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Published Paper's Title : Surgical and Parasurgical Procedures inFistula in ano

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Research Paper

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Surgical and Parasurgical Procedures inFistula in ano

DR. Sanjay Singh Chauhan

Declaration

The Declaration of the authors for publication of Research Paper in Asian Journal of Modern and Ayurvedic Medical Science (ISSN 2279-0772) : DR Sanjay Singh Chauhan the author of the research paper entitled Surgical and Parasurgical Procedures inFistula in ano declare that ,take the responsibility of the content and material of my paper as I myself have written it and also have read the manuscript of my paper carefully. Also, I hereby give my consent to publish my paper in ajmams , This research paper is my original work and no part of it or it's similar version is published or has been sent for publication anywhere else. I authorize the Editorial Board of the Journal to modify and edit the manuscript. I also give my consent to the publisher of ajmams to my the copyright of my research paper.

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Abstract - Though many surgical procedures are available for the treatment of fisula in ano but their complications are very high. There is still a big challenge to surgeons especially for treatment of complex and recurrent fistula in ano due to high reccurence and incontinence rate. The treatment of fistula in ano includes mainly three types of technique surgical treatment, minimal invasive surgery (ex. Endoanal advancement flap, fistula plug etc.) and seton placement. For the purpose of drainage and cutting different seton has to be used whereas *Ksharasutra* has benefit over seton that it has both, drainage and cutting along with removal of unhealthy granulation tissues from fistulous tract which facilitates healing of tracts.

Key word- Ksharasutra , fistulotomy , Fistulectomy Seton , and IFTAK technique etc.

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INTRODUCTION-

Goal of treatment of FIA is Preserving anal function and continence to Permanently eliminate abscess formation and To promote active healing .

Fistula surgery is most common cause of fecal incontinence . To avoid

these complication many new methods of operations like Fistulotomy , Fistelectomy, Fibrin glue and LIFT Method have been adopted all over the word ,

But still complication of operation is fairly high ,Now a day KST is one of the best treatment for FIA because occurrence of incontinence is rare and recurrence is very less .

fistulotomy (Lay-open Technique)

Laying open technique are widely practiced for simple intersphincteric and low transsphincteric fistulas, the patient is placed in the prone jackknife. Once the course of fistula has been accurately located a blunt probe is inserted from the external opening along the tract to the internal opening at the dentate line. The tissue overlying the probe is incised using a scalpel blade or cutting diathermy and the granulation tissue curetted and sent for pathologic evaluation.

The goal of the fistulotomy is to prevent the recurrence of perianal sepsis while minimizing disruption of sphincter morphology and function.

Seton

The seton may be used to drain pus, allow staged division and deliberately cut through sphincter. The problem of preserving anal continence and treating the fistula is more complicated when managing high transsphincteric fistulas. If the tract is seen to cross the sphincter muscle at a high level, the use of the lay-open technique in combination with insertion of a seton is safer. A seton may be any foreign substance that can be inserted into the fistulous tract to encircle the sphincter muscles. Materials frequently used include silk or other non absorbable suture material, Prolene, rubber bands, stainless steel and silastic catheters. The lower portion of the internal anal sphincter is divided along with the skin to reach the external opening and a nonabsorbable suture or elastic suture is inserted into the fistulous tract. The ends of the suture or elastic are tied with multiple knots to create a handle for manipulation.This form of seton, known as a cutting seton, is tightened at regular intervals to slowly cut through the sphincter. This allows the tract to become more superficial, converting a high fistula into a low one. The proximal fistulotomy subsequently heals by stimulating fibrosis behind it reestablishing continuity of the anorectal ring to prevent separation of the sphincter muscle at a second-stage repair 8 weeks later when the remaining external sphincter is divided.

Closure with Flaps –

When the traditional laying-open technique may be inappropriate, for example, in anterior fistulas in women, in patients with inflammatory bowel disease, in patients with high transsphincteric and suprasphincteric fistulas, as well as in those with previous multiple operations, multiple and complex fistulas, the use of an anorectal advancement flap has been advocated.

Anorectal advancement flap –

the fistulous tract is identified and the external component of fistula is dissected down to internal opening, an advancement flap is cut in the anal canal, the lower margin lying just below the internal opening with both lateral extensions diverging from one another across the anal column .The fistula is excised and the defect in the internal anal sphincter is closed after that internal opening in the flap is excised and the rectal advancement flap is mobilized.

Anocutaneus advancement –

it is similar technique but advanced a perianal flap in to the anal canal.

Advantages of this technique include a reduction in the duration of healing, reduced associated discomfort, lack of deformity to the anal canal, as well

as little potential additional damage to the sphincter muscles because no muscle is divided. Successful results have reported in more than 90% of patients. Factors associated with poor outcomes include Crohn's disease and steroids.

Fistulectomy

Either probe is passed through external opening or the external opening is grasped with tissue forcep or stay suture. After deviding the skin around the external opening the tissue around the fistula is filtrated with local anaesthetic agent to reduce bleeding.

