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Non Scalpel Sphincterotomy- A Novel Technique

KEYWORDS: Internal sphincter Hypertonia (ISH) , Internal Anal sphincter (IAS) , Nitric oxide (NO) , Non Scalpel Vasectomy (NSV)

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ABSTRACT *Anal fissure is a tear in the anal mucosa extending from the anal verge towards the dentate line, first described by Recamier in 1829, Fissures can be categorized as acute or chronic depending on duration of symptoms .Majority (90%) are situated in the posterior midline. Traditionally medical management is considered the first line of treatment and lateral internal anal sphincterotomy (open or closed), is reserved for fissures that fail, or recur. However lateral internal anal sphincterotomy is now considered the treatment of choice for anal fissure. However we have practiced non scalpel sphincterotomy which is a novel technique at our institute with promising results*

INTRODUCTION

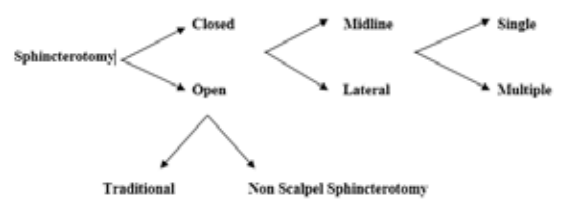
Anal fissure was thought to be due to severe constipation or straining during defecation. Various studies have suggested that both anorectal mechanics and blood flow to the anal canal may play a role in anal fissure development .Initial reports from the 1970s and 1980s have implicated internal sphincter Hypertonia (ISH) in anal fissure pathogenesis. The posterior commissure is not as well-perfused as other regions of the anal canal; here the inferior rectal artery has a perpendicular course through the septa of the internal anal sphincter. Hence, increased intramuscular pressure compromises the blood flow, which is further aggravated by increased intraluminal pressure .This endodermal ischaemia prevents small mechanical tears from healing in a timely fashion.

The diagnosis is made by the typical history of pain during defecation associated with prior constipation Chronic anal fissure is accompanied by an external skin tag and hypertrophied anal papilla. Anal fissure is very painful, because it affects the multilayer squamous epithelium of the anoderm, which is richly innervated with pain fibers. The basal tone of the IAS is affected by various substances, including Nitric Oxide (NO) , In Patients with anal fissures ,the synthesis of NO in the IAS is reduced in comparision with the controls .

MATERIALS AND METHODS

The study was undertaken on 50 patients (43 men and 7 women, with average age of 37.3 years) who underwent Non Scalpel Sphincterotomy in the Upgraded Department of General Surgery at Osmania General Hospital, Hyderabad, From January 2014 to December 2014. The patients who have a history of clotting disorder Inflammatory bowel disease, Diabetes, Perianal fistula, Abscess and previous colorectal cancer were excluded from the study.

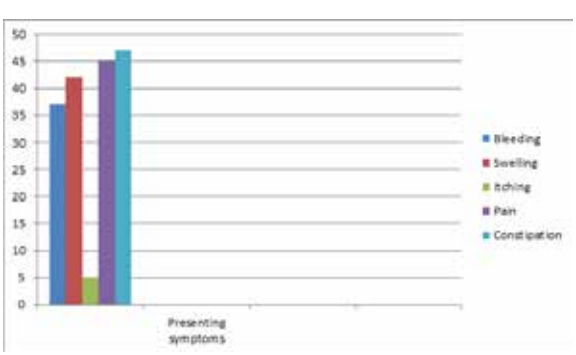
All data were prospectively examined and the patients were followed up at 1st, 4th, 12th postoperative days and at 6th month and 12th month.



Lateral Internal anal sphincterotomy for the management of anal fissure was first described and popularized in the 1950s by Eisenhammer.

Subcutaneous internal lateral sphincterotomy was done as a day care procedure under general, spinal or local anesthesia either in the left lateral position or lithotomy position and performed as a day care surgery, No preoperative part or bowel preparation was done. Postoperative course with early and long-term results were recorded, Mean follow up was 8 months (ranging from 6 to 12 months).

Presenting symptoms	Numbers	%
Bleeding	37	74
Swelling	42	84
Itching	05	10
Pain	45	90
Constipation	47	94



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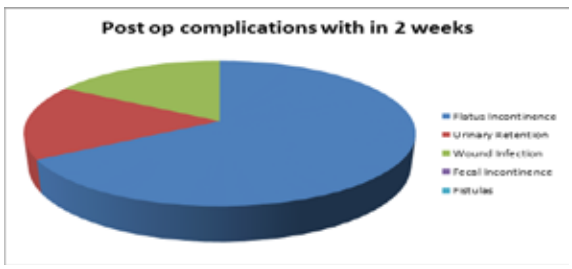
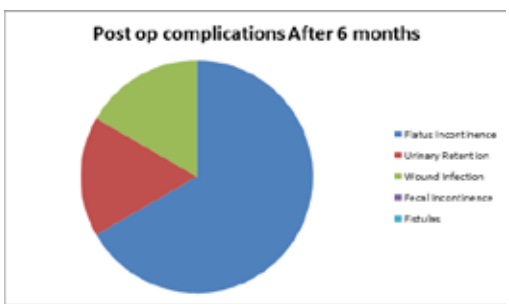
Postoperative Complications	With In 2 Weeks	After 6 Months
Flatus Incontinence	4	8
Urinary Retention	1	2
Wound Infection	1	2
Fecal Incontinence	0	0
Fistulas	0	0





PROCEDURE

A Radial stab incision is given at the anoderm either 3'o clock or 9'o clock position with sharp pointing curved artery forceps laterally in the intersphincteric groove exposing the internal sphincter muscle fibers, The internal sphincter is then lifted using vas hooks and brought out through the wound .Under direct vision the distal 4/5th of the internal sphincter muscle (up to the length of the fissure) is divided using Monopolar cautery, Haemostasis is secured with bipolar forceps and wound is dressed. The wound is then left open to heal.

