

## Excisional Diathermy in the Management of Post Kṣāra sūtra Wounds in Pilonidal Sinus - a Case Study

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### ABSTRACT:

Pilonidal sinus is a chronic inflammatory condition commonly affecting the sacrococcygeal region, with high recurrence and prolonged wound healing posing major challenges. Kṣārasūtra therapy, a minimally invasive Ayurvedic procedure, has proven effective in treating pilonidal sinus by gradually excising the tract. However, residual wounds following Kṣārasūtra often demand additional interventions to promote timely healing and prevent complications. A 25 years old male patient, presented with pus discharging opening at natal cleft since 6 years, was treated primarily with Kṣārasūtra therapy was observed. The case presented with fibrosed tissue and delayed wound healing after Kṣārasūtra therapy, so that excisional diathermy was employed to remove residual unhealthy tissue and enhance wound bed preparation. Healing outcomes, duration, and recurrence were to be assessed. Excisional diathermy provided effective clearance of fibrosed unhealthy granulation tissue and facilitated faster wound healing along with internal and external medications. The combined approach minimized fibrosis, false healing and enhanced wound healing. The use of agnikarma in the post-kṣārasūtra wound of pilonidal sinus is beneficial, as the tendency of the region to develop fibrosis, manifesting as raised, indurated, and insensate tissue (uchritha, katina, suptha māṃsa), for which thermal cauterization provides therapeutic advantage. The inherent property of Apunarbhavatva in Agnikarma, contributes significantly to minimizing recurrence and ensuring durable wound healing in pilonidal sinus.

**Keywords:** Pilonidal sinus, Kshara sutra, Excisional diathermy, Agnikarma

### I. INTRODUCTION

Pilonidal sinus is a chronic inflammatory condition of the sacrococcygeal region, commonly affecting young adults, with high morbidity due to pain, discharge, and recurrence. Conventional surgical management often carries the risk of

delayed healing, fibrosis, and recurrence. In Ayurveda, Kṣārasūtra therapy has been established as a minimally invasive, cost-effective, and recurrence-reducing modality for sinus tracts. However, incomplete healing and residual fibrosis may persist in certain cases, necessitating adjunctive measures. Agnikarma, as propounded by Suśruta Acharya for conditions such as uchritha, katina, and suptha māṃsa, provides effective cauterization and minimizes the chance of recurrence (Apunarbhavatva)<sup>1</sup>.

Diathermy is the use of high frequency alternate polarity radio-wave electrical current to cut or coagulate tissue during surgery. It allows for precise incisions to be made with limited blood loss and is now used in nearly all surgical disciplines. The radio-frequencies generated by the diathermy heat the tissue to allow for cutting and coagulation, by creating intracellular oscillation of molecules within the cells. Depending on the temperature reached, different results occur: at 60°C, cell death occurs (fulgurate), between 60-99°C, dehydration occurs and the tissues coagulate, and at around 100 °C, the tissues vaporise (cutting)<sup>2</sup>. Here, we present a case of pilonidal sinus managed successfully with Kṣārasūtra followed by excisional diathermy, a modern adaptation of Agnikarma, highlighting its role in enhancing wound healing and preventing fibrosis.

### II. CASE HISTORY

#### Presenting complaints with duration:

Patient complaints of inadequate wound healing of pilonidal sinus since one month.

#### History of Presenting complaints:

25-year-old male patient, a graphic designer by occupation, first experienced low back pain associated with prolonged sitting about 6 years ago, which was accompanied by localized swelling and pricking pain. He underwent treatment for low back pain for the following two years.

Subsequently, he noticed the appearance of a pinhole opening at the natal cleft, from which pus discharge occurred intermittently. Each episode lasted for about a week and subsided spontaneously, followed by an asymptomatic period of 6–7 months, after which the symptoms recurred.

For the next 1 year, the patient reported absence of pus discharge from the opening. He did not seek medical consultation for about 4 years as he was abroad for studies. On recurrence of symptoms after this period, he returned to India and was admitted for Kṣārasūtra Cikitsā. The initial tract length was noted as 8 cm, and he underwent six thread changes. At a residual length of 1.9 cm, the tract cut through by itself.

However, despite undergoing Kṣārasūtra therapy, the patient continued to have persistent induration at the site, which hindered complete wound healing and resulted in episodes of false healing. Hence, he has now been admitted again for further management.