After deviding the skin, fine scissor are used to core out the surrounding tissues ,leaving the granulating track and its surrounding fibrous tissue , which is withdrawn by gentle traction .

Although excision of the fistula or fistulectomy was thought to be a satisfactory method of treatment of fistula-in-ano, its use is no longer recommended. Larger wounds are created significantly prolonging wound healing time. A greater separation of muscle ends occurs and there is greater risk of injuring or excising underlying muscle thereby increasing the risk of incontinence.

Fibrin Glue

Division of any sphincter muscle in the management of fistula in ano may lead to impairment of fecal continence. Fibrin glue injection in to complex fistulous tract appear to offer a safe and painless technique that avoids sphincter compromise.

The use of fibrin glue as a primary treatment alone or in combination with an advancement flap has come into vogue. This treatment modality is appealing because it is a noninvasive approach that avoids the risk of incontinence associated with fistulotomy. In the case of failure, it may be repeated several times without jeopardizing continence. The technique involved is simple. As with fistulotomy, the fistula tract along with its internal and external openings is identified and curetted (with curettes or flexible brushes). Fibrin glue is injected into the fistula tract through a Y connector so that the entire tract is filled and the glue can be seen emerging from the internal opening. The injecting catheter is slowly withdrawn so that the entire tract is filled. Petrolatum jelly gauze may be placed over the external opening. Enthusiasm generated because of short-term success rates of 70%–74%. has been tempered because of delayed fistula recurrence despite initial apparent healing. With longer follow-up, 60% of fistulas were found to have healed in a recent study although patients underwent a two-stage approach consisting of seton placement followed by glue injection at a second stage.

Bioprosthetic Fistula Plug

Recently, the use of a bioprosthetic plug made from lyophilized porcine intestinal submucosal has been described for complex anal fistulas. This porcine fistula plug is commercially available from Cook Surgical Inc, Bloomington, IN. Following rehydration of the plug, the following technique is used. The fistula tract is identified but not debrided. A solution of peroxide may be used to gently clean the tract. A fistula probe is placed through the tract and a 2–0 suture is placed through the tapered end of the plug and the ends of this suture are attached to the fistula probe at the primary opening. The suture is pulled from the primary opening, through the fistula tract to exit at the secondary opening. With gentle traction on the suture, the porcine plug is pulled into the primary opening of the fistula until "wrinkling" of the superficial layer of the plug is first seen. The plug is not forced tightly. Excess plug is removed by transecting the plug at the level of the primary opening.

Ligation of the Intersphincteric Fistula Tract (LIFT)

Briefly in this procedure the patient is done in the prone jackknife procedure usually under monitored anesthesia care and a local anesthetic block. The anal canal is examined with a speculum. The outer opening is cannulated with an injecting catheter and hydrogen peroxide is instilled. One identifies the internal opening within the anal canal. A probe is placed from outside in and left in place. A curvilinear small incision is made over the intersphincteric groove (between internal and external sphincters) and the plane is advanced to incorporate the fistula tract without dividing any of the sphincter muscles. The tract is then debrided or scraped from the internal opening and the external opening gently to get rid of inflammatory tissue. The tract is then divided in the intersphincteric groove very close to the internal opening and from outside along the external portion of the tract. The fistula is then divided between ties. The internal opening is then sutured closed. The external opening is left open to dry. The intersphincteric incision is then close in layers. The patient is maintained on oral antibiotics for several days.

The original Thai series had a 94% success. Subsequent series have reported a success rate between 55 and 82%. The risk of anal weakness or incontinence is minimized because no sphincter muscle is divided.

Kshara Sutra Therapy

The eminent Indian surgeon *Sushruta* , who lived some times between 1000 to 800 BC , narrated in his teachings the use of *Kshara* for cure of fistula in ano . *Ksharsutra* therapy is an age old, simple and safe minimum invasive para-surgical technique for treatment of fistula in ano described in ancient classics of *Ayurveda* is being practiced as a primary method of treatment in all types of fistula in ano including complex and recurrent fistula at Banaras Hindu University since 1965 with great success rate. *Ksharsutra* is a unique medicated seton helps in both cutting as well as drainage of fistulous tract. The cutting and healing of fistulous tract takes place simultaneously therefore the possibility of damage to anal sphincter is less and chances of incontinence are practically nil. It is a cost effective, day care procedure and hospitalization is not required in majority of the patients. During the course of treatment patient remain ambulatory and can perform routine daily activities normally.

It involves application of a specially prepared medicated thread processed with certain medicinal plant a caustics. The thread is passed in to tract, tied outside the anal aperture and left in situ for seven days after which it is changed and retied. The patient is sent home after every sitting and is advised to continue his routine work as usual. In due course of time, the thread falls out spontaneously and the fistulous tract is simultaneously healed. The resultant scar formation is very minimal and the method is safe and free from any complication.

