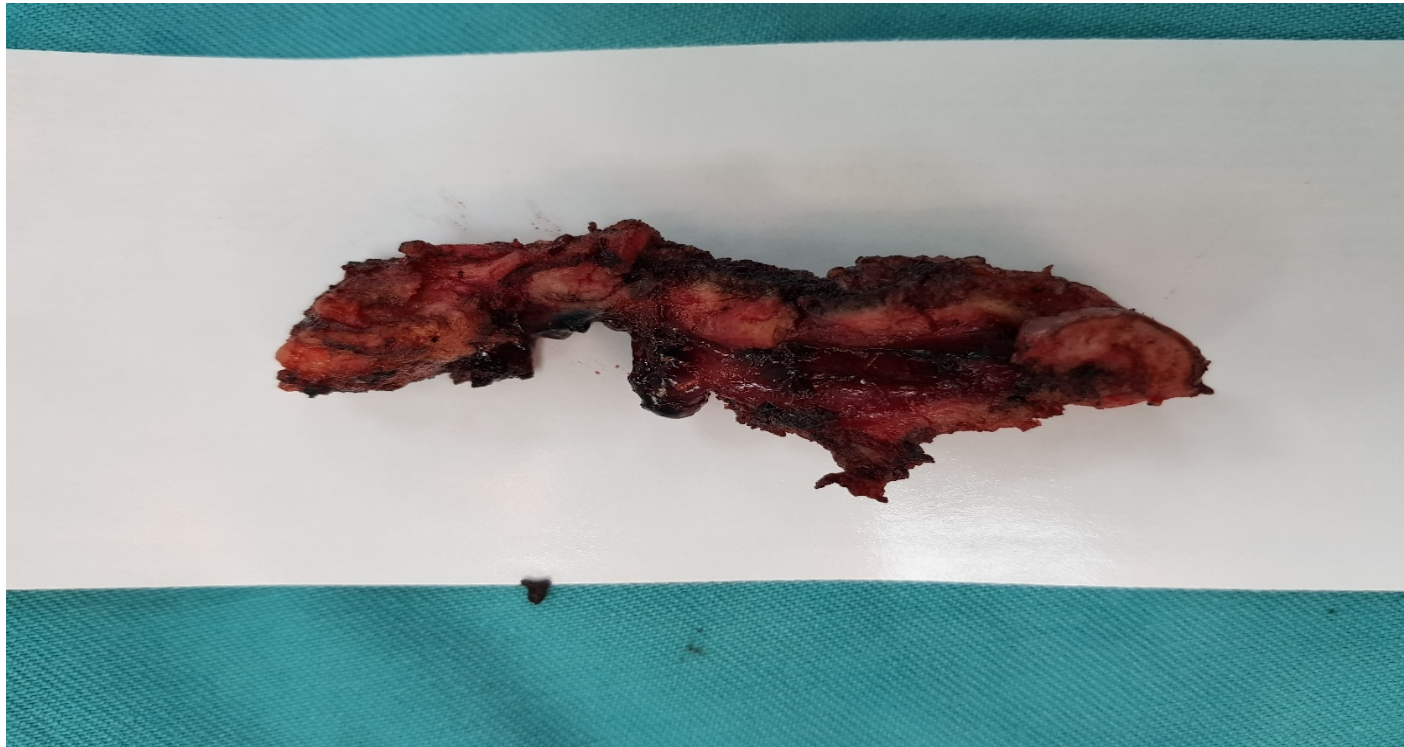


- Then **Primary repair-without overlap-** of the sphincter with Vicryl 2/0 with proper hemostasis using coagulation diathermy then injection of local anesthetic for post-operative pain control.





- All excised tissue were sent for histo-pathological examination.





- **Follow up** was done every two weeks for the 1st 2 months and then follow up was commenced monthly for 1 year. Clinical assessment of recurrence and anal incontinence.
- After 1 year, full assessment for fistula recurrence and anal continence was done by full clinical examination and by using Wexner score. Also at the end of the follow up period MRI Fistulogram was done again for all patients to ensure the absence of hidden recurrences that cannot be detected clinically.



Results



1-Age	Min.	Max.	Mean
	18	60	37.48
2- Gender (total=175)	Males		Females
	112 (64%)		63(34%)
3- Recurrence	Number of recurrent cases		Percentage
	16		9.1%
4- Continence	Incontinent cases.		Percentage
	4		2.28%
5- Wound healing	Delayed (up to 8 weeks)		Percentage
	5		2.85%



- **Recurrent Cases**

- The patients was followed up to 1 year.
- After 3 months 8 patients had recurrence. Seven of those patients recur with high trans-sphincteric fistulae and 1 patient recur with low branching trans-sphincteric fistula.
- After 6-9 months 4 patients develop recurrence in the form of high trans-sphincteric fistulae and 2 patients developed low fistulae. At the end of follow up period upon performing the confirmatory MRI, 2 patients showed hidden fistulous tracts ending into a high abscess cavity, those patients were complaining of vague anal pain with no visible external opening.
- This ends up into total of 16 recurrent cases.



Incontinence:

- Four patients (2.3%) were complicated with incontinence.
- Two of those 4 patients (1 male and 1 female) experienced gas incontinence two months postoperatively (score 3 in Wexner), the patients have responded well to biofeedback and regain continence after 2 months of biofeedback. The histo-pathological examination of the fistulous tract revealed chronic nonspecific inflammation for both patients.
- The other 2 male patients experienced soiling (Wexner's score 4) which was investigated and treated accordingly.



- **Analysis after exclusion of specific pathology:**

If the patients who had an un-diagnosed specific disease as Chron's disease and hidradenitis suppurativa are excluded from the analysis of the results, the recurrent cases will decrease to **14 cases** as there were 2 cases from the 16 recurrent cases had Chron's disease. Also the number of patients with delayed wound healing will fall to **1 case** as out of the 5 patients who experienced delayed wound healing 2 patients were diagnosed as Chron's disease and 2 patients with were diagnosed as hidradenitis suppurativa.



Discussion and conclusion

- Our study shows low incidence of recurrence (9.1%) and incontinence (2.28%) after the procedure. Also our study showed low incidence of delayed wound healing up to 8 weeks (2.85%).
- In conclusion, compared to other treatment modalities for complex trans-sphincteric anal fistula found in literature, it had been found that this technique has good results regarding healing of the fistula with acceptable risk of incontinence, relatively low recurrence rate and good wound healing.
- However **limitations** of this study is the need of longer period of follow up that may reach 2 years which may increase the recurrence rate.



Thank you
Questions?