



ROLE OF GUGGULU BASED PALASHA KSHARASUTRA IN THE MANAGEMENT OF SHALYAJA NADI VRANA (PILONIDAL SINUS) – A SINGLE CASE STUDY

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Abstract: *Ksharasutra* is a proven hallmark technique of Ayurvedic surgery. Presently *Ksharasutra* is the answer to some of the surgically treatable disease(s) which have high recurrence rates post-surgery especially in disease like Pilonidal sinus. International surgical texts have also not failed to mention the usage and benefits of *Ksharasutra*. The present-day management of pilonidal sinus is based on the removal of causative factors which include complete radical excision of the tract. Post operatively patients will have severe pain, discomfort, need long hospital stay and require prolonged dressings along with antibiotics. Recurrence is very common even with adequate excision of the tract and proper surgical wound management. Complications like post-op infection, wound dehiscence, seroma can be seen along with recurrence. In the past two-decades various researches are being carried out with respect to various *Kshara* and *Ksharasutra*. This Pilonidal sinus can be correlated to *Shalyaja nadi vrana*. Application of *Ksharasutra* has been explained as treatment modality in *Nadivrana* by *Acharya Sushruta* and *Acharya Chakrapanidatta*. Recent researches are aiming to produce *Ksharasutra* out of available *Kshara* drugs. one such combination is *Guggulu* based *Palasha ksharasutra*. *Guggulu* as a base material is slowly replacing *Snuhi ksheera* due to availability, affordability and analgesic action. Due to its abundance *Palasha* tops the list of *kshara* drug. This paper intends to throw an insight on role of *Guggulu* based *Palasha ksharasutra* in the management of *Shalyaja nadi vrana* through a single case study.

Index Terms - *Ksharasutra*, Pilonidal sinus, *Shalyaja Nadi Vrana*, *Guggulu*, *Palasha*

I. INTRODUCTION

The description of *Kshara* can be elaborately seen in *Sushruta Samhita*. The substance that debrides the debris of skin, flesh, muscle etc., which purifies the *Dosha*, *Dhatu* and *Mala* by its corrosive nature is known as *Kshara*(1). It is an alkaline substance paste made out of burnt ash(2) of various or single drug which involves drugs of plant like *Apamarga* (*Achyranthes aspera*), *Palasha*(*Butea Monosperma*), *Kadali*(*Musa paradisiaca*), *Snuhi*(*Euphorbia nerifolia*), *Arka* (*Calotropis procera*) etc., from animals like conch shells, coral etc., and from minerals like borax, potassium salts etc. these alkaline preparations can be consumed internally in certain diseases like urolithiasis, digestive disorders and can be used externally in the form of application in Piles and in the form of medicated thread known as *Ksharasutra* mainly in Pilonidal sinus and Fistula-in-ano. Diseases which are difficult to be cured by any other means can be cured by *Kshara* (3). In all the surgical and para surgical methods of Ayurveda *Kshara* tops the list (4)

II. MATERIALS & METHODS

2.1 Drugs

1. *Palasha* (5)

Palasha (*Butea monosperma*) is known for its antimicrobial effect. It can be a good alternative to *Apamarga* when it comes to irritation and availability. The same benefits apply to *Guggulu* when compared to *Snuhi*. *Palasha* (*Butea monosperma*) is a wildy growing plant. It has rough and trifoliate leaves. It pacifies vata and is one of the best sources of *Kshara*.

Botanical name: *Butea Monosperma*

Family name: Fabaceae

Gana - *Sushruta - Rodradigana, Muskakadigana, Ambashtadigana, Nyagrodhadi*

Useful part: *Panchanga*

Properties:

Rasa: Kashaya, Katu, Tikta;

Guna: Laghu, Snigdha;

Veerya: Ushna

Vipaka: Katu

Karma: Kaphavata Shamaka

Rogaghnata: Vrana Ropana, Krimighna

Chemical Composition: Kinotannic acid, Galic acid



Fig. 1 - *Palasha*

2. *Guggulu* (6,7)

Guggulu (*Commiphora mukul*) is shrub whose gum resin is used. It is known for its analgesic and binding action.

