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Comparision of Lateral Sphincterotomy with Glyceral Nitrate 0.2% / Diltiazem 2%Local Application in Chronic Fissure in Ano

Authors
Rajeev.N (MS), Raghunandan (MS)
Dr.B.R.Ambedkar Medical College and hospital
Email: *drjeevs@gmail.com*

Abstract

Background and Objectives: *Anal fissures are commonly encountered in routine general surgical practice. Developments in understanding of anatomy,physiology and itsresponse to GNT/Diltiazemhas resulted in new conservative approach.In this study we compare the two modalities of treatment in chronic fissure in ano.*

Methods: *In the study 80 patients of chronic fissure in ano was treated conservatively with0. 2% GTN/2% Diltiazem and lateral sphincterotomy based on the patient preference.The patients were followed up for 5 to 6 weeks for symptomatic relief and healing of fissure and the results compared.*

Results: *1. The fissure healed completely in 46 patients with Diltiazem 2%/NTG0.2% application twice daily with Sitz bath.2. In 25 patients treated with surgery (Internal Lateral Anal Sphincterotomy), the fissure healed completely.3. The mean duration required for healing of fissure was 5.37weeks in Diltiazem/NTG group and 4 weeks in Internal sphincterotomy group.4.There were no side effects after Diltiazem/NTG therapy, 8 patients treated with sphincterotomy had pain in immediate post-op periods subsided with analgegics.*

Conclusion: *Comparision between Diltiazem/NTG gel and Internal sphincterotomy did not show any difference in pain relief and fissure healing. But the time taken for healing was less in surgical group compared to conservatively managed group. Conservative treatment is equally efficacious as surgical treatment in this study.*

METHODOLOGY

Methods of collection of data

Cases attending the surgery OPD with complaints of painful defecation with or without bleeding per rectum were considered for the study.A detailed history and per rectal examination was done to diagnose chronic fissure in ano.Patients were explained about the treatment modalities and the patients opted for conservative management (chemicalsphincterotomy) were prescribed as all odd numbers with NTG and even numbers with Diltiazem, those who opted for surgery underwent lateral sphincterotomy. Conservative management involved local application of 2% Diltiazem/NTG twice daily for 5-6 weeks. Surgical mode of management was lateral sphincterotomy. Both groups were advised plenty of oral fluids, high fibre diet, laxatives and Sitz bath.Follow up of the patients is done by history and per rectal examination to assess the efficacy of treatment—complaints like pain, bleeding, sphincteric spasm, discharge per anus and incontinence was noted.

INCLUSION CRITERIA

1. Both sex, with age >18yrs with fissure.
2. Associated with pain, spasm of internal sphincter with or without sentinel pile.
3. Cases which were regular for post treatment follow-up.
4. Patients willing to be part of this study.

EXCLUSION CRITERIA

1. Fissure with TB, AIDS, Crohn's disease.
2. Fissure with complication—abscess or fistula
3. Not willing for follow up
4. Not willing to be a part of this study

RESULTS

80 patients with various symptoms of fissure in ano were taken for study. All the data were analysed as par the performa chart.

1.Age incidence

No of Patients	Age Group	Percentage
3 Patients	<20	3.75%
30 patients	20-30	37.5%
18 patients	31-40	22.5%
18 patients	41-50	22.5%
8 patients	51-60	10%
3 patients	>60	3.75%

2. Sex:

Sex	No of Patients	Percentage
Females	36	45%
males	44	55%

3. Symptomatology

Symptoms	No of Patients	Percentage
Pain During Defecation	80	100%
Bleeding Per rectum with pain	25	31.25%
Constipation	40	50%

4.Fissure in ano treatment:

Therapy	No of Patients
GTN	23
Diltiazem	23
Surgery	34

5.Healing in:

Conservative management:

No of Cases	Healed	Non Healed
46 Cases	40	6

Surgery:

No of Cases	Healed	Non Healed
34 Cases	34	0

DISCUSSION

Anal fissure is a very common problem across the world. It causes considerable morbidity and adversely affects the quality of life. Therefore appropriate treatment is mandatory.

The simplest and most effective way of reducing internal anal sphincter tone is surgery. Lateral internal sphincterotomy is the gold standard in the treatment of chronic anal fissures.

It involves partial division of the internal anal sphincter away from the fissure. Calcium channel blockers have been shown to lower resting anal pressure and promote fissure healing and chemical sphincterotomy is now the first line of treatment in many centres.

In the present study, comparison of different treatment modalities of fissure in ano:

Acute fissure where treated with conservative measures –

- Warm water sitz bath to soothen the pain and reduces the spasm.
- Adequate analgesia is necessary to break the vicious cycle of pain viz. avoidance of defecation for prolonged periods leading to hard stools resulting in further tearing of the anoderm and thereby inviting increased pain. A suitable dose of analgesic consumed half an hour before going for defecation gives a good amount of post defecation pain relief.
- Stool softening is essential .Plenty of oral fluids also help in keeping the stools soft, High-fibre-diet and bulk-forming agents such as Isaphgula; green leafy vegetables and fibrous fruits go a long way in

increasing the bulk of stool leading to a smooth and swift act of defecation.

