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Research Article

**ANALYSIS OF THE RESULTS OF PARTIAL FISTULOTOMY  
WITH SETON**<sup>1</sup>Dr. Sadaf Zafarullah, <sup>2</sup>Dr. Naila Bajwa<sup>1</sup>Al-Nafees Medical College, Islamabad<sup>2</sup>Lahore Medical and Dental College, Lahore**Article Received:** July 2020**Accepted:** August 2020**Published:** September 2020**Abstract:*****Aim:** To evaluate the effectiveness of cutting seton in the treatment of high anal fistulas.****Design and duration:** A quasi-experimental study was held in the Surgical Unit-II Jinnah Hospital Lahore for one-year duration from March 2019 to March 2020.****Methodology:** All cases with high anal fistula were selected for study. After clinical examination, all patients with high anal fistula were treated with cutting seton; the material was metal wire. The probe was inserted through the outer opening and the channel on the grooved probe was opened up to the toothed line, then inserted through the seated outer opening and out of the anus through the inner opening and tied at the anal edge. Every two weeks the seton was tightened until it crossed the road.****Results:** Of all 25 patients, 20 (80%) were male and 5 (20%) were female. Their ages ranged from 20 to 60, and the average age was 38. The duration of symptoms ranged from 3 to 24 months. The main ailments were perianal discharge, rectal swelling, pain and premonition. The fistula healed completely in 21 (84%) patients; 3 (12%) of patients experienced some degree of bloating urinary incontinence, but none with feces. One patient had a recurrence of the fistula.****Conclusion:** The treatment of a high anal fistula by staged fistulotomy with a cutting seton is very satisfactory, with minimal postoperative complications.****KEYWORDS:** high anal fistula, stage fistulotomy, seton, metal wire.***Corresponding author:****Dr. Sadaf Zafarullah,**

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**INTRODUCTION:**

Fistula is a Greek word for pipe or gutter. It is a common perianal condition that is associated with significant morbidity and discomfort for the patient. An in ano fistula is a hollow canal lined with granulation tissue connecting the primary opening inside the anal canal to the secondary opening in the skin of the anus<sup>1-2</sup>. There is little information on the incidence in the general population. Anal fistula is largely nonspecific (idiopathic, cryptoglandular) with inter-sphincteric infection of the anal gland as the initiating pathology. However, it may be associated with several specific conditions such as Crohn's disease, tuberculosis, venereum lymphogranuloma<sup>6</sup>, precross<sup>7</sup> rectum<sup>8</sup>, actinomycosis<sup>9</sup>, trauma and foreign body. Milligan and Morgan<sup>11</sup> classified fistulas as rectal or recto-rectal with respect to the recto-rectal ring to maintain continence, and further subdivided each into small and high. The Park Classification, widely used and accepted today has divided fistulas into four groups, namely inter-sphincteric, trans sphincter, sup aphylectic, and extra-sphincteric, based on the relationship between the duct and anal sphincter. The division into simple and complex fistulas carries the risk of sphincter dysfunction during treatment<sup>3-4</sup>. However, identification of ducts in high / complex fistulas requires a combination of careful clinical and possibly radiological evaluation prior to intervention. Ultrasound and MRI assisted by hydrogen peroxide can help identify these pathways. Patients usually have reliable history of prior pain, swelling, and spontaneous or planned surgical drainage of the anal and anal abscess<sup>5-6</sup>. A finger examination of the perineum and rectum will allow the assessment of the anatomy and tension of the anal sphincter before surgery. The basis of fistula surgery is to eliminate the fistula, prevent recurrence, and preserve sphincter function. Setons have been used to treat anal fistulas for hundreds of years. The term seton comes from the Latin word seta meaning bristles<sup>7-8</sup>. They are commonly prescribed for large or complex fistulas to avoid fecal incontinence and relapses. If the entire sphincter is not involved, an incision is recommended, and if the cable goes deep into all of the sphincter muscles, drainage should be performed. The seton's task is to drain, induce chronic fibrosis and cut the fistula tract while maintaining sphincter function<sup>9-10</sup>. Cutting seton is used after partial distal fistulotomy to treat patients

with high sphincteric fistulas in an effective manner with a lower risk of recurrence or urinary incontinence problems. Patient satisfaction following fistula treatment is largely related to relapse and the effect on restraint. The aim of the study was to assess the effectiveness of seton cutting in the treatment of high anal fistula in our setup.

