

Sireesha Asoka suppository in the management of Anorectal Post-operative Pain – A Case Report

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Abstract- Anorectal disorders causes physical pain and discomfort. Most common anorectal conditions include haemorrhoids, fissure-in-ano, fistula-in-ano, faecal incontinence, rectal prolapse and pruritis ani. In Ayurveda their treatment includes many surgical and parasurgical procedures. Post-operative pain is the most common complication after these procedures. A 53-year-old male, with complaints of mass at anal verge during defecation along with bleeding per anum in the past 1 month, presented at the OPD of Shalyatantra. Patient was clinically examined and diagnosed as a case of haemorrhoid. The condition was managed with barron's rubber band ligation and the patient complaints of pain after the procedure. Rectal suppository prepared with *sireesha* and *asoka* in cocoa butter was administered, that relieved post-operative pain.

Keywords: Anorectal disorders, Haemorrhoid, Barron's ligation, Post-operative pain, *Sireesha Asoka* suppository, Cocoa butter.

INTRODUCTION:

The wide spectrum of anorectal disorders may vary from the ubiquitous haemorrhoids to more serious conditions such as malignancy. Most common anorectal conditions include haemorrhoids, fissure-in-ano, fistula-in-ano, faecal incontinence, rectal prolapse and pruritis ani. Almost all of them are treated surgically. However, one of the prominent post-surgical complication experienced by all patients is mild to moderate postoperative subjective pain and it remains a distressing problem in the field of surgery. Acute postoperative pain is common. Almost all patients nearly 20 per cent of patients experience severe pain in the first 24 hours after surgery. In modern medicine, post-operative pain is usually managed with Opioids. Frequent use of opioid analgesics may induce adverse effects such as respiratory depression, nausea and vomiting. In long-term use, it will lead to gastrointestinal disorders, including constipation and may postpone wound healing. In small surgeries of anorectum, pain can be managed with diclofenac or NSAID suppositories. The use of many analgesic drugs which are effective in pain management, is limited due to their concomitant side effects. The major goal in the post-operative pain management is to provide adequate analgesia with lesser side effects.

Classical texts of Ayurveda explains pain as a separate entity termed as *vedana*. Since ancient times, there have been many attempts to find relief from pain. *Acharya Susrutha* describes *rujahara karma* (methods for relieving pain) after surgery in *bhagandara chikitsa* which includes *parisheka* of the area with warm *anutaila*, *nadisveda* (fomentation) or *avagaha*(sits bath). In this study, drugs *sireesha* (*Albizia lebbek*) and *asoka* (*Saraca asoka*) comig under *vedanasthapana gana* are selected to prepare rectal suppository in cocoa butter base. *Sireesha* possesses *sophahara* (anti-inflammatory), *vranahara* (wound healing) and *vishaghna* (anti toxic) properties. *Asoka* has *dahasamaka* (reducing burning sensation), *krimighna* (anti-microbial), *vranaropaka* (wound healing), *sandhaneeya* (wound closure) and *sthambhaka* (arresting) properties. In previous studies, it has been mentioned that *Asoka* is having analgesic, anti-inflammatory, anti -nociceptive and CNS depressant activities. Previous studies also reinforces the anti-inflammatory, analgesic, anti-histaminic and anti-nociceptive action of *sireesha*. Cocoa butter is fat from *Theobroma cocoa* which is non-irritant to sensitive membrane tissues. Melting point of cocoa butter is 31-34° C. Rectal suppository is a small capsule like formulation designed for insertion into anus, where it would melt and the effect of the medicines would be transferred to the site of application. The main objective of this suppository is to reduce the pain after anorectal surgeries.

CASE REPORT:

A 53 year old male, with complaints of mass at anal verge during defecation along with bleeding per anum since 1 month. Associated complaint includes constipation since 3 months, that aggravated with intake of spicy foods and meat. Patient is a known case of diabetes mellitus and under medication since 2 years. On general examination, pallor, icterus, cyanosis, oedema and lymphadenopathy were absent. Anorectal examination was done. On inspection there was presence of mucous discharge at anal verge. Per rectal examination disclosed that the sphincter was normal.

Proctoscopic examination revealed the presence of 2nd degree internal haemorrhoid at 3, 7, 9 and 11 O' clock positions. The patient was diagnosed as a case of *Arshas*. Condition was managed with Lord's anal dilation followed by Barron's rubber band ligation, and the patient complaints of pain after the procedure.

METHODS:

Preparation of *Sireesha Asoka* suppositories: Micro pulverised powder of *sireesha* and *asoka* triturated and dried in the *kashaya* of *sireesha* and *asoka* for 3 times. Cocoa butter and *bhavitha sireesha asoka choorna* were taken in the ratio of 2:1. Cocoa butter melted by double boil method. *Bhavitha sireesha asoka choorna* was added to melted cocoa butter, mixed well and transferred to 2g suppository mould.

Procedure: Informed consent was taken. Patient was laid in left lateral position and part exposed and cleaned. *Sireesha Asoka* suppository was inserted to the anal canal. Packing done with sterile cotton pad. Patient was asked to lie in comfortable position.



RESULT:

Pain completely reduced within 2 hours. The change in the pain score using VAS Scale after administering the *Sireesha Asoka* suppository have been tabulated below.

