Out come of closed internal sphincterotomy in chronic Anal Fissure: a prospective study at Saidu Teaching Hospital Swat.

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ABSTRACT

BACKGROUND: Anal fissure is a longitudinal tear in the lining mucosa of lower anal canal which causes painful defecation and mild streaking of blood when passing hard stool. It is associated with classical triad of anal ulcer, sentinel tag and hypertrophic papilla. This common problem had been traditionally managed by anal dilatation. In present work, we wanted to look for the safer method of sphincterotomy as a quick and effective procedure.

OBJECTIVE: To study the outcome of Closed Internal Sphincterotomy in chronic anal fissure in terms of healing , pain relief and associated complications.

MATERIAL & METHODS: This Prospective study was conducted at Surgical "B' Unit Saidu Teaching Hospital, Swat from July 2014 to June 2017. 139 patients with chronic anal fissure irrespective of age & gender were included in the study. Patients with previous Sphincterotomy, anal dilatation and suspicion of malignant fissure, atypical fissure or ulcer with associated abscess and those with un controlled diabetes or on anti coagulation therapy were excluded from the study. All patients underwent Closed Internal Sphincterotomy and were observed for 24 hour in the ward and with 2 weeks , 6 week and 6 months interval follow up. Data were recorded on predesigned proforma and analysed with SPSS version 16.

RESULTS: Out of the total of 139 patients, 127 patients were followed-up at 2nd , 6th week and 6th month, while 12 patients lost to follow up. Common presenting symptoms were pain in 112 (81%) , bleeding 76(55%) and pruritis in 7(5%) patients. Pain was relieved within 24 hours in 136 (98%) while in a week time in 3(2%) patients. One patient (0.72%) had reactionary bleeding which was controlled with pressure dressing while one (0.72%) had bleeding which needed re-exploration of the wound. Transient flatus incontinence was observed in 2(1.48%) , while no patient had any faecal soiling. All of the 127 patients had complete healing of fissure by 6 weeks. 2(1.48%) patients had recurrent fissure after few months and were treated by sphincterotomy at the opposite side. 3(2.2%) developed wound infection which responded to antibiotic therapy.

CONCLUSION: Closed lateral internal sphincterotomy is a safe and effective procedure that leads to quick symptomatic improvement and healing in chronic anal fissure with minimal complication rates.

Key Words: *Anal Fissure, sphinterotomy.*

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INTRODUCTION:

Anal fissure is longitudinal tear in the lining mucosa of lower anal canal which causes painful defecation and mild streaking of blood when passing hard stool. It is associated with classical triad of anal ulcer, sentinel tag and hypertrophic papilla[1].

Young adults are often affected. Life time risk for developing anal fissure is 1 in 5[2]. The exact cause is unknown but high sphincter pressure and secondary local ischemia is suggested as causative factors[1]. It is caused by shearing trauma inflicted by passage of hard stool and explosive diarrhea[3,4]. Tuberculosis, Chron's, malignant and sexually transmitted diseases may also lead to anal fissure.

Treatment for anal fissure is based on reducing the spasm of internal anal sphincter through chemical agent or surgical release[5]. Medical treatment options include avoidance of constipation, topical application of anesthetic (eg lignocain 5% gel or ointment) and vasodilator (Glyceryle Trinitrate GTN, nifedipine and diltiazem) ointment and injection of botulinum toxin[5]. GTN relaxes the smooth muscles both of sphincter and vessels walls, thus reducing sphincteric spasm and increasing blood supply to overlying mucosa and promotes healing of fissure[6]. Surgical options for Fissure in Ano include manual anal dilatation, Sphincterotomy and fissurectomy[7].

Internal sphincterotomy has been frequently performed since its introduction at posterior site by Eisenhammer in early fifties[8] and lateral sphincterotomy was popularided by Notaras[9] as a much safer option.

Lateral internal sphincterotomy remains the gold standard as a definitive management of anal fissures[5] with healing rates of 96.5%[10] with a little risk of incontinence[5]. In lateral internal sphincterotomy the lower third of sphincter is cut through incision or stab at anal verge usually at three or nine O'clock position. It has lower recurrence rate but bleeding and sepsis are

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common complications[11].Although there are few reports in long term studies about incontinence but the patients should be warned about it[12].

The current study was conducted to know the pain relief, healing and rate of complications e.g. the haematoma development, bleeding, infection and incontinence in chronic fissures after closed lateral internal sphincterotomy.

MATERIAL AND METHODS:

This Prospective study was conducted at Surgical "B' Unit Saidu Teaching Hospital Swat, from July 2014 to June 2017. 139 patients with chronic anal fissure (more than 6 weeks duration of symptoms) of any age and gender were included in the study. Patient with previous sphincterotomy, anal dilatation, suspicion of malignant fissure, intestinal tuberculosis and atypical Ulcer like ulcerative colitis or chron's disease, known diabetics and patient on anti coagulant therapy were excluded from the study.

Detailed history was obtained from all patient followed by complete physical and digital rectal examinations. Complete set of routine investigations was done and all patients were prepared for Lateral internal sphincterotomy. All the patients were given a kleen enema, two hours before shifting to theatre. Patient was placed in lithotomy position after induction of general anesthesia. After cleaning and draping, Xylocain with adrenaline was injected subcutaneously and in the inter sphinteric region. Number 11 blade was introduced between the muscosa and internal sphinter at 3 o'clock position and was turned out ward to divide the internal sphincter up to the dentate line. The external wound was left open.

