

**KSHARA PICHU – A NON INVASIVE APPROACH IN SHALYAJA NADIVRANA–
CHRONIC POST LAPAROSCOPIC PARAUMBILICAL HERNIOPLASTY SINUS**

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ABSTRACT

This case report of the patient who was received in the OPD of SKAMCH&RC presented with chronic non healing sinus which occurred as post-surgical complication caused by the presence of infected sutures and mesh used during laparoscopic mesh repair of paraumbilical hernia. After thorough examination and necessary investigation, under spinal anaesthesia umbilical excision, removal of the infected mesh and offending sutures done which was the primary focus of infection followed by herniorrhaphy to correct the defect in linea alba, patient's recovery thereafter was uneventful. Then on OPD basis, the sinus was treated with the insertion of kshara pichu which was prepared in the lab of SKAMCH&RC from which chemical debridement of fibrosed tissue and drainage of pus was observed. When minimal soakage and healthy granulation tissue was observed at the opening of the sinus, kshara pichu treatment was stopped and jatyadi thaila pichu treatment was started to facilitate wound healing. The patient recovered well with complete healing of the tract within a span of 8 weeks.

KEY WORDS: *Shalyaja nadi vrana*, post laparoscopic paraumbilical hernioplasty sinus, *Kshara pichu*, *jatyadi thaila pichu*.

INTRODUCTION

In the present study, attention is paid on the *shalyaja nadvrana*. According to *Sushruta Samhita*, this disease manifests due to the presence of *shalya*(foreign body) inside the body leading to *pachana* of *rakta* and *mamsa* by *pitta* leading to *shopha* which suppurates and tracts inside and opens with continuous discharge^[1]. A very much similar condition is post paraumbilical hernioplasty stitch sinus which is an acquired sinus in which pus tracks along the planes of least resistance and point towards skin and spontaneously discharge tracking to skin. Post surgical suture sinus results from the presence of non absorbable suture materials which acts as focus of infection within the wound. The internal opening usually closes leaving a chronic discharging sinus that fails to heal due to inadequate drainage of abscess cavity^[2].

The concept of *kshara varti* has been explained by Acharya Sushruta in the context of *Nadi vrana chikitsa*.^[3]

Kshara pichu is a medicated wick prepared by coating *Arkasheera* and *Haridra churna* on 6 strands taken from sterile cotton gauze and rendered alkaline.

MATERIALS AND METHODS

In the preparation of *Kshara pichu*, (medicated wick), 2 herbal drugs had been taken namely

1. Latex of *Calotropis procera* (family-Burseraceae)
2. Powder of *Curcuma longa* (family-Zingiberaceae)

Preparation of *Kshara pichu*

For the preparation of *kshara pichu*[4], 6 strands from sterile cotton gauze of necessary length was taken and manually coated with mixture of freshly obtained latex of *Arka* and *Haridra churna*, made into a *varti* form and dried under shade. The *pichu* thus prepared was sterilized by ultra violet radiation using *kshara sutra* cabinet and preserved in airtight glass container. Length was about 5.5-6 cm.

**Patient details**

A 32 year hindu female, receptionist by occupation received in the OPD of SKAMCH&RC on 18th Aug 2016.

Chief complaint

Pus discharge from an opening present over left side of the upper abdomen associated with discomfort, soiling of clothes & occasional pain since 6 yrs.

History of past illness

H/O Para umbilical hernia before 8 ½ yrs
K/C/O Hypothyroidism since 4 months
No Medical history of DM, HTN, BA, KOCH'S and drug allergy.

Surgical history

H/O Tubectomy before 7 yrs.
H/O Elective laparoscopic paraumbilical hernioplasty under general anaesthesia at Victoria hospital before 6 yrs.

On examination

Moderately built and nourished, Pallor –absent, edema – absent, Icterus- absent, Cyanosis – absent, lymph nodes – no enlargement noticed,

Respiratory system: NVBS heard, no added sounds

Cardiovascular system: S1 & S2 heard.

Gastrointestinal system**P/A findings**

Inspection: scar marks of previous excision of the multiple sinuses seen over the abdomen. An opening noted at left hypochondrium, 12 cm from the umbilicus, on mid clavicular line, below the left costal margin.

Umbilicus inverted.

Stria gravidarum +

Auscultation: Bowel sounds heard (+)

Percussion: Tympanic sound except liver dullness.

Palpation: Soft, non tender, no organomegaly.

Local examination**Inspection**

Site : left hypochondrium, 12 cm from the umbilicus on mid clavicular line below the left costal margin.