Table 1: Chart on observation of pain score in each hour up to 6 hours after administering *Sireesha Asoka* suppository

Time	0 th hour	1 st hour	2 nd hour	3 rd hour	4 th hour	5 th hour	6 th hour
Score	6/10	3/10	0/10	0/10	0/10	0/10	0/10

DISCUSSION:

Anorectal disorders are condition that affect the anus and rectum area. Common anorectal disorders include haemorrhoids, anal fissures and anal fistulas. These conditions can be managed by diet modification, medicines and surgical procedures. In Ayurveda, procedures includes *ksharasutra* ligation, barron's rubberband ligation, plain seton therapy etc. The most common complication of these procedures is post-operative pain. The cause of post-operative pain is multifactorial. It includes spasm of anal sphincter, type of anaesthesia and open wound below dentate line. The mechanism of the pain begins with an acute local inflammatory response due to tissue trauma. In modern medicine, they manages the post-operative pain with analgesic and anti-inflammatory drugs. Opioid analgesics can effectively provide post-surgical pain relief. Morphine is one of the most widely used analgesics for pain relief. Frequent use of morphine for postoperative pain is well known to induce adverse effects, such as respiratory depression, nausea and vomiting. Non-steroid anti-inflammatory drugs combined with intravenous patient-controlled opioids administration can decrease drug dosage and minimize the incidence of opioids-induced side effects in patients when compared with using opioids alone. Using local anaesthetics, non-steroidal anti-inflammatory drugs (NSAIDs) and COX-II inhibitors are also limited because of their adverse effects.

Rectal suppositories can be used to deliver many types of medication. Drugs delivered through suppositories to the lower and middle haemorrhoidal veins are absorbed rapidly and effectively. Because inferior and middle haemorrhoidal veins bypass the liver and do not undergo first pass metabolism. Rectum is a suitable area for drug absorption because it has a neutral pH and it is not buffered. Chances of enzymatic degradation might be lesser in that area due to very little enzymatic activity. Along with these, rectal mucus is more capable of tolerating various drug related irritations than gastric mucosa. Suppository melts inside the body in very short time and is absorbed directly in to bloodstream. It can be easily administered even in unconscious patients.

In surgical procedures of *Ayurveda*, pain mostly causes due to tissue damage which produces nociceptive pain. In *Ayurveda*, *Vedana* or *soola* refers to pain. Generally *soola* refers to any type of pain according to *susruta*. Severe pain similar to driving a nail in to the body is experienced by the patient is called *soola*. Vitiated *vata* is the main cause for *soola*. *Soola* has many types according to *dosha*, but among all these types of colic generally there is a predominance of *vata*.

Studies disclose that, *asoka* possess analgesic, anti-inflammatory, anti-nociceptive and CNS depressant activities. Previous studies also reinforces the anti-inflammatory, analgesic, anti-histaminic and anti-nociceptive action of *sireesha*. *Sireesha* and *asoka* are coming under *vedanasthapana gana* described in *Caraka samhitha sutrasthana*. *Sireesha* is famous for its antitoxic property, even though *Acharya Caraka* has been mentioned it as one among in the *vedanasthapana gana*. The pain management of *Sireesha* is due to its anti-inflammatory effect. In addition with this, rejuvenative and anti-oxidant effects of *Sireesha* also has been proved which also contribute in pain management.

Asoka possess anti-nociceptive property which can act against the nociceptive pain due to surgical wounds. Studies proven that the analgesic effect of *Asoka* has been attributed to its ability to inhibit sensory nerve stimulation in early phase. Hence combination of these two drugs acts well in post-operative pain. Since *asoka* is having *sthambhaka* (arresting) property, in case of fresh wounds, it will help to stop bleeding.

Cocoa butter is fat obtained by hot pressing from roasted and peeled chocolate tree seeds (*Theobroma cocoa*). It is non-irritant to sensitive membrane tissues. It is a yellow white solid, brittle below 25°C and insoluble in water. It mixes well with various medicinal substances, quickly releases the introduced medicinal substances, has a distinct melting point and high plasticity, and also has a pronounced reparative and lubricating effect. Since it is a suppository base of natural origin, it doesn't have consequences such as discomfort or allergic reaction in patients as in synthetic or semi-synthetic suppository bases. It meets almost all qualities of ideal suppository base. Hence cocoa butter or its substitutes are recommended for preparation of suppositories. Since the cocoa butter is a fat, it is having *snigdha guna* and is capable to reduce pain by pacifying *vata*.

In this case, there was considerable reduction in pain by placing *Sireesha asoka* suppository within 2 hours. Patient was complaining a pain of score 6/10 after the procedure. After administering the suppository, the pain score reduced to 3/10 in 1st hour and then to 0/10 in 2nd hour. There was no pain after 2 hours. The anti-nociceptive property of both *Sireesha* and *Asoka* played a vital role in the pain management in postoperative pain after the procedure.

CONCLUSION:

The pain management after surgery is a major problem faced by Ayurveda surgeons. This study was an attempt to manage the post-operative pain in anorectal surgeries with the application of *Sireesha Asoka* suppository. Observations proves significant pain relief. This *Sireesha Asoka* suppository is a simple formulation with benefits of easy administration, preparation and cost effectiveness.

INFORMED CONSENT:

Informed consent has been provided by the patient to publish the case report.

LIMITATION OF STUDY:

This is a single case study. Hence more number of cases needs to be subjected to study for validation.

CONFLICT OF INTEREST: Author declares that there is no conflict of interest.

GUARANTOR: Corresponding author is guarantor of this article.

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