OUTCOME OF CONSERVATIVE LATERAL INTERNAL ANAL SPHINCTEROTOMY FOR CHRONIC ANAL FISSURE

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ABSTRACT

Objective *To determine the effectiveness of conservative lateral internal anal sphincterotomy in the treatment of chronic anal fissure in females.*

Study design *Quasi-experimental study.*

Place & Duration of study *Hamdard University Hospital and three other private city hospitals of Karachi, from January 2006 to December 2007.*

Patients and Methods *All female patients with wide based fissures with fibrosis, large skin tags and recurrence/failure of healing after chemical sphincterotomy were included. Patients were operated under spinal anaesthesia in lithotomy position. Lateral internal anal sphincterotomy was done up to 1cm at 9^0 clock position and skin tags were excised. Data and results were recorded on predesigned proforma and outcome in terms of pain relief, healing, complications and recurrence were recorded.*

Results *Total number of patients was 67. Mean age was 31 years. Duration of symptoms was between 2 months to more than 10 years. Fissures were associated with constipation in 52(77.6%) patients and onset dated back to the time of child birth in 39(58.2%) cases. Pain relief was achieved within 48 hours in 82% patients and complete healing of fissure occurred in 97.01%. Two patients had transient incontinence of flatus and mucous. One patient developed wound infection and two had recurrence of symptoms after one year of complete healing.*

Conclusions *Conservative lateral internal anal sphincterotomy is a safe and effective method to treat chronic anal fissure with low rate of complications and recurrence.*

Key words Anal fissure, Conservative anal sphincterotomy, Incontinence, Recurrence.

INTRODUCTION:

Chronic anal fissure is one of the most frequent benign anorectal disorders in our country especially in females. The initiating cause is unclear. Minor trauma by the passage of stool and a high resting anal pressure has been described as main pathophysiological factor.[1]

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The aim of treatment is to reduce the anal tone and allow the fissure to heal.[2] Both chemical and surgical methods are recommended. Chemical sphincterotomy reduces this spasm temporarily while surgical sphincterotomy does the same permanently.[3] Nowadays pharmacological agents are employed as first line treatment for chronic anal fissure but failure of treatment or recurrence of symptoms still require surgical intervention.[4,5] If the fissure is associated with prolonged history, fibrosis, skin tag or a mucous polyp then surgical treatment is required.[6]

Lateral internal anal sphincterotomy is the most common and recommended surgical treatment with good results

but it is associated with some complications like varying degrees of incontinence, wound bleeding, haematoma, abscess and anal deformity.[7] Traditional sphincterotomy comprises of division of the internal sphincter up to the level of dentate line, a more conservative division could lead to a lower incontinence and an equivalent healing rate. This study was designed to assess whether conservative lateral anal sphincterotomy is beneficial and safe in our set up.

PATIENTS AND METHODS:

This quasi-experimental study was conducted at Hamdard university hospital and 3 private city hospitals in Karachi (where authors work) from January 2006 to December 2007. A total of 67 female patients who presented with chronic anal fissures with fibrosis, large skin tags and recurrence/failure after chemical sphincterotomy were included. Detailed history and clinical examination were performed in all patients.

All patients were operated under spinal anaesthesia in lithotomy position. Park's anal retractor was placed and examination under anaesthesia performed. A circumferential incision of 0.5 cm was made with no 11 blade at 9^0 clock position and plane created in intersphincteric groove and between internal sphincter and anal mucosa. Internal sphincter was cut up to 1 cm with scissors and skin tags were excised. Haemostasis was secured with digital pressure. Data and results were recorded on predesigned proforma and outcome in terms of pain relief, healing, complications and recurrence were recorded.

RESULTS:

A total of 67 female patients with age ranging from 16 to 68 years (mean age 31 years) were admitted with the diagnosis of chronic anal fissure. Duration of symptoms was between 2 months to more than 10 years but mostly (about 65%) of 1-2 years. Fissure was associated with constipation in 52 patients (77.6%) and in 39 patients (58.2%) the history dated back to child birth both after vaginal delivery and caesarean section.

Examination revealed presence of large fibrotic skin tags in 86.76% of patients. Most of the fissures were found posteriorly at 6^0 clock position (n 30 - 45%), other locations were anterior (n 13 - 19%), both anterior and posterior (n 22 - 33%) and lateral (n 2 - 3%) Adequate pain relief was achieved in 82% patients within 48 hours of surgery (assessed by visual analogue scale). Complete healing of fissure (till 8 weeks post operatively) was observed in 97.01%. Two patients remained unhealed after 8 weeks and were lost to follow up after that. Post operative bleeding was observed in 4 patients who required pressure dressing only. Wound infection occurred in one. The main concern was incontinence which was observed in two patients. This was transient and resolved in one month. Two patients returned with recurrence of symptoms after one year of complete healing.

