



## Case Study

### TO EVALUATE THE EFFECT OF *PAPAYA - TANKAN KSHAR SUTRA* IN RECURRENT PILONIDAL SINUS

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#### ABSTRACT

*Shalya Tantra* is a branch of *Ayurveda* which deals with surgical as well as parasurgical procedures like *Kshar karma*, *Agnikarma* & *Raktamokshana*. This study elicits a case report of a recurrent *Pilonidal sinus* treated by the intervention of *Papaya-Tankan Kshar Sutra*, which cured and demolished the symptoms. The incidence of *Pilonidal sinus* is approximately 26 / 100,000; it is a benign disease that occurs in young adults in the age group of 15 - 30 years after puberty when sex hormones are known to affect pilosebaceous glands & change healthy body hair growth. The etiology and pathogenesis of *Pilonidal sinus* are not clear although the disease is thought to be related to the accumulation of weak and lifeless hair in the intergluteal region. Over time, foreign body reaction occurs, causing abscess and sinus formation. *Pilonidal sinus* can be correlated with *Nadivrana* in *Ayurveda*. *Acharya Sushruta* the father of surgery has described *Nadivrana* first time in detail including etiological factors, classifications, symptomatology, pathology, complications & its management in a most scientific manner.

**KEYWORDS:** *Nadivrana*, *Pilonidal sinus*, *Kshara karma*, *Papaya-Tankankshar sutra*.

#### INTRODUCTION

*Ayurveda*, 'the science of life'<sup>1</sup> is based on the time tested observations and medical experiences. It has immense potential to evolve solution of many challenging and unresolved problems of medical world. *Shalya Tantra* is one of the most important branches of *Ayurveda* which has its own originality with authenticity, contributing to modern medical technology of today. *Sushruta Samhita* is the only available text in surgical practice, enriched with detailed basic surgical techniques and parasurgical measures.

All these procedures are contenting their own limitations with the greater rate of complications, recurrence etc. and for these reasons there is a continuous search for newer methods. A number of new surgical methods have led to a reappraisal of *Pilonidal sinus* disease over the last few decades. Despite a range of treatment modalities, the options are limited to their effectiveness. There are still existed controversies and lack of agreement in regards to the treatment strategies for *Pilonidal sinus*. Keeping in view answering authentically, *Shalya Chikitsa* particularly from the area of parasurgery has been selected. Under the heading of parasurgery, *Kshara karma* procedure interpreted to potential cauterization application therapy is the specific field taken in this case study for finding out the correct approach in comparison to the modern counterpart treatment. In relation to *Kshara karma*, *Acharya Sushruta* has advocated *Kshara sutra* application method for the treatment of *Nadivrana*<sup>2</sup>.

#### CASE STUDY

A 22 years old male reported to the surgery O.P.D. at *Patanjali Bhartiya Ayurvedigyan Avum Anusandhan Sansthan, Haridwar, Uttarakhand* with complaints of pus

discharge from a wound over an operated site around natal cleft region along with discomfort and pain in June 2016. Patient was apparently alright before 3 year. Initially swelling developed around natal cleft region and after few days pain and pus discharge occurs through this region. Patient taken some allopathic medicine from local doctor and it subside. After 1 year again swelling occur and this time patient go to Government allopathic surgeon. Surgeon performed Incision & Drainage procedure for *Pilonidal sinus* in 2014. After 6 month, disease reoccurred. After this, patient came in *Patanjali Bhartiya Ayurvedigyan Avum Anusandhan Sansthan, Haridwar, Uttarakhand* for management. After Local examination and Sinogram investigation the diagnosis was *Pilonidal sinus*. Before planning treatment Patient was assessed for fitness for Local anaesthesia and surgery. Injection Xylocaine with adrenaline was given around the area of operated site for local anaesthesia. Through scoop debridement of the *Pilonidal sinus* tract was done. Unhealthy granulation tissue was removed through the opening on skin. Hairs inside the tract was also removed through artery forceps. The opening of the skin was incised as the scoop can go inside and tract was cleaned with normal saline. Probing done through opening and tract traced till its blind end and another opening was made over the skin upto the tip of the probe. Probe removed through another opening after feeding of *Papaya-Tankankshar sutra* and *Papaya-Tankankshar sutra* ligated appropriately. Patient was discharged from hospital on next day after operation. *Papaya-Tankan Kshar sutra* was changed on every week by Railroad technique<sup>3</sup> until "cut through" of the tract.

