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COMPLEX FISTULA IN ANO MANAGEMENT WITH FEEDING TUBE TIE SETON

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ABSTRACT

Background: Fistula in ano is a common anorectal problem any surgical procedures are introduced to reduce higher rate of recurrence and maintain anal continence. Newer techniques, modification are in progress since 18th century to get rid from this diseases.
Objectives: To analyze the recurrence and fecal incontinence with seton" feeding tube-tie" at secondary care hospital.
Method: this prospective study of complex fistula in ano involving more than 30% of anal sphincters or recurrent manage by feeding tube-tie with both sides partial fistulotomies and specially internal opening between 3&6 o'clock from April 2007 to January 2012 at Ghulam Muhammad Mahar Medical College Teaching Hospital SU-II Sukkur & City Medical Centre.
Results: One hundred thirteen patients treated during study period, age ranges from13 to 69 years, complete wound healing found within 6 to 11.4 weeks ,seton tightened 6 to 12 times with 3 mm length each time. Recurrence found in 3.5% and incontinence 0% during the minimum period of six months follow up**.**
Conclusion: Feeding tube-tie seton with bilateral partial fistulotomies is , cost effective, simple management with low morbidity and will recommend as procedure of choice for the management of complex fistula in ano.

Key words: Complex fistula in ano, seton, recurrence & incontinence.

INTRODUCTION

Fistula-in-ano is a hollow tract lined with granulation tissue, connecting a primary opening inside the anal canal to a secondary opening in the perianal skin. Secondary tracts may be multiple and can extend from the same primary opening. Whatever the type and the extent of fistula are, the principles of anal fistula surgery are to cure of the fistula, prevent recurrence, and preserve sphincter function. Most of the fistula-in-ano has been conventionally treated by either fistulotomy, or fistulectomy, which have been proved to be effective [(1)]. In the late 19th and early 20th centuries, prominent physician/surgeons, such as Goodsall and Miles, Milligan and Morgan, Thompson, and Lockhart-Mummery, made substantial contributions to the treatment of anal fistula. These physicians offered theories on pathogenesis and classification systems for fistula-in-ano [(2)]. The most modern classification of fistula-in-ano is described by Parks et al is based on the location of its tract in relation to anal sphincter muscle: Intersphincteric, transsphjincteric, suprasphincteric, or extrasphincteric [(3)], the term complex fistula is modification of the Park's classification, which denotes in any one of these conditions that is, the track crosses more than 30 % to 50% of the external sphincter, multiple tracts, recurrent, anterior in females or the patient has preexisting incontinence, local irradiation or Crohn's disease [(4)]. New technologies provide promising alternatives to traditional methods of management particularly in case of complex fistulas. High-

COMPLEX FISTULA IN ANO MANAGEMENT WITH FEEDING TUBE TIE SETON

FEEDING TUBE TIE CUTTING SETON (Cost About 0.2 USD)



A. FEEDING TUBES OF DIFFERENT SIZE.
B. IN SIZED TUBE
C. FEEDING TUBE TIE SETON
(ARROW SHOWS CUTTING EDGES INSIDE)

quality randomized control trials to evaluate the different surgical and non surgical treatment options are warranted.

The prevalence rate of fistula-in-ano is 8.6 cases per 100,000 (one lac) populations [5], and in another study, the prevalence of 1.2 to 2.8/10,000 (Ten Thousand) is observed in general population [6], creating the work load in general surgical practice. Due to lack of a single appropriate technique for the treatment of fistula-in-ano, treatment must be refined by the surgeon's experience and judgment. The surgeon has to keep in mind the tradeoff between the extent of sphincter division, postoperative healing rate and functional loss. The laying-open technique (fistulotomy) is useful for primary fistulas [7], a seton can be placed alone, combined with fistulotomy, or in a staged fashion, is useful technique in patients having complex fistula-in-ano [8][9]. Seton is any string-like material which when tied through the fistulous track resulting into inflammatory reaction which stimulated fibrosis that fixes and prevent retraction of the sphincter continuity during cutting process, for that different type of setons are used, like silatic tube, silk, linen, braided silk, braided polyester, rubber band, cable tie, polypropylene and so on [10]. With different materials used as seton the recurrence rate ranges from 0% to 16% [11] and incontinence 6% to 8% [12]. The feeding tube tie is very cheap easily inserted according to the internal opening of the fistula and is convenient tightening gauge in clinic by using a foot scale without need of analgesia. To determine the incontinence, recurrence and healing time of feeding tube setons.

