

Analgesic Effect of Sirisa Gel in Painful Fissure-in- Ano: A Case Report

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ABSTRACT:

Fissure in ano is a common and painful anorectal condition characterized by severe pain, particularly during and after defecation. Pain associated with fissures greatly affects patients daily activities and overall quality of life. Conventional treatment strategies for fissure in ano include increased fluid intake, high fiber diets, sitz baths and topical application of analgesic medications. The Most commonly used topical analgesic is lidocaine, which has side effects such as burning sensation, itching, redness and dermatitis. This case highlights the analgesic effect of *Sirisa* gel, prepared from the stem bark of *Sirisa*, which is categorized under *Vedanasthapana gana*. A 36 year old female presented to our out patient department with severe pain during defecation and which last for 4-5 hours after defecation. For diagnosis anorectal examination was performed and on inspection fissure in ano was noticed at posterior midline and after that digital examination was done following lubrication of index finger with *Sirisa* gel. Following digital examination the patient reported pain similar to that experienced after defecation. The case was diagnosed as fissure in ano. Thus *Sirisa* gel was applied over fissure and pain intensity was assessed using the Visual Analogue Scale at 1, 5, 10, 15, and 30-minute intervals. The VAS score was 9 at one minute, decreased to 8 at 5 minutes, 6 at 10 minutes, and further reduced to 4 at both 15 and 30 minutes after application. These findings suggest that *Sirisa* gel may serve as a useful topical analgesic for reducing pain in fissure in ano.

KEY WORDS: Analgesic effect, Fissure in ano, *Parikarthika*, *Sirisa* gel, *Vedanasthapanagana*

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INTRODUCTION:

Fissure in ano is a common anorectal condition described as a linear, longitudinal or oval ulcer in the squamous epithelium of the anal canal, located below the dentate line.^[1] It affects nearly 1 in 350 adults, with no significant difference in incidence between men and women,^[2] and is most frequently seen in individuals aged 15–40 years.^[3] The causes are multifactorial, but the passage of hard stools and increased tone or spasm of the anal sphincter are the most common contributors. Anal fissures are classified as acute or chronic based on duration, and may also be described as superficial or deep depending on the depth of the tear. They typically occur in the posterior midline due to increased pressure during defecation. The characteristic feature includes Bright streak of blood with passage of stool and severe pain during defecation.^[4] Most frequent symptom of fissure in ano is pain, occurring in about 90.8% of patients according to a review of 876 cases. Individuals typically report sharp, tearing pain during bowel movements. This pain may be limited to the time of defecation or may persist for several minutes to hours afterward.^[5] Fissure in ano can be correlated with *Parikartika* in Ayurveda classics. *Lakshanas* include *Theevrasula* at *Guda* (*Excruciating pain at anal regio*), *Sa piccha asram karothe* (Slimy and bloody discharge).^[6] Initial management of fissure in ano aims to, reduce pain, prevent further injury, relieve sphincter spasm, and avoid constipation through conservative measures and appropriate medications. Since pain is the predominant symptom, providing an effective topical analgesic is essential. Lidocaine gel is the most commonly used topical analgesic agent.^[7] However, it may cause adverse effects such as skin rashes, itching, redness, dermatitis, and in some

cases, systemic toxicity.^[8] There are many unexplored herbal drugs in Ayurveda which have analgesic effect. In *Charaka Sambhitā* a group of drugs together called as *Vedanasthapana gana* is described for pain management.^[9] Previous animal studies and phytochemical studies give clear evidence that *Albizia lebbek* one among *Vedanasthapana gana* has excellent anti nociceptive, anti inflammatory, anticancer, antimalarial, antiallergic, antidiabetic and wound healing properties.^[10] *Albizia lebbek* known as *Sirisa* in Sanskrit, belong to Fabaceae family. It is a tall, deciduous tree distributed throughout India. Phytochemical studies on the stem bark of *Albizia lebbek* revealed the presence of tannin, alkaloids, flavonoid, terpenoids, phenols, steroids, saponins, glycosides, carbohydrate and proteins. Here it is intended to check the analgesic effect of *Sirisa gel* prepared from *Sirisa* stem bark in painful fissure in ano.

Preparation

Drug preparation was done from Department of Rasasastra, Government Ayurvedic college Thiruvananthapuram.

Step -1Preparation of ethanolic extract

The dried stem bark powder (250g) of *Albizia lebbek* was extracted with ethanol (500ml) at room temperature by maceration for 7days. After maceration period the contents was filtered and filtrate was concentrated under reduced pressure by rotary flash evaporator. The concentration extract was dried in desiccator and stored in air tight containers.

