AN INSIGHT ON PREPARATION OF GUGGULU BASED PALASHA KSHARASUTRA

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ABSTRACT

*Ksharasutra* is a proven hallmark technique of Ayurvedic surgery. Presently it is the answer to some of the surgically treatable diseases which have high recurrence rates post-surgery. International surgical texts also have not failed to mention the usage and benefits of *Ksharasutra*. Since the time, *Ksharasutra* has become one of the main lines of treatment protocol for ano-rectal diseases especially Fistula-in-ano, Pilonidal sinus and even in Piles also. In the past two-decade various researches are being carried out with respect to various *Kshara* and *Ksharasutra*. Various modalities of *Kshara* preparation have been explained in *Sushrutha Samhita*, *Ashtanga Hrudaya*, *Sharangadhara Samhita*, *Chakradutta*, *Rasa Tarangini* etc. Preparation of *Ksharasutra* mentioned in texts was later developed by Prof. Prabhakar Janardhan Deshpande. *Snuh ksheera* based *Apamarga Ksharasutra* is a standard *Ksharasutra*. Recent researches are aiming to produce *Ksharasutra* out of other *Kshara* drugs which may be even more effective and compatible, one such combination is *Guggulu* based *Palasha Ksharasutra*. *Guggulu* as a base material is slowly replacing *Snuh Ksheera* due to availability, affordability and analgesic action. Due to its abundance *Palasha* tops the list of *Kshara* drugs. This article intends/aims to throw an insight on preparation of *Guggulu* based *Palasha Ksharasutra*.

**Keywords**: *Palasha, Guggulu, Ksharasutra*, Pilonidal sinus, Fistula-in-ano

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*. It is an alkaline paste like substance made out of burnt ash of various or single drug like *Apamarga* (*Achyranthes aspera*), *Palasha* (*Butea Monosperma*), *Kadali* (*Musa paradisiaca*), *Snuh* (*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*. In all the surgical and para surgical methods of Ayurveda *Kshara* tops the list.

Here is the brief mentioning of the drugs used for preparation of *Guggulu* based *Palasha Ksharasutra*. 
1. Palasha

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 rich 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

2. Guggulu

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: Samagna sthapaka (Charaka)
Eladi (Sushrutha, Vagbhata)
English name: Indian bedellium
Chemical composition: volatile oils and resins
Properties:
Rasa – Tikta, Kashaya and Katu
Guna – Laghu, Ruksha, Vishada

3. Haridra

Latin Name: Curcuma longa
Family: Scitaminae (Zinzeberaceae)
Gana: Charaka: Kustagna, Kandugna, Lekhniya, Vishagna Tiktaskanda,
Shirovirechana
Sushruta: Haridradi, Mustadi, Shleshma Samshamana
Vagbhata: Haridradi, Vachadi, Mustadi
Chemical Constituents:
It contains Alpha-phellandrene, Sapinine, Cineol, Borneal, Zinziberone and Turmerones. The crystalline colouring matter Curcumin is a diferuloyl methane of the formula C21 H2006.
Externally it acts as an Analgesic, Anti-inflammatory

Sukshma, Sara (old)
Snigdha, Picchila (new)
Veerya – Ushna
Vipaka – Katu
Karma – Deepana, Brimhaneeya, Vrushya, Lekhana, VATashamaka and Purana
Diseases indicated- Prameha, Kusta, Ashmarı, Amavata, Sopha and Gandamala
Kaphavataja roga, Vrana (Vran shodhaka and ropaka), Krimiroga
Parts used: Niryasa
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 Ksheera and usage of Palasha instead of Apamarga as a Kshara drug.

**Method of preparation of Palasha Kshara**:  
10 kgs of whole plant was collected and burnt into ash. It was then allowed to cool by itself. The whole ash obtained weighed 1kg was then mixed with 6 liters of water and stirred well, allowed to settle overnight. Then it was filtered through double folded cloth for 21 times, residue was thrown out. Amber colored filtrate was obtained. This was then boiled on low flame. Once the content was reduced to half, about more than one third of Ksharajala was taken out of the vessel. 100 grams of Seashells (Shuktii) were heated red hot and then mixed with one third Ksharajala to dissolve it completely. Thus, dissolved Shuktii was added to boiling Ksharajala as an Avapa Dravya and boiling was continued. Meanwhile 10gms of Chitrakamoola (Plumbago Zeylanica) Kalka was added to boiling Ksharajala as a Prativapa Dravya and could boil for a few more minutes, till the content attained powder consistency. Then it was removed from the flame, transferred into separate airtight container and stored. The pH value of which was recorded as 13.5 which suggests the high alkaline strength.

**Method of preparation of Guggulu based Palasha Ksharasutra**:  
**Materials Used**  
- Surgical linen thread number 20  
- Palasha Kshara powder  
- Guggulu Niryasa  
- Turmeric powder

**Procedure**  
- 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 airtight container and stored keeping it away from contact with any moisture.

**DISCUSSION**  
Different drugs can be used in the preparation of Kshara, from which the Ksharasutra is prepare. Palasha can be one such potent drug for preparation of Ksharasutra. Due to difficulty in availability of Snushi ksheera, slowly it is being replaced by Guggulu. Though Ksharasutra seems to be a slightly painful procedure, it has become the best solution than sur-
gery which does layer by layer cutting and simultaneously healing. It also does the debridement of the track and stimulates the healthy granulation tissue for healing. It is a minimally invasive procedure which has no recurrence and complications\textsuperscript{10}

**CONCLUSION**

*Ksharasutra* is a popular treatment and is becoming choice of treatment because diseases like Fistula in ano and Pilonidal sinus behave notoriously even after surgical management. Application of *Guggulu* based *Palasha Ksharasutra* is a good alternate, when compared with other types of *Ksharasutra* in tackling such problems. The number of coatings for the preparation of *Ksharasutra* is already standardized and the same is being followed here also. The circumferential thickness of the *Ksharasutra* is to be standardized in order to avail the same thickness thread globally.

**Scope for further research:**
1. Drug analysis before preparation of *Kshara*
2. Testing the pH of prepared *Kshara* and comparing it with other *Ksharasutra*
3. Standardization of *Ksharasutra* preparation concerning coating and thickness

**REFERENCES**

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**Source of Support: Nil**

**Conflict of Interest: None Declared**