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AYURVEDIC AND MODERN PERSPECTIVE OF DIFFERENT TREATMENT OPTIONS IN "FISTULA -IN -ANO"

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ABSTRACT

Treatment of fistula in ano is still a great challenge for the surgeons due to high incidents of its recurrence rate. Sushruta has described about Ashtamahagadas[1], which are very difficult to treat and Fistula–in-ano is one of them. As far as the origin of fistula in ano is concerned, it originates from the anal glands present between anal sphincters which drain via ducts into anal sinuses at the level of dentate line. If the outlet of these glands anyhow gets obstructed, the abscess forms which eventually extends to the skin surface and drains from there. The tract thus formed is termed as fistula in ano. Hence, in the present article, different treatment options available in Ayurveda and modern science are discussed.

KEYWORDS: Fistula in ano, Ayurvedic treatment, modern treatment.

INTRODUCTION

Anal fistula can be compared with Bhagandara described in Ayurveda due to its resemblance in clinical sign and symptoms. Faulty life style and food habit has been considered to be a cause of Fistula in ano (Bhagandara). The disease which causes daran (deformity) in and around bhaga (pubic region, perineum, vaginal region, and genital area), guda (anal region) and basti (urinary bladder) is called Bhagandara.[2] When the blister remains unripe (not suppurated) it is called Pidaka, when the same gets ripened it will be called Bhagandara.[3]

A fistula-*in*-*ano*, or anal fistula, is a chronic abnormal communication, usually lined to some degree by granulation tissue, which runs outwards from the anorectal lumen (the internal opening) to an external opening on the skin of the perineum or buttock (or rarely, in women,

to the vagina). Anal fistulae may be found in association with specific conditions, such as Crohn's disease, tuberculosis, lymphogranuloma venereum, actinomycosis, rectal duplication, foreign body and malignancy (which may also very rarely arise within a longstanding fistula).[4]

No definite therapy is there which may claim guaranteed success in the treatment of fistula-in-ano. As the recurrence rate of fistula in ano is high, it is a big challenge for clinicians.

Classification

Parks classification[5]

1. Intershphincteric(64%)
2. Transsphincteric(30%)
3. supralevater

Standard classification[6]

1. low level fistula (fistulae which open into anal canal below anorectal ring)

a) subcutaneous
b) submucus type
c) Intershphincteric
d) Transphincteric
e) Suprasphincteric

2. High level fistula (fistulae which open into anal canal at or above anorectal ring)

a) Extrasphincteric or supralevor type
b) Transphincteric (which may be seen in low type also)
c) Pelvi- rectal fistula

Etiology and pathogenesis

- **Cryptoglandular (90%)**

- extension of sepsis from infected anal gland in the intersphincteric space

- **Non Cryptoglandular**

- Chrohns disease
- Tuberculosis
- Actinomycosis
- Malignancy

- Hidradenitis suppurativa
- Radiation
- Foreign body
- Immunocompromised

Clinical presentation

- Intermittent seropurulent discharge keeps perianal region always moist and wet.
- Previous history of perianal abscess due to anal gland infection.
- Pruritus ani
- Single or multiple external opening with pouting granulation tissues, may discharge blood also.[11]

Physical examination

In physical examination entire perineum is inspected for the external opening of the fistula which appears as sinus or elevated granulation tissue, spontaneous discharge of pus or blood through external opening.

Bi-digital rectal examination

It helps in identifying the tract, type of fistula (anterior or posterior), internal opening and extent of the fistula**.**

Probing

In probing a malleable medium sized probe (nowadays silver probe) is used. The Probe is inserted into external opening to assess the extent of tract and Index finger of other hand is kept inside anal canal to feel the tip of probe. It is done careful not to create an iatrogenic opening by force.

Anoscopy / proctoscopy- help to identify the internal opening.

Fistulography

It is an internal diagnostic imaging technique that is performed by a radiologist to determine the characteristics and course of fistulous tract. In this procedure an injection of contrast dye is pushed via internal opening to assess the extent and course of fistula so that it could be useful while performing surgery for fistula.

Endo anal or End rectal ultrasonography

It involves the passage of a 7 to 10 MHz ultrasound transducer into anal canal to help define the muscular anatomy and thereby help in the assessment of intersphincteric from transphincteric lesion.

CT

CT is helpful in the setting of per rectal inflammatory disease then in setting of small fistulas because it is better for delineating fluid pockets that requires drainage than for delineating small fistulas. CT requires administration of oral and rectal contrast.

MRI

MRI findings show 80-90% concordance with operative findings. It is the gold standard imaging modality which replaces surgical examination under general anesthesia and helps in demonstrating the extension of fistula and in turn also helps make accurate treatment decision and therapy monitoring. It is the study of choice in the evaluation of complex and recurrent fistulas.

Ayurvedic management

Sushruta has decrfibed 5 types of Bhagandara (i.e Shatponak, ushtrgriv, Prashravi, agantuj, shambukart) out of which Agantuj and Shamukart are incurable and rests are extremely difficult to treat.