**PATIENTS & METHODS:**

This quasi-experimental study was held in the Surgical Unit-II of Jinnah Hospital Lahore for one-year duration from March 2019 to March 2020. A detailed patient history was collected and a careful local examination was performed to see the features of the fistula viz. site, number, tenderness, discharge, induration, location of internal and external openings, and the presence of other diseases such as tuberculosis, Crohn's disease, ulcerative colitis, and tumors. Digital rectal examination, proctoscopy, and fistulography were also performed in each case to assess the extent of the fistula. Patients were given laxatives and rectal lavage 24 hours prior to surgery, and nothing was given orally. The procedure was performed under subarachnoid / general anesthesia in the lithotomy position. Prior to surgery, hydrogen peroxide was injected through the outer opening to delineate the tube and locate the inner opening. A grooved probe was inserted through the outer opening and the fistula canal was opened to the toothed line and curettage was performed. The probe tip is then inserted through the remaining tube and exited through the internal opening and anus. A metal wire of the appropriate length was cut and inserted through the probe and the other end out of the anus. Both ends of the wire were crimped and a dressing was applied. The patient was discharged from the ward on the second day after surgery, and he was recommended to come every two weeks to tighten the seton under sedation. Seton gradually cut the fistula over 4 to 10 weeks. Patients were followed for six months to check for wound healing and the development of any complications such as recurrence or urinary incontinence.

**RESULTS:**

Of the 25 patients with high anal fistula, 20 (80%) were male and 5 (20%) female, with a male to female ratio of 4: 1. The age of the patients ranged from 20 to 60 years (Table 1).

**Table I. Age and Sex Distribution**

Age	Male	Female	No.(%)
20-30 years	8	1	9 (36)
30-40 years	7	3	10 (40)
40-50 years	4	1	5 (20)
50-60 years	1	0	1 (04)
<b>Total</b>	<b>20</b>	<b>5</b>	<b>25(100)</b>

The duration of symptoms ranged from 3 to 24 months, and the main symptoms were vaginal discharge from the anus, edema of the anus, pain, punctures, etc. (Table II).

**Table II. Symptomatology**

Symptoms	No.	%
<b>Pain</b>	<b>8</b>	<b>32</b>
<b>Perianal swelling</b>	<b>10</b>	<b>40</b>
<b>Perianal discharge</b>	<b>7</b>	<b>28</b>
<b>Bleeding</b>	<b>1</b>	<b>4</b>
<b>Skin excoriation</b>	<b>4</b>	<b>16</b>
<b>Fever and other symptoms</b>	<b>3</b>	<b>12</b>

Six patients had a history of a perianal abscess with drainage. Some degree of contamination in the anal area was noticed by patients in the first days, which resolved later. Some patients experienced pain associated with the presence of the seton, which was relieved with analgesics (Table III).

Complication	No.	%
<b>Incontinence of Flatus</b>	<b>3</b>	<b>12</b>
<b>Pain</b>	<b>5</b>	<b>20</b>
<b>Recurrence</b>	<b>1</b>	<b>4</b>

**Table III. Post-operative Complications**

In six patients during follow-up, wound healing was completed within four weeks and in 10 patients it was completed by week 6. In the remaining patients, healing took place by week 10 (Table IV). The time it took for the seton to cut the fistula canal also ranged from 4 to 10 weeks. The fistula healed completely in 21 (84%) patients, only 3 patients (12%) experienced some degree of bloating urinary incontinence. One patient had a recurrence of the fistula. All patients felt comfortable and satisfied with this treatment; neither of them complained of fecal incontinence.

Wound Healing Time	No.	%
3 to 4 weeks	6	24
5 to 6 weeks	10	40
7 to 8 weeks	7	28
9 to 10 weeks	2	8

**Table IV. Wound Healing Period**

#### DISCUSSION:

The in ano fistula is an age-old problem known for its chronicity, relapses and frequent acute exacerbations. Anal fistula disease is not uncommon in adults and most commonly occurs between the third and fourth decade of life<sup>11-12</sup>. The age distribution and the predominance of men (80%) observed in our study are consistent with other studies, but are not a predictor of a clinical variable. The goal of surgical treatment is to drain local sepsis, eliminate fistulas and avoid recurrences, while maintaining sphincter function<sup>13</sup>. However, the type of surgery varies depending on the type of fistula. Low fistulas are generally treated with simple fistulotomy, with the use of a seton being preferred for high and complex fistulas. Seton is a string of foreign material inserted into the fistula tract; the most commonly used materials are stitching, rubber, wire and healing threads. The task of the seton is to drain and gradually cut the muscles by pressure necrosis; The fibrosis that follows fixes and prevents the sphincter from receding<sup>14</sup>. This procedure can be considered similar to the procedure for cutting the wire through a block of ice that remains intact after splitting. The cutting seton similarly cuts through the sphincter for days or weeks, while the integrity of the sphincter is not compromised. Usually, healing after seton is uneventful, although minor control problems may occur in a variable number of patients. Only three of our patients had bloating incontinence, which correlates well with other studies<sup>15</sup>. The mean healing time in this study (40 days) was shorter than in the other studies. The follow-up period in this study was difficult to discuss our results in relation to the relapse rate; only one patient relapsed.

#### CONCLUSION:

In ano fistula treatment is still a surgical problem. The use of a cutting seton in the treatment of a high anal fistula is very satisfactory as it simultaneously drains, cuts and causes fibrosis along the duct. It is simple, safe and cheap. The patient tolerates the procedure well, and the risk of urinary incontinence and recurrence is not high. Therefore, we recommend this procedure for high anal fistulas.

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