MATERIAL AND METHOD

This prospective study of patients having transsphinteric complex anal fistuala recurrent fistula involving more than 30% of anal sphincter were manage with partialiy divided in vertical direction of distal end with size of 6,8 ,10fr feeding tube tie seton (figure 01) and freshen margins of internal opening between 3 to 9 o'clock, from April 2007 to January 2012 performed by a single surgeon. Patient existing preoperative incontinence, ano rectal tumor inflammatory bowel disease, intestinal tuberculosis and generalized disorders who affecting the healing time like diabetic mellitus etc were excluded.

All the patients examined in OPD, their digital rectal examination (DRE) proctoscopy were carried out. They were counseled about the method of dealing with the fistula and facts about healing follow up and recurrence. All the base line investigation done no effort was made to define the tact or investigated the condition radiologicaly, ultrasound or MRI, the bowel preparation was done in all patients with liquid diet for 24 hours and clean enema most of the patient have been done under spinal anesthesia.

After giving spinal anesthesia, all aseptic measures done patient kept in lithotomy position. Digital rectal examination and proctoscopy were done prior to any intervention, during proctoscopy roll gauze was placed in ano rectal canal, gentian violet solution in 3 ml syringe using stub of 23 G needle with that has been broken about 3 to 5 mm from hub to stain the entire tract by injecting through external opening. The roll gauze was removed to identify the depth and position where the internal opening exists which is very important part of examination. Standard 3 mm blunt tipped probe used gently from external opening till it passed the previously identified internal opening. A feeding tube of size 6 Fr, 8 Fr, 10 Fr selected and its feeding side stylet excised then attached to the probe and drawn through tract from internal to external opening. The amount of sphincter analyzed the internal opening margins freshen from 3 to 6' O clock and area around external opening was dissected around the tract up to the sphincter; this core of tissue then divided and skin from internal opening to lateral portion of tract was incised to allow the feeding tube seton to settle on to the sphincter; the feeding tube was prepared as seen in figure, reef knot tie applied and tightened to make it sit over the sphincter. Haemostatis secured dry gauze applied to cover the wound with T bandage, diclofenac sodium was used as a primary analgesic drug orally and sometimes I/M.

Home care advised consisted of sitz bath, warm water wash, dry gauze cover, dressing by fitting under garments as daily dressing, stool softeners' and antibiotics (Metronidazole) advised.

Patient were advised to attend the OPD to evaluate wound after 72 hours and advised to attend clinic weekly, after every week about 3 mm size seton tightened by measuring the limb of the

feeding tube seton, patient is encouraged for normal activities as much as possible; at the same time, the seton tie was tightened if found lose. On each visit (weekly) patient were asked about the fecal incontinence according to Wexner's score, and feeding tube tightened for 3 mm, if feeding tube tie did not completely cut through despite complete healing of lateral wound or core sphincter of millimeter diameter was left behind, the tie was removed by dividing it. Data was collected and analyzed.

RESULTS

In this series 113 cases of fistula in ano operated designed feeding tube tie seton (Fig 1) from April 2007 to march 2012 by a single surgeon with follow up of minimum 6 months. The age ranges from 16 to 71 years, 108 were male (95.5%) and 03(4.5%) were females, none of them have diabetes or any systemic disorder which interfere the healing time, majority of patients have high intersphincter fistula (70%) , 62.8% beyond 2.5 cm and 58.4% posterior according to goodsall's rule respectively. Recurrent fistula in ano found in 6.19 %, history previous surgery for perianal abscess in 13 cases.