Botanical name: *Commiphora mukul*

Family: *Burseraceae*

Gana: *Samgna sthapaka (Charaka)*

Eladi (Sushruta, Vagbhata)

English name: *Indian bedellium*

Chemical composition: *volatile oils and resins*

Properties:

Rasa – Tikta, Kashaya and Katu

Guna – Laghu, Ruksha, Vishada

Sukshma, Sara (old)

Snigdha, Picchila (new)

Veerya – Ushna

Vipaka – Katu

Karma– Deepana, Brimhaneeya, Vrushya, Lekhana, Vatashamaka and Purana

Diseases indicated- *Prameha, Kusta, Ashmari, Amavata, Sopha and Gandamala*

Kaphavataja roga, Vrana (Vran shodhaka and ropaka), Krimiroga

Parts used: *Niryasa*



Fig.2 Guggulu

3. *Haridra* (6,7)

Latin Name: *Curcuma longa*

Family: Scitaminae (Zinzeberaceae)

Gana: Charaka: *Kustagna, Kandugna, Lekhaniya, Vishagna Tiktaskanda, Shirovirechana*

Sushruta: *Haridradi, Mustadi, Shleshma Samshamana*

Vagbhata: *Haridradi, Vachadi, Mustadi*

Chemical Constituents:

It contains Alpha-phenllandrene, Sapinine, Cineol, Borneal, Zinziberone and Turmerones. The crystalline colouring matter Curcumin is a diferuloyl methane of the formula C₂₁ H₂₀O₆.

Externally it acts as an

Analgesic, Anti-inflammatory



Fig.3 Haridra Churna

In this article, an effort has been made to throw an insight on preparation of *Ksharasutra* using *Guggulu* as a binding material instead of *Snuhi khseera* and usage of *Palasha* instead of *Apamarga* as a *Kshara* drug

2.1 Method of preparation of *Guggulu* based *Palasha Ksharasutra* (8)

- A surgical Linen thread number 20 is spread out lengthwise on the *Ksharasutra* hangers.
- *Guggulu Niryasa* is smeared over the thread on its whole length by wearing sterile gloves.
- This wet threaded hanger is placed in *Ksharasutra* cabinet. After drying the same procedure is repeated for 11 times.
- The twelfth coating, thread is smeared with *Guggulu Niryasa*, then in wet condition the thread is spread with *Palasha Kshara* powder. After drying the same procedure is repeated for 7 times.
- Next the thread is smeared with *Guggulu niryasa* and then in wet state it is spread with *Haridra churna*. This procedure is repeated for 3 times continuously. In this way a thread has total 21 coatings of *Guggulu niryasa*, 7 coatings of *Palasha Kshara* powder, 3 coatings *Haridra churna* and stored in a sterile airtight test tube.
- After this the threads were cut in 2 sizes; Medium length- 16cm, small length- 10cm and packed in a sterile sealed pack after placing in the UV cabinet with a small pack of silica inside to absorb moisture. All these were then packed in air tight container and stored keeping it away from contact with any moisture.



Fig.4 Ksharasutra

III. A Single Case Study:

A 33 years old male subject, driver by profession, not a K/C/O DM/ HTN presented to the OPD with pain and pus discharge at tail bone for 2 Months. 4 months ago, when he had a similar issue, he happened to visit a nearby clinic wherein he was administered with antibiotics and analgesics for 5 days without local examination. And he was relieved from his complaints. Since he noticed similar complaints, he visited Shalya tantra OPD at Ayurveda Mahavidyalaya, Hubballi.

3.1 Sthanika Pareeksha (Local Examination):

Inspection: Swelling and pus discharge seen at tail bone region

- Number- 1
- Sprouting granulation tissue – Present (+) Absent ()
- Discharge- Present (+) Absent ()
- Surrounding Skin - Healthy (+) Unhealthy ()

Palpation:

- Tenderness - Present (+) Absent ()
- Indurations - Present (+) Absent ()

Probing

- Direction of the sinus- Upwards (), Downwards (+), Left Lateral (), Right Lateral ()
- Foreign Bodies - Present () Absent (+)

3.2 CHIKITSA / TREATMENT:

Treatment	Procedure	Follow up
Guggulu based Palasha Ksharasutra	Under aseptic conditions Ksharasutra is changed weekly till complete track is cut	45 days post complete cutting and healing of the track

Table 1 - Depicting the Chikitsa

3.3 Procedure of Ksharasutra:

Pre-op:

1. Evaluation
2. Written and informed consent
3. Part preparation
4. Injection TT 0.5 ml I.M
5. Lignocaine sensitivity test

Operative:

1. Position: Prone position
2. Painting and draping
3. Anesthesia: Local
4. Removal of visible hairs and debris with pus
5. Probing and Primary threading - Primary thread was inserted into eye of probe and passed through the track. Probe was removed from distal end of the track, leaving behind thread in track
6. Hemostasis

Post - Op:

1. Sitz Bath - Once a Day for 5 mins
2. After 3 days Ksharasutra was tied through rail-road technique
3. Ksharasutra was tied firmly outside the tract
4. Till the track was completely excised ksharasutra was changed every week

