OUTCOME ANALYSIS OF PARTIAL FISTULOTOMY WITH SETON

ABDUL RAZAQUE QAZI, JAN MUHAMMAD MEMON, ROSHAN ALI SOLANGI, SYED QAISER HUSSAIN NAQVI*
Department of Surgery, Unit III, Nawabshah Medical College & Hospital, Nawabshah
Department of Pathology, Nawabshah Medical College, Nawabshah*

ABSTRACT
Objective: To evaluate the effectiveness of cutting seton in the treatment of high anal fistulae.
Setting: Department of Surgery, Unit III, Nawabshah Medical College & Hospital, Nawabshah.
Patients: All cases with high anal fistula.
Methodology: After clinical work-up all patients with high anal fistula were treated with cutting seton; the material used was metal wire. A probe was introduced through the external opening and the tract was laid open over a grooved probe up to the dentate line, subsequently seton was introduced through the external opening and brought out of the anus through internal opening and tied at the anal verge. After every fortnight the seton was tightened, till it cut through the tract.
Results: Out of the total 25 patients, 20(80%) were male and 5(20%) were female. Their ages ranged between 20 to 60 years, with a mean age of 38 years. The duration of symptoms varied from 3-24 months. The chief complaints were perianal discharge, swelling, pain and perianal excoriation. The fistula healed completely in 21(84%) patients; 3(12%) patients experienced some degree of incontinence to flatus but none to faeces. One patient developed recurrence of the fistula.
Conclusion: Treatment of high anal fistula by staged fistulotomy with cutting seton is very rewarding, with minimum postoperative complications.

KEY WORDS: High Anal Fistula, Staged Fistulotomy, Seton, Metal Wire

INTRODUCTION

Fistula is a “Greek” word which means pipe or gutter. It is a common perianal condition that is associated with appreciable morbidity and inconvenience to the patient. Fistula in ano is a hollow tract lined with granulation tissue connecting a primary opening inside the anal canal to secondary opening in the perianal skin. Information on incidence to the general population is scarce.

Anal fistula is mostly non specific (idiopathic, cryptoglandular) with infection of an anal gland in the intersphincteric space as the initiating pathology. However it may be associated with several specific conditions like Crohn’s disease, tuberculosis, malignancy, lymphogranuloma venerium, presacral dermoid, rectal duplication, actinomycosis, trauma and foreign body.

Milligan and Morgan classified fistulae as either anal or anorectal in relation to anorectal ring in maintaining the continence and further sub-divided each into low and high. Parks classification widely used and accepted today divided fistulae into four groups i.e. intersphincteric, trans-sphincter, suprasphincteric and extrasphincteric, based on the relationship between the tract and the anal sphincters. Division into simple and complex fistulas entails the risk of sphincter dysfunction upon treatment. However the identification of tracts in high/complex fistulas require a combination of careful clinical and perhaps radiological assessment prior to interven-

Correspondence:
Dr. Abdul Razaque Qazi, Assistant Professor,
Surgical Unit III, Nawabshah Medical College & Hospital, Nawabshah.
Phones: 0300-3216581.
E-mail: qaziraza2000@yahoo.com
tion. Hydrogen peroxide enhanced endorectal ultrasound and magnetic resonance imaging may aid in delineating the tracts.

Patients usually provide a reliable history of previous pain, swelling and spontaneous or planned surgical drainage of anorectal abscess. Perineal and digital rectal examination will allow the assessment of anal sphincter anatomy and tone prior to surgery. The principles of fistula surgery are to eliminate the fistula, prevent recurrence and preserve sphincter function.

Setons are used to manage anal fistula for hundred of years. The term seton is derived from Latin word “seta” meaning a bristle. They are commonly prescribed for high or complex fistulæ in order to avoid faecal incontinence and recurrence. A cutting seton may be preferred when the entire sphincter is not involved and a drainage seton if the tract passes deep to all the sphincter muscles. The function of seton is to provide drainage, to induce chronic fibrosis and to cut the fistulous tract with preservation of sphincter function.

Cutting seton is used after partial distal fistulotomy to treat patients with high extra-sphincteric fistulae in a successful manner with lower risk of recurrence or the incontinence problems. Patient’s satisfaction after fistula treatment is largely related to recurrence and the effect on continence. The purpose of this study was to evaluate the effectiveness of cutting seton in the treatment of high anal fistula in our setup.