96% of the cases had complete cure while 4% had recurrence after treatment with K.S. The incontinence of feces and flatus was not observed in any of the cases. The first application of K.S. was easy in majority of the cases but some had difficulty. But all cases had successful application of K.S. in the fistulous tract. Subsequent application of K.S. was painless in 85.0%.

IFTAK (interception of fistulous tract with application of Ksharsutra)

This novel technique IFTAK-BHU (Interception of fistulous tract with application of *Ksharsutra*) for the treatment of fistula in ano is a modified technique of *Ksharsutra* therapy. This technique is being practiced for treating all type of fistula including complex and recurrent fistula in Banaras Hindu

University, Varanasi since 2007 by Prof M. Sahu. In this technique interception of proximal part of fistulous tract is done at intersphincteric plane along with application of *Ksharsutra* from site of interception to the infected crypt in anal canal. This technique is aimed to eradicate the infected anal crypt without damage to anal sphincters by using Ksharsutra . continuous drainage of any associated abscess cavity in intersphincteric plane, preventing recurrence, make surgical approach to managing the fistula in ano easy by converting the complex nature of fistula into a simple one, reduce the duration of time to complete cure of fistula, allowing an early return to normal activity for the patient. It is being observed that complete cure of complex fistula in ano with a highest success rate and almost negligible recurrence rate.

This technique of treatment is based on the Park's concept of crypto glandular origin of fistula in ano. The basis of the procedure is to eradicate the infected anal crypts at the pectinate line using a *Ksharsutra* (medicated Seton) without laying open of the tract distal to the site of interception. The important steps involve in this technique include, identification of the infected anal crypt, interception of fistulous tract at intersphincteric plane and application of ksharsutra from the site of interception into the the infected anal crypt. The fistulous tract is intercepted at the intersphinteric plane and separated from its distal portion

Complication of fistula surgeries

Incontinence

Minor disorders of continence after fistulotomy have been reported to range from 18% to 52% where as soiling and insufficiency have been reported in as many as 35% to 45%. The occurrence of continence disorders has been found to be related to the complexity of the fistula and to the level and location of the internal opening. Patients with complicated fistulas, high openings, posterior openings, and fistula extensions have been found to be at higher risk.

Although excellent results using a seton have been reported, it's use does not protect against the development of impaired continence. Minor continence disorders were reported in 73% whereas Williams et al.[20] reported minor disturbances in 54%. Parks and Stitz found that minor incontinence occurred in 39% with the two-stage approach versus 17% when only the first stage was performed and the seton was removed rather than dividing the muscle. Major fecal incontinence was reported in 6.7% after a review of several series Excellent results with respect to continence have been reported with the use of the advancement flap59 although recent reports have observed disturbances in continence in 9%–35%.

Recurrence

Recurrence rates after fistulotomy range from 0% to 18%. Causes include failure to identify a primary opening or recognize lateral or upward extensions of a fistula. spontaneous closure of the primary opening, or a microscopic opening. The presence of secondary tracts which can be easily missed accounted for early recurrence in 20%.

Recurrence rates after staged repairs using a seton range from 0% to 29%. Although recurrence rates after anorectal advancement flaps were initially reported to be low, with long-term follow-up, recurrence rates of 40% have been reported. Recurrence can be minimized provided that care has been taken to avoid necrosis or retraction of the flap. The use of full-thickness rectal wall has been advocated to prevent ischemic necrosis of the flap. Early postoperative complications that have been reported after fistula surgery include urinary retention, hemorrhage, fecal impaction,

and thrombosed external hemorrhoids, which were found to occur in less than 6% of cases. Later complications such as pain, bleeding, pruritus, and poor wound healing have been reported in 9% of patients.

SUMMARY- In the *ayurvedic* text, fistula in ano has been described as "*Bhagandara*". *Sushruta* (1500-1000 B.C) elaborately described this disease and has adopted surgical, parasurgical and conservative measures for fistula in ano. Under the parasurgical management '*Ksharasutra*' had been introduced which is also known as medicated seton. *Ksharsutra* therapy is an old, simple and safe minimum invasive surgical technique for treatment of fistula in ano described in ancient classics of *Ayurveda* and is being practiced as a primary method of treatment in all types of fistula in ano including complex and recurrent fistula at Banaras Hindu University since 1965 with great success rate (95.5%) (Deshpande, P. J. and Sharma, K. R1973).

Ksharsutra is a unique medicated seton helps in both cutting as well as drainage of fistulous tract. The cutting and healing of fistulous tract takes place simultaneously therefore the possibility of damage to anal sphincter is less and chances of incontinence are practically nil. *Ksharasutra* also remove unhealthy granulation tissue due to the presence of *Kshara* in thread so that it also facilitates healing of fistulous tract. It is cost effective, day care procedure and hospitalization is not required in majority of the patients. During the course of treatment patient remains ambulatory and can perform routine daily activities normally (Deshpande, P. J. and Sharma, K. R.1973).

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