DISCUSSION:

Anal fissure is a common painful perianal condition in surgical practice. High resting anal pressure, 30 mm Hg or more above normal resting anal pressure, has been considered as a major etiological factor.[7] Different modalities of treatment have been designed to reduce this pressure which ultimately results in healing of fissure. Chemical sphincterotomy includes reduction of anal spasm by glyceryl trinitrate or diltiazam ointments,[8] and more recently botulinum toxin has been introduced in practice as a convenient alternative to more laborious treatment with ointments.[9]

The surgical treatment (lateral internal anal sphincterotomy) is the most commonly used modality and is considered as gold standard treatment for chronic anal fissure.[2,10] Many studies proved lateral internal anal sphincterotomy superior to chemical sphincterotomy in terms of high healing rate, fewer side effects, low risk of incontinence and recurrence.[11] Chemical sphincterotomy is used by many as first line therapy and there are suggestions that surgery should be reserved for patients who fail to response to initial chemical sphincterotomy,[5] There are studies which describe failure of pharmacological means in patients with prolonged history of more than 6 weeks and fissures associated with sentinel pile.[12] Majority of the patients in our study (83.46%) presented with history of more than one year and 7 of our patients had this problem for 10 years or more. This prolonged history made them suitable candidate for surgical intervention. This delayed presentation can be explained by taking treatment from *hakims* and homeopaths and getting temporary relief and the main reason was unavailability of female surgeons for *pardah* observing female patients.

Association with constipation was observed in 77.6% of the patients and this finding is consistent with published literature.[1] In 58.2% of patients in our study symptoms started after vaginal delivery and caesarean section. This figure is quite high in comparison with published literature which showed the association of fissure with child birth in up to 11% of cases.[2] Many patients blamed the enema given to them by janitorial staff rather than trained staff nurse as an initiating cause. Constipation was again the associated factor as these patients were either bed ridden or were not taking proper diet with roughage. The commonest position for fissure has been described posteriorly (90%) and anterior fissures account only 10% of cases,[2,11] while in our study posterior fissure were commonest but they were present alone in 45% patients and along with anterior fissures in 33%. Anterior fissures

alone were present in 19%. The ratio of our patients showing association with childbirth is more than in reported literature, this probably explains the cause of more anteriorly placed fissures.

We divided the sphincter up to 1 cm as opposed to traditional sphincterotomy in which sphincter is divided up to dentate line. This conservative approach has proved to be associated with lower incontinence rate and equivalent healing.[13]

Postoperative pain relief was adequate in most of the patients in our study and this finding is consistent with the studies which claim improvement in quality of life because of rapid pain relief associated with surgical management.[14,15] Wound related complications including infection and bleeding occurred in 7.46% of patients in this study in comparison to 0.5 to 14.2% reported in literature.[3,16-18] The documented healing rate of lateral internal anal sphincterotomy in various studies ranges from >90% to 78%,[7,19] same was the experience in our study where the healing rate was 97.01%. .

The incidence of incontinence in traditional sphincterotomy is from 1.7 to 30% but most of the episodes have been proved to be minor and transient in different studies.[2,3] A study from Pakistan showed incontinence to flatus/faeces in 64.3% patients at 1st week which resolved by 8th week.[16] While conservative or caliberated sphincterotomy results in 0.4-3.07% incontinence [18,13]. This lower incidence is also reflected in our study too where 2 patients (2.98%) developed incontinence to flatus and mucous of transient nature. Chemical sphincterotomy is associated with high rates of recurrence once the effect of pharmacological agent disappears,[20,21] but it is low after surgery, ranging from 1.3 to 13.1%.[7] Recurrence in our study occurred in 2 patients (2.98%), which is comparable with published literature.[22]

Patient satisfaction was seen in 94.02% proving it an effective and acceptable treatment. Four patients (5.97%) were not satisfied, one because of wound infection, one because of temporary incontinence and two with non healing fissure. Our experience showed that this operation is safe and effective in experienced hands when indicated.

CONCLUSION:

Conservatice lateral internal anal sphincterotomy is a safe and effective method to treat chronic anal fissure with low rate of complications and recurrence.

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