PATIENTS & METHODS

This study was carried out in Surgical Unit III of Nawabshah Medical College between Jan. 2004 to Jan. 2007. A detailed history of the patient was taken and a careful local examination was conducted to see the characteristics of the fistula viz. site, number, tenderness, discharge, induration, position of internal and external openings, and presence of other diseases like tuberculosis, Crohn’s disease, ulcerative colitis and malignancy. Digital rectal examination, proctoscopy and fistulography were also performed in each case to evaluate the extent of the fistula.

Patients were prepared with laxatives and rectal washes 24 hours prior surgery and kept nothing per orally. the procedure was carried out under spinal/general anaesthesia in the lithotomy position. Before proceeding for surgery, hydrogen peroxide was injected through the external opening to delineate the tract and localize the internal opening. A grooved probe was introduced through the external opening and the fistulous tract laid open up to the dentate line and curettage performed. The tip of the probe is then introduced through the remaining tract and brought out via the internal opening and anus. A suitable length of metal wire was cut and introduced though the probe and the other end brought out of the anus. Both the ends of the wire were tightened and a dressing applied. The patient was discharged on the second postoperative day from the ward and advised to come every fortnight for tightening of the seton under sedation. The seton gradually cut through the fistulous tract within 4 to 10 weeks time. The patients were followed-up for six months to see the wound healing and development of any complications such as recurrence or incontinence.

RESULTS

Out of the 25 patients with high anal fistula, 20(80%) were male and 5(20%) female, with a male to female sex ratio of 4:1. The ages of the patients ranged between 20-60 years (Table I). The duration of symptoms varied from 3-24 months, chief complaints being perianal discharge, perianal swelling, pain, excoriation, etc. (Table II). Six patients had a history of perianal abscess with drainage.

Some degree of perianal soiling was noticed by patients in the initial days, which settled later on. Some patients experienced pain due to the presence of the seton which was relieved with analgesics (Table III).

Table I. Age and Sex Distribution

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

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Perianal swelling</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Perianal discharge</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Bleeding</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Skin excoriation</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Fever and other symptoms</td>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
In six patients, during follow-up, the wound healing was complete in four weeks whereas in 10 patients it was complete in 6th weeks. In the remaining patients healing took place till the 10th week (Table IV). The time taken for the seton to cut through the fistulous tract also varied from 4-10 weeks. The fistula completely healed in 21(84%) patients, only 3 patients (12%) experienced some degree of incontinence to flatus. One patient developed recurrence of fistula. All the patients were comfortable and satisfied with this treatment; none of them complained of faecal incontinence.

### DISCUSSION

Fistula in ano is an age-old problem and notorious for its chronicity, recurrence and frequent acute exacerbations. Anal fistula disease is not uncommon in adults and has its maximum incidence between third and fourth decades of life.\(^{17}\) The age distribution and male predominance (80%) seen in our study is in agreement with the other studies\(^{16-20}\) but is not a predictor variable in clinical judgment.

The aim of the surgical treatment is to drain local sepsis, eradicate the fistula and avoid recurrence while protecting sphincter function. However, the type of surgical procedure differs according to the type of fistula. Low fistulas are generally treated with a simple fistulotomy, where as seton application is generally preferred for the high and complex fistulas.\(^{21}\) A seton is a string of foreign material, that is placed in the fistula tract; the common materials used are sutures, rubber, wire and medicated thread.

The function of the seton is to provide drainage and gradually transect the muscles by pressure necrosis; the fibrosis that follow fixes and prevents retraction of the sphincter. This procedure may be considered similar to that of a wire cutting through a block of ice, the ice remaining intact after division. The cutting seton transects the sphincter similiary over a number of days or weeks while the integrity sphincter is not compromised.\(^{22}\)

Usually the healing after a seton procedure is uneventful, though minor control problems may occur in a variable number of patients. Only three of our patients had flatus incontinence, a finding which correlates well with other studies.\(^{23}\) The mean healing time in this study (40 days) was shorter than other studies.\(^{24}\) The follow-up period in this study was short, hence it is difficult to discuss our results with respect to the recurrence rate; only one patient developed recurrence.

### CONCLUSION

The treatment of fistula in ano still poses a surgical problem. The use of cutting seton in the treatment of high anal fistula is highly rewarding as it simultaneously drains, cuts and causes fibrosis along the tract. It is simple, safe and cheap. The patient’s tolerance of the procedure is well, while the risk of incontinence and recurrence is also not remarkable. Hence, we advocate this procedure for high anal fistula.

### REFERENCES


