INTRODUCTION

Anal fissure is one of the most common causes of anal pain. All treatment modalities, including surgery, aim to reduce the spasm of the internal anal sphincter. Surgery reduces the basal sphincter tone by partial incision of the internal anal sphincter. Lateral internal sphincterotomy is now recommended as the standard procedure for this disease. It has replaced posterior sphincterotomy with fissurectomy, presumably because of longer period of wound healing and a higher incidence of disturbed continence secondary to “keyhole” deformity in the later. Fissure excision has been replaced by lateral sphincterotomy. Lateral internal sphincterotomy, however, leaves behind the chronic fissure, which is regarded as an unstable scar tissue. In addition, it involves a blind incision to the internal sphincter leading to a higher incidence of incontinence. Sphincterotomy with fissurectomy, on the contrary, involves excision of the fibrotic fissure to create a fresh surgical wound which then allows a stable wound healing. It also allows a more controlled resection of the sphincter.

The aim of this study was to assess the efficacy of posterior midline sphincterotomy with fissurectomy in patients with chronic anal fissure in terms of symptomatic relief, complications and recurrence.

METHODOLOGY

This study was conducted at Liaquat University Hospital (LUH), Jamshoro/Hyderabad, from January 2005 to December 2007. A total of 136 patients with pain and/or bleeding due to chronic anal fissure, of more than 6 weeks duration, were included in this study. Patients with co-morbid diseases, multiple and secondary fissures and fissures with associated local pathologies such as haemorrhoids were excluded from the study.

All patients were planned for elective fissurectomy and posterior midline sphincterotomy. Surgery was performed either under spinal or general anaesthesia. A bivalve type of anoscope was inserted into the anal canal and opened up slightly to stretch the internal sphincter. The scared tissue together with the sentinel skin tag and the hypertrophied anal papillae was excised and routinely sent for histopathology. A narrow blade scalpel was then used...
introduced and a small incision along the entire length of the anal fissure was made to divide the superficial fibres of the internal sphincter. The area was pressed for approximately 5 minutes, gauze lubricated with medicated petrolatum gel and lignocaine ointment was placed over the cut area and a perianal pad was applied. Bulk laxatives were prescribed postoperatively in all patients. Relief of symptoms and any early postoperative complication such as pain, urinary retention or bleeding, if any, was recorded. The severity of pain was scored and recorded based on the “coin” method.

The patients were followed for 18 months. The follow-up was weekly for one month, monthly for 5 months and then every 3 months for the remaining 12 months. Follow-up included assessment for late complications such as pain, incontinence, key-hole deformity, and recurrence. Mean±SD values was calculated for quantitative data (age, hospital stay) whereas frequencies with proportions were calculated for qualitative data (clinical presentations, complications).

RESULTS

One hundred and thirty six patients with chronic anal fissure were included in this study. There were 98 males and 38 females with a male to female ratio of 2.6:1. The mean age was 38±11.5 years ranging from 20 to 65 years. Eighty eight patients were operated under spinal anaesthesia while 48 patients underwent surgery in general anaesthesia because of patient’s choice or failure of spinal anaesthesia. The mean postoperative hospital stay was 2±0.6 days.

All patients included in this study complained of pain during and after defaecation. The duration of the pain varied from a few minutes to 1-2 hours after defaecation. Forty (29.4%) patients presented with bleeding per rectum. The bleeding was usually small in quantity, streaks in stool, and occurred at the time of defaecation. One hundred and sixteen (85%) patients complained of perianal swelling which was found to be sentinel oedematous “pile” on subsequent examination. Perianal itching was a rare presentation in this series with only 8 (5.9%) patients complaining of this symptom.

Retention of urine was the most common postoperative complication seen in this series, occurring in 10 (7.4%) cases within the first 24 hours after operation and all required catheterization. The other complications are depicted in Table I. The postoperative pain was moderate to severe requiring narcotic analgesics in the first 24 hours. The incontinence was transient, lasting for 6-8 weeks and responded to conservative treatment including perineal exercises. Only one patient presented with a recurrent anal fissure occurring after 8 months and responded to conservative measures. None of the patients presented with “key-hole” deformity.

<table>
<thead>
<tr>
<th>Complication</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary retention</td>
<td>10</td>
<td>7.4</td>
</tr>
<tr>
<td>Pain</td>
<td>06</td>
<td>4.4</td>
</tr>
<tr>
<td>Flatus incontinence</td>
<td>05</td>
<td>3.7</td>
</tr>
<tr>
<td>Faecal incontinence</td>
<td>03</td>
<td>2.2</td>
</tr>
<tr>
<td>Recurrence</td>
<td>01</td>
<td>0.74</td>
</tr>
</tbody>
</table>

DISCUSSION

Anal fissure has an equal incidence across the gender. Males outnumbered females in this study with a ratio of 2.6:1, an observation also reported by other local studies indicating hesitancy on the part of female population in Pakistan to consult doctors for anorectal symptoms. Pain, during or after defaecation, a pathognomonic feature of anal fissure, was present in 100% cases in this series. The age ranged from 20 to 65 years with a mean of 38 years. This corresponds well with other studies that report a mean age ranging from 30 to 45 years. The presenting complaints, however, are variable and different studies cite dissimilar incidence of clinical features, with the incidence of bleeding per anum in more than half of the patients and perianal swelling in as many as 90% of cases. Division of internal sphincter (spincterotomy) to relieve the sphincter spasm is currently considered the treatment of choice for chronic, recurrent and non-healing anal fissures. Posterior internal sphincterotomy, done by dividing the sphincter through the fissure wound, is reported to be associated with the development of a posterior midline keyhole defect that may lead to difficulty in continence or persistent seepage. This study has shown that fissurectomy and posterior internal sphincterotomy is a safe treatment of chronic anal fissures. A small number of patients in this series developed incontinence for flatus and a still smaller number for faeces. These, however, were transient, lasting for 6-8 weeks and responded to conservative treatment including perineal exercises. Although Mousavi et al. report no incidence of incontinence in their series, other studies report a variable occurrence of this complication in patients undergoing lateral internal sphincterotomy. Garcia et al. report an incidence of incontinence varying from 16.1 to 26.7% in patients undergoing lateral sphincterotomy. Another study reported mild soiling in 13% of patients after lateral sphincterotomy. This high occurrence of incontinence in lateral sphincterotomy comes as no surprise. The incidence of incontinence is directly related to the length of sphincterotomy; the surgical estimates of the length of sphincterotomy in lateral sphincterotomy are not always accurate, which at times, leads to excessive cutting of the sphincter. Posterior sphincterotomy, in contrast, involves division of sphincter through the fissure wound, which is a more controlled and standard technique. In addition, fissurectomy removes an unstable scar tissue that enhances the healing rate.
One patient in this series developed recurrent anal fissure within 8 months of undergoing surgery. This settled on conservative treatment. With a recurrence rate of just over 0.7%, posterior sphincterotomy is competitive to lateral sphincterotomy and significantly lower than manual anal dilatation. Some series report incidence of impaired continence as high as 35%.\(^{24-26}\)

**CONCLUSION**

Given the lower rate of complications and almost negligible rate of recurrence, fissurectomy with posterior midline sphincterotomy could still be considered as an alternative treatment for the management of chronic anal fissure. In addition, unlike lateral sphincterotomy, the incision of the internal sphincter is more controlled and through the same scar instead of creating a new one.

**REFERENCES**