General treatment

Sushruta has advocated eleven kinds of remedial measures to be administered in the patient suffering from bhagandara pidika (eruption earlier to the formation of fistula) starting with aptarpan (fasting) up to virechan (purgation) in the prodromal stage of bhagandra.[7] Being a surgeon he described different types of incisions to be taken in the treatment of Shatponak Bhagandara (fistula with multiple openings) i.e langalaka, ardhalangalak, sarvatobhadraka and gotirthaka.[8] In ushtagiva bhagandara, the ulcer should first be searched with probe or director and after the surgery; an alkali matter should be applied to it. A plaster of clarified butter and sesames paste should be applied to it and ulcer duly bandaged thereafter.[9] In case of parisravi bhagandara, where there are various secretions from the ulcer, the sinus and cavities of pus should be removed first and then cauterized with an alkali or fire. If the ulcer is soft and free from pain and secretions, it should be searched with a probe or a director and there after the incisions should be made in shape of ardhachandra, chandrachakra, suchi-

mukha, avangmukh and kharjura-patra. After the incision it should again be cauteraized with an alkai or fire.[10] In agantuj bhagandara (fistula due to extraneous cause), surgeon should lay open the fistula and then burn the place with jambavoshta or shalaka made red hot and the vermicidal treatment should also be continued.[11] In case of shambukarta bhagandara in which all three doshas are invloved should be treated without holding out any hope of recovery to the patient.[12]

Parasurgical procedures

Ksharsutra ligation[13]

From the references of Chakradatta, Rastarangini, kshara sutra therapy was aimed to give a new life. First designed sutra was snuhi kshara sutra, it was tried out experimentally first in animals and then small group of patients and remarkable results were obtained. Later on, Dr. P J Deshapande, Dr. S N Pathak, Dr. K R Sharma and others, adopted this in large number of patients and established the treatment as an effective, ambulatory and safer alternative treatment for patients with fistula in ano. Ksharsutra is a medicated alkaline thread prepared by smearing seven times in the latex of snuhi, eleven times apamarg kshara and three times haridra. Surgical linen thread no. 20 is used and kept inside specially designed cabinet. Thread has curetting, cutting, cleaning and healing properties. Number of drugs like apamarg kshar, snuhi kshar, kadali kshar, papaya kshar, arka kshar, nimb kshar, udumbar kshar is used.

IFTAK (Interception of fistulous tract with application of ksharsutra)[14]

Iftak is also known as BHU technique of treatment of fistula in ano, The technique was developed by Dr M sahu, (Professor, Department of Shalya Tantra, faculty of Ayurveda, Banaras Hindu University, Varanasi, u.p India) and is being practiced for treating complex and recurrent fistula in ano in Banaras Hindu University, Varanasi since 2007. In this technique, proximal part of fistulous track is intercepted at the level of external sphincter along with the application of *Ksharsutra* from site of interception to the infected crypt in anal canal. This is aimed at to eradicate the infected anal crypt with no or minimal damage to anal sphincters by using *ksharsutra* (medicated seton). Use of *ksharsutra* causes extensive fibrosis and favors proper healing which reduces the chances of recurrence.

Surgical procedures

1. Fistulotomy[15]: in this surgery the fistulous tract is incised and laid open followed by curettage of underlying unhealthy tissues. Recurrence rate in this surgery is high due to

remnants of abscess cavity, necrotic or fibrosed tissue. At low anal fistula, the internal sphincter and subcutaneous external sphincter can be divided at right angle to underlying fibers without affecting continence.

2. Fistulectomy[16]: It involves total excision of track with surrounding unhealthy tissue. It causes very wide wound. It heals from top causing a tunnel formation and recurrence. Greater separation of ends of sphincter takes longer time to heal and there is greater chance of incontinence.

3. Fibrin glue[17]: Fistulous track is closed by injection of fibrin glue, which results in formation of a clot within the fistulous tract which helps to promote healing of the track. Commercial fibrin glue is mixture of two components.

a) Fibrinogen solution (fibrinogen, aprotonin + fibronectin + plasminogan).

b) Thrombin solution (Thrombin + cal-cium chloride).

- Partial Fistulectomy with fibrin avoids risk of incontinence and gives good results.

4. Surgisis anal fistula plug[18]: The Surgisis AFP plug is conical device made from pocine collagen similar to human collagen, the plug, once implanted and incorporates naturally over lime into your own tissue. The plug is made up of porcine small intestine submucosa, fixing the plug from inside of anus with suture. At first the fistulous track is traced, probed and irrigated and APF plug is pulled into internal opening. Internal opening is closed by suturing the top tissue layers of anal canal over the plug later plug at external opening is cut to size of track and sutured to edge of external opening. External opening is kept open for drainage.

5. LIFT technique[19]: it is the novel modified approach through the intersphincteric plane for the treatment of fistula in ano, known as LIFT (ligation of intersphincteric fistula tract) procedure. LIFT procedure is based on secure closure of the internal opening and removal of infected cryptoglandular tissue through the intersphincteric approach. Essential steps of the procedure include, incision at the intersphincteric groove, identification of the intersphincteric tract, ligation of intersphincteric tract close to the internal opening and removal of intersphincteric tract, scraping out all granulation tissue in the rest of the fistulous tract, and suturing of the defect at the external sphincter muscle.

6. Vaaft[20]: VAAFT is Video Assisted Anal Fistula Treatment. It is a novel minimally invasive and sphincter-saving technique for treating complex fistulas. This technique involves use of an endoscope.

7. Endorectal mucosal advancement flap[21]: Safe and effective technique for treatment of complex cryptoglandular fistula in ano such as high le.g. transphinecteric, suprasphincteric and extrasphincteric fistula. In this technique Total fistulectomy with removal of primary and secondary track is done later on Closure of internal opening by an anal, anorcetal, rectal or anocutaneous flap is done.

Complications of surgery

Early Post-Operative: Urinary retention, bleeding, cellulitis, Fecal impaction, acute external thrombosed hemorrhoids.

Delayed Post-Operative: Recurrence, in-continence, persistent sinus, stenosis, rectovaginal fistula, delayed wound healing.

CONCLUSION

All Acharyas of Ayurveda and the surgeons of present time have realized the difficult course of fistula in ano. Many surgical and parasurgical techniques have been developed so far in this regard. In spite of so much development in the medical science the management of fistula in ano is still a challenge even for a skilled and experienced surgeon. It is very important to diagnose the same early so that appropriate treatment could be incorporated to prevent its recurrence.

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