- Reassurance and encouragement for not resisting the urge for defecation help prevent hard stools. Later the patient should be encouraged to acquire and maintain a regular bowel habit.
- Application of local anaesthetic cream or gel may help avoid the torture experienced in passage of stools in the patients with acute fissures.

Patients with symptoms of fissure in ano for more than 6 weeks were labelled as having chronic fissure in ano and clinical examination was done to confirm chronic fissure in ano.

Chronic fissure patients were explained about chemical sphincterotomy–Nitroglycerine gel or 2%Diltiazem gel and lateral internal sphincterotomy and treated as perpatients choice of treatment.

A total of 80 patients of fissure in ano, who presented to surgery opd and / or admitted in Dr B R Ambedkar Medical College and Hospital, Bangalore, were divided into acute and chronic fissure in ano based on history and clinical examination.

Patients with symptoms of fissure in ano for more than 6 weeks were labelled as having chronic fissure in ano and clinical examination was done to confirm chronic fissure in ano. All the data were analysed as per the proforma sheet. In this study the commonest age group affected was 20-30 years age group (37.5%) and least affected were >60 years and <20 years age group (3.75%). According to J.C. Goligher2 (1984) the disease is usually encountered in young or middle aged adults. In Udwadia T E series 35 maximum incidence was seen in age group of 31-40 years.

The incidence of fissure in females was slightly lesser than males study and from Bennett and Goligher2 (1962) which says anal fissure is equally common in both the sexes.

Patients with acute fissure were treated conservatively on domiciliary basis and patients with chronic fissure receiving Nitroglycerine gel/ Diltiazem gel therapy underwent treatment on domiciliary basis and were reviewed once a week on outpatient basis. Out of 23 patients undergoing treatment with Nitroglycerine gel, 20 patients healed and 23 patients receiving Diltiazem gel, 20 healed completely.

The mean duration of healing was 5.37 weeks with chemical sphincterotomy and 4 weeks with lateral internal sphincterotomy. Duration for healing with chemical sphincterotomy was comparatively longer than internal sphincterotomy group. Study conducted by J. S. Knight3 et al. (2001) reported a healing rate of 75% after 8-12 weeks treatment with Diltiazem gel. U. K. Shrivastava6 (2007) reported a healing rate of 80% with Diltiazem gel in 12 weeks.

In our study no side effects were reported after 6-8 weeks of therapy with Diltiazem gel or Nitrogylcerine gel. In a study conducted by J. Knight3 et al. 71 consecutive patients were treated with 2% Diltiazem gel for a median period of 9 weeks. Four patients experienced perianal dermatitis and one patient experienced headache. Study conducted by U. K. Shrivastava reports no side effects in patients treated with Diltiazem gel.6 In a study conducted by G. F. Nash et al. 112 patients were treated with 2% Diltiazem gel for 6 weeks and were followed up over 2 years. The success rate and satisfaction of topical Diltiazem were each over two thirds. Nearly 80% of patients reported no adverse effects, and it seems that those complaints attributed to Diltiazem rarely led to reduced compliance.

Two patients in Diltiazem gel group and four patients in Nitrogylcerine group whose fissures did not heal after 8weeks of therapy underwent Internal Sphincterotomy and fissure healed in 4 weeks.

Patients in internal sphincterotomy group underwent surgery under spinal anaesthesia. Post-operative hospital stay was between 1-2 days. In internal sphincterotomy group, fissure healed in 34 out of 34 patients. Mean duration required for healing was 4 weeks. In our study 34(100%) patients out of 34 underwent internal

sphincterotomy were free from pain by 6 weeks .Scouten W.R. et al.36 reported pain relief in 98% of cases after undergoing internal sphincterotomy.

Our study shows a healing rate of 100% after internal sphincterotomy. Adriano Tocchhiet al.37 (2004) reported a healing rate of 100% with internal Sphincterotomy at the end of 6 weeks post-sphincterotomy review.

In our study no complications were reported in patients undergoing internal sphincterotomy after follow up of patients for 6weeks. Adriano Tocchhi et al. report no long-term complication after internal sphincterotomy. Patient satisfaction was 96%.

Comparison between Diltiazem gel therapy and Nitroglycerine did not show any difference in pain relief or fissure healing. Non-compliance was uncommon with Diltiazem gel/NTG therapy and were excluded from the study.

In conclusion, patients with acute fissure are treated with conservative management and those with chronic fissure were treated with chemical/lateral internal sphincterotomy. Though fissure healing is comparatively slow with Diltiazem gel/NTG therapy, patients can be avoided from the trauma of surgery and they can take treatment at home. Therefore topical Diltiazem gel/NTG therapy can be advocated as the first line of treatment and surgery should be reserved for patients with relapse and therapeutic failure of prior pharmacological treatment and those who refuse surgery.

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