All the patients operated and discharged within 24 hours, the tightening session were carried out without analgesic in majority of cases, few of them have given local application of Xylocaine Jelly, measuring on foot scale minimum 3 mm tightening carried out in each session sometime more and the size of distal limb plus tightening gauge recorded. Three to six sessions required in all cases depending upon encircling size of sphincter. None of the patients found discomfort to remove seton, in two cases premature seton was removed due to slippage or dislodgement, none of patients has complication like bleeding or wound infection. Complete healing achieved within 6 to 12 weeks of time faster who have internal opening at dentate line, slower In high intersphincteric and recurrent cases. Recurrence found in 3.5 % (04) cases all cases have high complex fistula, external opening anterior in 3 cases and posterior in 1 case, which is insignificant (table 1).

DATA

Characteristics	values
Age 13 to 69 years	
Sex	
Male	108 (95.5%)
Female	05 (4.5%)
External opening according to Goodsall's rule	
Anterior	47 (41.6%)
Posterior	66 (58.4%)
External opening from anal verge (Goodsall's rule)	
Within 2.5 cms	42 (37.2%)
Beyond 2.5 cms	71 (62.8%)
Internal Opening	
At dentate line	31 (27.4%)
Above dentate line	82 (72.6%)
Type of fistula	
Low transsphincteric	34 (30.0%)
High transsphincteric	79 (70.0%)
Suprasphincteric	0 (0%)
Recurrent Fistula	7 (6.19%)
Outcomes	
Perfect continence	100%
Recurrence (06 months)	4 (3.5%)

DISCUSSION:

There are so many Seton materials used with different rates of recurrence and incontinence, whatever the material is, patient's compliance recurrence and incontinence are mainly depending on expertise and decision of surgeon. In complex fistula surgery seton placement either loose or cutting with two separate partial fistulatomies have been advocated [13, 14]

In this article with series of 113 cases we found 0% incontinence and 3.5 % recurrence treating with cutting seton partial fistulotomy at external opening and 3 to 9 freshen the margin of internal opening, the date of incontinence validated on Wexner's scale, recurrence and patients compliance to seton on patients reply and examination minimum up to 6 months follow up. Seton (cutting) tie has been used previously, with almost mimicking results in study carried out by Gur et al (15) found 0% recurrence and incontinence while, Zbar A P et al [16] results shows recurrence 6.2% and continent impairment 12.5% .So many factors are involving in recurrence of fistula in ano, lack of identification of internal opening, presence of horseshoe extension, complexity of fistula, and surgeon's expertise, even after caring of these and selection of procedure about 8% recurrence found in a large study [17].

Fecal incontinence remains problem after complex fistula surgery the incontinence rate vary from 0-17% [19] which is a major health problem that is why new techniques designed to minimize

WEXNER'S SCORE FOR FECAL INCONTINENCE.

Characteristic	Never	Rarely <1/month	Sometimes >1/month <1/week	Usually >1/week <7/days	Always > 1/day
Flatus	0	1	2	3	4
Liquid Stool	0	1	2	3	4
Solid Stool	0	1	2	3	4
Wears Pad	0	1	2	3	4
Alteration in lifestyle	0	1	2	3	4

the fecal incontinence. In our study 0% incontinence attributed due to, direct compression effect of feeding tube seton tie cut ends towards sphincter side, gradually cut the sphincter muscle complex followed by fibrosis, which does not allow distraction of sphincter muscle and adhere to each other resulting to prevent incontinence. During normal dissection of the tissue emphasis given not to cut sphincter muscle fibers, properly localized internal opening and freshen the margin between 3 t 9'0 clock, to start, early tear and wear from above downward these factors prevent sphincter function normal resulting into proper continence. From our study we able to identify the tract and internal opening in all patients without expensive radiological examination and use cheaper type of seton have found low recurrence rate and incontinence, we further emphasis that important factor is surgeon's experience judgment and use of seton with partial fistulatomies.

CONCLUSION:

The treatment of complex fistula-in-ano need placement of seton which does not carry disadvantages reduces the recurrence and incontinence. The simply designed feeding tube tie seton with variable size is safe cost effective precise and good compliance and convenient to patient.

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