**Past history:**

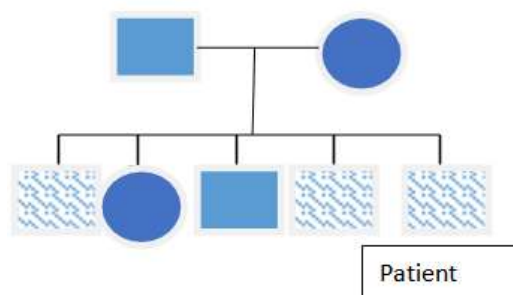
No relevant past history

**Personal History:**

Bowel – constipated often  
 Appetite – good  
 Micturition – 4-5 times / day, once at night  
 Sleep – disturbed due to pain  
 Addictions – Alcohol – stopped 2 years before  
 Smoking – stopped 1 year before  
 Food habits – spicy, tangy, curd, sweet, meat, fish, eggs (daily 5 nos), untimely food habits, long sitting, straining on defaecation

**Family History:**

Patient’s two elder brothers had the same condition



**Local examination:**

**Inspection** –post kshara sutra wound nearly 4.2 cm x 3.5 cm length over natal cleft with irregular margins and raised edges

Blackish discolouration of skin around the scar

Wound bed – reddish

**Palpation** – induration around the wound nearly 0.5 cm width

**Therapeutic Intervention:**

**Excisional diathermy (Electrocautery)**

**Purva karma**

- Informed consent obtained
- Blood investigations – WNL
- Vitals – WNL
- Tt injection taken
- Test dose – lignocaine hydrochloride 2% taken
- Part preparation done
- Patient position – prone
- Part cleaned and draped

**Pradhana karma**

- Under LA, excision of the post kshara sutra wound along with the induration around the wound is done using diathermy (electrocautery)
- Bleeding spots are coagulated accordingly.

**Paschat karma**

- Part cleaned and sterile pressure bandaging done.
- Patient stable and shifted to post operative ward.

**Internal and external medications:**

1.	Guggulu thikthakam kashaya	15 ml KS in 45ml luke warm water B/D	Before food
2.	T. triphala guggulu	1 – 0- 1	With Kashaya before food
3.	Guggulu panchapala churnam	1 tsp – 0- 1tsp	With honey after food
4.	Jathyadi gritha	External application	Twice daily

### III. OBSERVATIONS AND RESULTS



Fig 1: Before Kshara sutra application



Fig 2: After Kshara sutra application



Fig 3: After Kshara sutra complete cut through



Fig 4: After Excisional diathermy



Fig 5 : Wound healing in progress

#### Assessment<sup>3</sup>:

Assessment criterion	Day 1 – After procedure	Day 14	Day 28
Wound dimension Lx B	4.2 cm x 3.5 cm	2.8 cm x 1.4 cm	0.9cm x 0.3 cm
Wound edges	Not approximated	Not approximated	approximating

Wound bed	Mostly granulating	Mostly granulating	Mostly epithelising
Swelling surrounding tissues	absent	absent	absent
Exudate	clear	nil	nil
Wound pain	Mild (3)	0	0

#### IV. DISCUSSION:

**1. Classical basis in Agnikarma** – Suśruta Acharya advocates Agnikarma in conditions like uchr̥ta, kaṭīna, and suptha māṃsa, where hard, elevated, and fibrosed tissues hinder natural healing. This forms the Ayurvedic rationale behind adopting heat-based surgical innovations.

**2. Relevance in post-Kṣārasūtra wound** – After Kṣārasūtra therapy, residual fibrosed and unhealthy granulation tissue often persists, delaying healing. Excisional diathermy mimics Agnikarma principles by addressing these resistant tissues.

**3. Efficacy of diathermy** – Diathermy allows precise excision of fibrosed tissue with minimal blood loss, better clearance, and reduced chances of recurrence compared to conventional excision.

**4. Facilitation of wound healing** – Removal of unhealthy fibrosed tissue improves vascularity, reduces local infection risk, and facilitates faster granulation and epithelialisation.

**5. Integrative approach** – The innovation reflects how classical concepts of Agnikarma can be translated into modern surgical tools like diathermy, maintaining the essence of Ayurveda while enhancing patient outcomes.

**6. Clinical significance in Pilonidal sinus** – Since pilonidal sinus is prone to chronicity, fibrosis, and delayed healing, applying this integrative method ensures effective wound management and decreases recurrence rates.

#### V. CONCLUSION:

The present study underscores the clinical significance of integrating Agnikarma principles with excisional diathermy in the post-Kṣārasūtra management of pilonidal sinus. Early excision of fibrosed and indurated tracts within one month ensured thorough removal of unhealthy tissue, prevented false healing, and accelerated wound recovery. By harmonizing classical Ayurvedic wisdom with modern surgical precision, this integrative approach emerged as a safe, minimally invasive, and cost-effective technique—significantly reducing recurrence, fibrosis, and

postoperative morbidity in this otherwise persistent condition

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