Step- 2 preparation of gel from extract

2gm of extract is mixed with 1gm of gelling agent- carbopol 934 ,Preservative- Methyl paraben and 500ML of distilled water. Which was kept for 8hours and then stirring was done to obtain *Sirisa gel*.

CASE REPORT

A 36 year old female patient visited the out patient department (OPD) with complaints of hard stool associated with burning pain in the perianal region during and after defecation for 1 month. The pain was severe and continue up to 4 -5 hours after defecation with out reducing severity. Occasionally she noted blood streaks while passing of stool. She was employed in the information technology sector and reported a preference for spicy foods along with consistently low daily water consumption. When pain started she consulted a physician and took laxative for 3days, after in which bowel habit become normal, but pain persisted.

Clinical Findings

General examination of patient revealed that the patient was well built, well nourished, no pallor/icterus/cyanosis/Clubbing/oedema/lymphadenopathy was observed. On examination Naadi- Vataja naadi, mutra - Anavilam, Mala -bhadham, Jihwa-lipta, Pulse rate of 74 beats per minute, Respiratory rate of 18 breaths per minutes and Heart rate 74 beats per minutes.

Personal history:

The patient is non vegetarian individual who predominantly consume *Katu*

(spicy) and *Amla rasa Ahara* (Sour taste food) in excess. Also she had irregular meal timings with less amount of water intake. Due to her profession most of the days she is sleeping only 2-4 hours and her physical activity is completely negligible. Her *Agni* (digestive fire) is *Manda Agni*.

Anorectal examinations:

After obtaining written informed consent, the patient was positioned comfortably in the lithotomy position. On Inspection Acute fissure at posterior midline was noted. Palpation over fissure gives grade 3 tenderness. The index finger was lubricated with *Sirisa* gel, and a digital anorectal examination was performed.

THERAPEUTIC INTERVENTION:

Following the examination, the patient reported pain similar to that experienced after defecation, with a Visual Analogue Score (VAS) of 9. Subsequently, a sufficient quantity of *Sirisa* gel was applied directly over the fissure site

Treatment Outcome

After application of *Sirisa* gel pain intensity was assessed using Visual Analogue scale. Result of the intervention are mentioned in table number 1. Adverse or unanticipated events are not noteced during and after intervention.

Table-1: VAS score

Pain	Before intervention	1 minutes After intervention	5 minutes After intervention	10minutes After intervention	15minutes After intervention	30minutes After intervention
VAS score	9	9	8	6	5	5



Figure-1: Sirisa gel final product

DISCUSSION:

Sirisa scientifically known as *Albizia lebbek*, is recognized as one of the members of the *Vedanasthapana Gana*, mention by Charaka . *Sirisa* having *Madhura* (sweet), *Tikta* (bitter), *Kashaya* (astringent), *Anushna veerya*, *Katu vipaka* (which refers to its post- digestive effect being pungent), and *Laghu* (light) guna. By this pharmacological properties its plays a significant role in *Thridoshashamana*. *Parikartika* developed due to aggravation of *Vata* and *Pitta doshas*. In this context, pain is due to aggravation of *vata* and *Pitta* which contributes to localized inflammation. As *Sirisa* having significant role in balancing three *doshas*, it is effective in alleviating both pain and inflammation resulting from the *Vata-Pitta dushti*. Phytochemical analysis of ethanolic extract of *Sirisa* bark shows the presents of bioactive compounds such as flavonoids, saponins, alkaloids, and tannin. This phytochemicals had a potency to interact with pain pathway. Some studies show that flavonoids in the plants help to inhibits enzymes like cyclooxygenase and lipoxygenase and this help to reduce key pain mediators acting on peripheral nociceptors such as prostaglandin and leukotriene. Saponins in plants can modulate the sodium channel activity on peripheral sensory neuron by slowing or reducing nerve depolarization and decreasing the

frequency of nerve impulses carrying pain signals. The tannins in plant have property to form a thin protein precipitate layer on damaged mucosa and which leading to reduce physically exposing nerve endings and stimulation of peripheral nociceptive receptors.

Thus the analgesic effect of *Albizia lebbek* plant is mostly due to action of bioactive compounds on peripheral nociceptive receptors which prevent transmission of pain signals.

CONCLUSION:

Thus *Sirisa* gel may be used to reduce pain during and after defecation for patient with painful fissure in ano and which help improve patients quality of life. Although this is a single case report, the Outcome highlights the potential of *Sirisa* gel to reduce pain. Further clinical studies with higher sample size are recommended and further pharmacological analysis is needed for validation of the observed analgesics effect. Exploration of standardized formulation for broader clinical use is need.

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Limitation of study: This is a single case report and lacks a larger sample size.

Patient consent: The patient provided informed consent for publication of this case report

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