*Papaya-Tankan Kshar Sutra* was made through *Papaine powder*, (it is made through drying unripe papaya fruit juice through Dryer oven upto maximum 100°C temperature.) *Papaya pulp, Tankan Kshar & Haridra*.

## RESULT

Tract of *Pilonidal sinus* healed completely by weekly changing of *Papaya-Tankan Kshar Sutra* in a period of 4 weeks. No adverse effects were observed during the course of study and management.

## DISCUSSION

*Kshar Sutra* is a Parasurgical measure capable to perform excision by virtue of its mechanical pressure and chemical action together with healing effect in the area where it is applied. For *Pilonidal sinus* tract *Kshar sutra* act as good drainage. There were some problems coming in the way while preparing conventional *Snuhi-Apamarga Kshar Sutra*<sup>4</sup>. For example, *Snuhi Ksheer* requires a specific season and time for collection. Preservation of *Snuhi Ksheer* for a long period of time is also very difficult. During *Kshar Sutra* therapy patients complain of pain, burning sensation and itching due to presence of *Apamarg Kshar & Snuhiksheer*. *Papaya pulp* can be preserved at the normal temperature whole day without any change in its consistency and property. *Papaya* is easily available in all seasons. Its fruit<sup>5</sup> is *Vranaropana, Shothahara, Vednasthapana, Krimighna, Pittashamak, Raktshodhak, Carica papaya* have different ingredients which have various medicinal properties in which *Papaine enzyme* is main component. Some other chemical constituents of *Papaya* include - Alkaloid like *Carpaine, Pseudocarpaine & Carpinine; Proteolytic enzymes Chymopapaine & Carpaine; Vitamins like A, C & E; Minerals like Mg & Zn*. These chemical constituents act as anti-microbial<sup>6</sup>, wound healing<sup>7</sup>, debriding agent<sup>8</sup>, anti-inflammatory<sup>9</sup>, analgesic effect<sup>10</sup>, exfoliative action on skin and are less irritant. *Tankan* does not absorb moisture so it dissolves very slowly, so retained in fistulous tract for longer time<sup>11</sup>. Local application on wound stops bleeding, due to its vasoconstriction action. It works as local antiseptic.

The best response was seen in reduction of Burning Sensation and Pain after ligation of *Papaya-Tankan Kshar sutra*. It provide radical cure of *Pilonidal sinus* with negligible recurrence rate as evident by regular follow-up visits by the patient after completion of therapy. In this case no sign and symptom of recurrence was ever found out.

## CONCLUSION

*Kshar Sutra* ligation therapy in the management of *Pilonidal sinus* has proved boon for the humanity. It is effectively substituting the modern surgical procedures. *Papaya-Tankan Kshar sutra* works by gradual chemical

excision of the *Pilonidal sinus* with simultaneous healing. Early ambulation of patient even after the procedure is possible as it is a minimal invasive procedure. During application of *Papaya-Tankan Kshar sutra*, less discomfort occurs. After ligation of *Papaya-Tankan Kshar sutra*, the best response was seen in reduction of Burning Sensation and Pain. No complications or recurrence have been reported in *Papaya-Tankan Kshar sutra* therapy in this case study.

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### Study Photographs



Fig. 1 - Image showing the case of Pilonidal sinus



Fig 2 - Image showing the case of Pilonidal sinus during probing



Fig. 3 - Image showing the case of Pilonidal sinus during surgery



Fig. 4- Image showing the case of Pilonidal sinus after cut through.



Fig. 5 - Image showing the case of Pilonidal sinus after healing