All patient were given injection ceftriaxone and metronidazol pre opp at induction and 8 hours post operatively and diclofenac injection 8 hourly for pain relief .The patients were discharged on next/first post op day on oral antibiotics and analgesics for one week and were advised high fibre diet and plenty of fluids.

All the patients were advised for follow up visits at the end of 2nd and 6th week and 6th month to determine common clinical outcome, fissure healing, wound infection, pain, bleeding & fecal incontinence.

All data was collected on pre designed proforma and entered in SPSS version 16. Frequency/ percentages were calculated for qualitative variables, while mean and standard deviation were calculated for quantitative variable. P value ≤ 0.05 was considered as significant value. All the results were presented in the form of tables and charts.

RESULTS:

Total of 139 patients were inducted of whom 127 had complete follow up. Age and gender distribution of the patients are shown in table 1 and 2. Majority (75%) of the patients complained of pain with defecation while bleeding was present in 76(55%) and pruritis in 7(5%) of patients. Site distribution of the fissure is shown in table no 3.

In 136 (98%) complete pain relief in 24 hours while in 3(2.2%) patient pain lasted for a week after the procedure. 2 patients developed a small haematoma which resolved spontaneously while 2 patients had reactionary bleeding after 2 hours which was controlled with pressure dressing in 1 patient while the other patient needed re exploration of the wound for bleeding control. Only 2 patients had transient flatus incontinence while faecal incontinence was not observed at all. All the 127 patients had complete healing of the fissure by 6 weeks. 2 of the patients had recurrent fissure after few months who were treated by lateral sphincterotomy at opposite side (9 o'clock position). Only 3(2.2%) developed wound infection which responded to antibiotic and analgesic.

TABLE NO 1: AGE WISE FREQUENCY DISTRIUBUTION OF PATIENTS WITH ANAL FISSURE

AGE (YEARS)	FREQUENCY	PERCENTAGE (%)
15-20	14	10
21-25	37	27
26-30	42	30
31-35	18	13
36-40	14	10
41-45	10	7
46-50	4	3
Total	**139**	**100**
Mean ± SD	30 years ± 2.16	

TABLE NO: 2: GENDER WISE FREQUENCY DISTRIBUTION

GENDER	FREQUENCY	PERCENTAGE (%)
Male	63	45
Female	76	55
Total	139	100

TABLE NO: 3: SITE WISE FREQUENCY DISTRIBUTION OF FISSURE

POSITION	FREQUENCY	PERCENTAGE (%)
6 O clock	97	70
12 O clock	36	26
Both 6 & 12 O clock	6	4
Total	139	100

DISCUSSION:

In our study the mean age of presentation was 30 ± 2.16 years and comprised of 45% males and 55% females, while in a study by Sagheer Ahmad et al the mean age was 36.4 ± 8.8 years and men were found to have this condition three times more frequently then women[13]. Memon et al reported that men are effected 2.6 times more frequently then women [14]. Sanniyasi S et al reported mean age of 35 ± 5 years with 41 males and 23 females out 64 patients[15], while in a study by Vivek Gupta et al the mean age was 40.13 years with male to female ratio of 1.47:1[16] . The increased incidence in females in our society is probably because of increased incidence of constipation in the perpeurium.

Majority (75%) of the patients in our study presented with painful defecation or pain lasting for an hour or more there after, while bleeding was present in 76(55%) and pruritis in 7(5%) of patients. Sagheer Ahmad et al reported bleeding per rectum as the chief complaint (79%) with some degree of anal pain (18.9%) and pruritis due to discharge (3%)[13] While pain was predominant symptom (54.4%)in a study by Gupta et al[16] . A lower incidence of bleeding from the rectum was also noted by Mousavi et al[17.]

97 (70%) of our patients had fissure at posterior (6 o'clock) position while 36 (26%) had anterior fissure and 6 (4%) had got fissures both at anterior and posterior position. Gupta et al reported fissure at posterior position in 82.4%, anterior 13.2% , both 1.5% and ,multiple sites in 2.9%[16]. In study by Sanniyasi et al about 60% of the patients had posterior fissure and 36% had anterior fissure and only 2 patients had both anterior and posterior fissures[15]. All the studies including ours suggest that posterior anal fissure is more common.

Complete pain relief was observed in 136 (98%) patients in 24 hours while in 3(2.2%) patients pain lasted for a week after the procedure probably because of infection. In study by Sagheer Ahmad et al pain was significantly reduced in all patients in the first 24 hours and post operative pain lasted for 5 days in one (1%) patient [13], while Sanniyasi et al reported that 87.5% of the patients were pain free on postoperative day2 [15].

In our study 2 patients developed small haematoma which resolved spontaneously and 2 patients had reactionary haemorrhage while Sagheer Ahmad et al reported haematoma in one (1%) and brisk reactionary haemorrhage in one (1%) [13]. Only 2 patients had transient flatus incontinence while faecal incontinence was not observed at all. Saniyyasi et al reported incontinence to flatus in 10% patients[15] while it was 3.35% in a study by Sagheer Ahmad et al[13] while Gupta et al did not notice incontinence or soiling at all[16].

All the 127 patients had complete healing of the fissure by 6 weeks. Healing rate was reported as 96.7% by Sagheer ahmad et al [13] while no case of delayed or absent healing was noted by Gupta et al in the patients who underwent closed lateral internal sphincterotomy[16].

CONCLUSION:

Closed lateral internal sphincterotomy is quick, safe , effective and less expensive (as compared to prolong use of Glycerol Tri Nitrate Ointment) procedure for the management of chronic anal fissure and is associated with minimal complications and quick healing rate.

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