Internal medications:

1. Triphala Guggulu 1- 1- 1 BF
2. Gandhaka Rasayana 1- 1- 1 BF

IV. Assessment criteria:

4.1 Subjective parameters

1. Pain

Pain was assessed by Wong-Baker faces pain reading scale

Patients was asked to choose a face which best describes how much pain he had



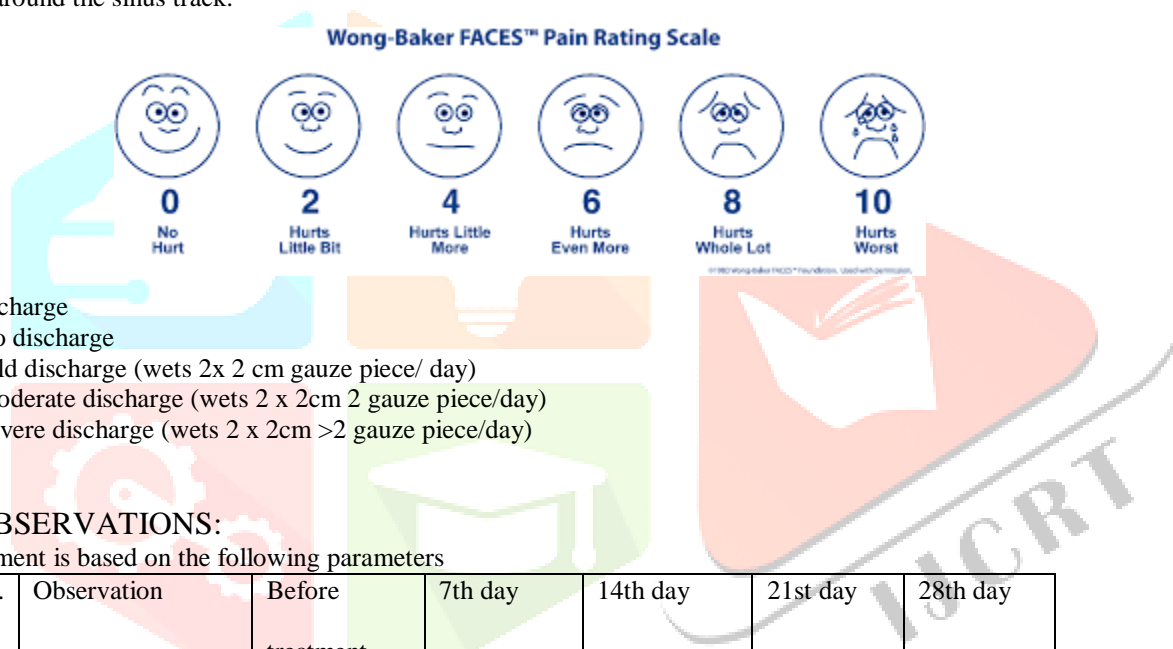
4.2 Objective parameters

I. Length of the track – was measured at every sitting in cm.

II. Tenderness

-Tenderness was assessed by Wong-Baker faces pain reading scale

- Patients was asked to choose a face which best describes how much pain/discomfort he experienced on gradual exertion of pressure at and around the sinus track.



III. Discharge

D0– No discharge

D1–Mild discharge (wets 2x 2 cm gauze piece/ day)

D2– Moderate discharge (wets 2 x 2cm 2 gauze piece/day)

D3– Severe discharge (wets 2 x 2cm >2 gauze piece/day)

V. OBSERVATIONS:

Assessment is based on the following parameters

Sl. no.	Observation	Before treatment	7th day	14th day	21st day	28th day
1.	Pain	8	6	4	0	0
2.	Discharge	3	2	1	0	0
3.	Length of the track	2	1.8	1	0.5	0
4.	Tenderness	8	6	4	2	0

Table 2 depicting subjective and objective parameters

UCT - Total days/Initial length of the track

Follow up period for observing recurrence - 45 days

Occurred () Not occurred (+)



During Ksharasutra



Healed Track

VI. Discussion

1. Usage of different *Kshara* drugs and binding materials
2. Pain management
3. Follow ups to check recurrence

VII. Conclusion:

1. *Ksharasutra* can be a game changing treatment in Pilonidal sinus which has high recurrence rates
2. Application of *Guggulu* based *Palasha Ksharasutra* is a good alternate for its availability

VIII. Scope for further research:

1. Drug analysis before preparation of *Kshara*
2. Standardization of *ksharasutra* preparation concerning coating and thickness
3. Increased sample size.

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