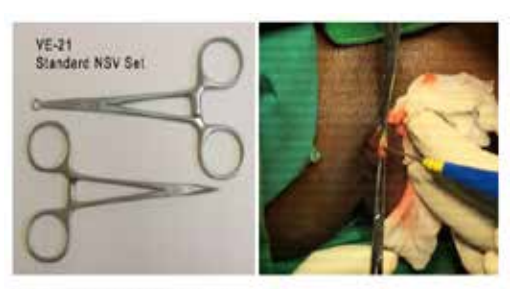


Fig 1 Instruments used for Non Scalpel Shincterotomy

Fig 2 Non Scalpel SphincterotomyTechnique

ADVANTAGES

Low incidence of skin entropion
Faster healing
Less Post Operative Pain
Less complications
Economical

COMPLICATIONS

Lateral Internal anal sphincterotomy results in complete healing of the fissure in 92-100% of patients (Bailey et al, 1978; Lewis et al, 1988; Pernikoff et al ,1944; Lock and Thomson , 1997). Temporary incontinence of flatus and of liquids was reported by Leong et al (1944) in up to 9% but usually resolved within 2-3 months .Permanent incontinence has been reported in 5-6 % (Walker et al, 1985; Lewis et al, 1988).Other complications are

Ecchymosis

Hematoma

Wound Infection

Abscess

Fistulas

Fecal Incontinence

Anal Pruritis

DISCUSSION

In our study of 50 patients, 31 patients were done under general anesthesia and 19 were done under local anesthesia .The fissures and anal wounds were healed within 4 weeks .Pain was significantly reduced in all patients at 1 postoperative day .Early complications included mild hematoma and urine retention in one male patient .Transient incontinence to flatus occurred in 4 patients, which spontaneously resolved in all cases over a period of time and zero incidence of fistulas were observed. Wound infection in 1 patient, there is no fecal incontinence in this group of patients,

CONCLUSION

Medical treatment is considered by some as first line of the therapy for anal fissures and surgery is only reserved for failure of the former and recurrence of fissure, We are using Non Scalpel Vasectomy (NSV) set of instruments which is cost effective, Non Scalpel Sphincterotomy is a safe easy and effective procedure. Hence the community gets benefitted with this safe easy technique with low complication rate which is low cost and maximum benefit for the third world countries.

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CONFLICT OF INTEREST None

References

1 Dykes SL, Madoff RD,Benign anorectal : anal fissure .In: Wolff BG, Fleshman JW , Beck DE,Pemberton JH, Wexner SD ,eds. The ASCRS Textbook of colon and rectal surgery.New york: Springer ,2007 : 178-191 CrossRef

2 Sauper T,Lanthaler M, Bieble M,Weiss H, Nehoda H.Impaired anal sphincter function in professional cyclists ,Wien Klin Wochenschr 2007; 119:170-173PubMedCrossRef

3 Brown CJ , Dubreuil D ,Santoro L,Liu M,O'connor BI, McLeod RS, Lateral internal sphincterotomy is superior to topical nitroglycerin for healing chronic anal fissure and does not compromise long-term fecal

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continence:Six-years follow up of multicenter, randomized ,controlled trail. Dis Colon Rectum 2007; 50:442-448. PubMedCrossRef

4 Elia Gueden M ,Gracia Solanas JA, Royo Dachary P,Ramirez Rodriguez JM , Aguilella Diago V,Martinez Diez M. Prevalence of anal diseases after Scopinaro's bilipancreatic bypass for superobesepatients .Cir Esp 2008;84:132-137PubMedCrossRef

5 Garg P.Water steam in a bidet -toilet as a cause of anterior fissure-in-ano: a preliminary report.Colorectal Dis 2010;12:601-602 PubMedCrossRef

6 Mentes BB,Guner MK,Leventoglu S,Akyurek N,Fine-tuning of the extent of the lateral internal sphincterotomy : spasm-controlled vs.up to the fissure apex ,Dis colon Rectum 2008;51:128-33 PubMedCrossRef

7 Wollina U.Pharmacological sphincterotomy for chronic anal fissures by botulinum toxin a. J Cutan Aesthet Surg.2008 Jul;1(2):58-63. PubMedCrossRef

8 Aivaz O,Rayhanabad J , Nguyen V, Haigh PI, Abbas M.Botulinum toxin A with Fissurectomy is a viable alternative to lateral internal sphincterotomy for chronic anal fissure .Am Surg 2009;75:925-928 PubMed

9 Garcia-Granero E, Sanahuja A, Garci-Botello SA,Faiz O,Esclapez P, Espi A,FlorB,Minquez M,Lledo S.The Ideal lateral internal Sphincterotomy:clinical and endosonographic evaluation following open and closed internal anal sphincterotomy.Colorectal Dis.2009;11:502-7 PubMedCrossRef

10 Eisenhammer S.The Evaluation of the internal anal sphincterotomy operation with special reference to anal fissure .Surg Gynecol Obstet 1959; 109:583-90 PubMed

11 Notaras MJ.Lateral subcutaneous sphincterotomy for anal fissure-a new technique, JR Soc Med1969;62:713

12 Nelson R .Non Surgical therapy for anal fissure .Cochrane Database Syst Rev 2006;4:CD003431.