Number of openings : 1

Opening of the sinus : small, hyperpigmented margin.

Discharge : Seropurulent

Surrounding skin : Hyperpigmented

Palpation: No tenderness, mobile.

Induration–circumferential 1cm around the external opening.

Fibrous tissue around the external opening – present.

Examination with a probe: Patient was explained about the procedure and assured. A sterile metallic probe with 2% lignocaine hydrochloride gel applied was passed through the external opening in the left hypochondrium and forwarded along the path of least resistance.

Direction: medially towards umbilicus.

Length of the tract: 5.5 cm

No presence of any foreign body moveable at the depth of the sinus.

No fresh discharge on withdrawal of the probe.

Not communicated with hollow viscus.

Lab investigations

Hb - 12.1 gm%

WBC count - 8800 cells/ cu mm

DC-

Neutrophils - 68%

Lymphocytes - 29%

Eosinophils - 02%

Monocytes - 01%

Basophils - 00%

Platelet count - 3.43 lakhs/cumm

PCV - 39%

MCV - 78 fl

MCH - 24 Pg

MCHC - 31 g/dl

Bleeding time - 3 min 20sec

Clotting time - 4 min 30 sec.

RBS - 97 mg/dl.

HBsAG - Non reactive.

HIV 1 & 2 - Non reactive.

ESR - 15 mm/hr.

ECG - Normal

CXR – PA view - Normal.

C & S of pus - revealed klebsiella organism, Amikacin showed good sensitivity and Levofloxacin showed moderate sensitivity.

USG anterior abdominal wall done on 16/6/2016

Impression : Left hypochondrium: a sinus tract is seen extending from the incision site extending to a small collection in the intra muscular plane measuring 2 to 3 cc in volume.

Interventions

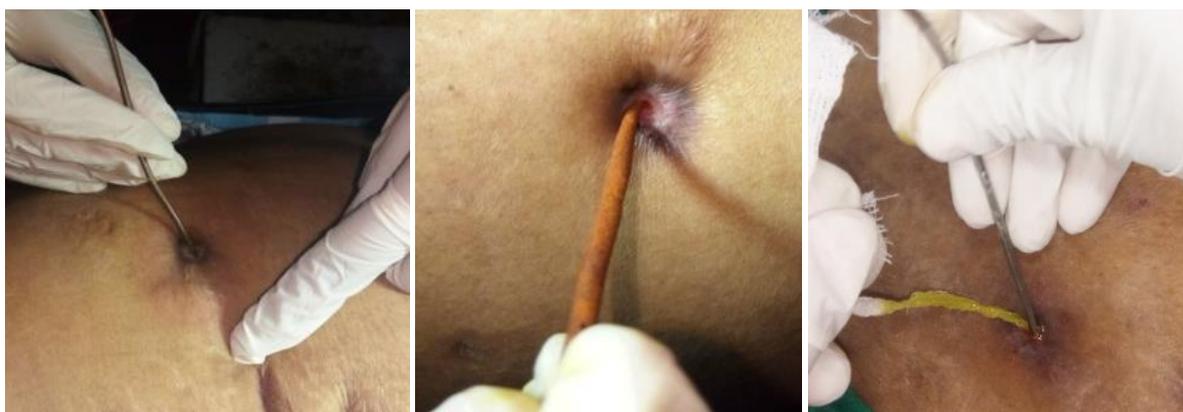
Surgery performed on 19/8/16:

Under spinal anaesthesia umbilical excision, removal of the infected mesh and offending sutures done which was the primary focus of infection followed by herniorrhaphy to correct the defect in linea alba.



Application of *pichu* (27/8/2016)

Patient was placed in supine position and after aseptic preparation of the part, probing was done under topical anesthesia. Probe was passed into the opening of the sinus to know the direction of the tract. Required length of *kshara pichu* inserted through the opening into the sinus and left in situ. Once in 3 days, the old *Kshara pichu* was replaced by new one. During *pichu* treatment, the patient was advised to continue her normal routine work. The *jatyadi thaila*[5] *pichu* was changed once in 3 days along with the internal administration of *Triphala guggulu* and *Gandhaka rasayana* 2 BD for 15 days.



The patient was also treated for infective organism found in C & S of pus accordingly.

RESULTS

Table 1: There was considerable changes found on various parameters as follows

DATE	Soakage	Fo ul sm ell	Size of the opening	Eryth ema	Tender ness	Slough in the opening	Tract	Granula tion tissue
29/8/16	+	-	small	-	-	Not visible	Narrow	Not visible
31/8/16	++	++	widened	+	++	Not visible	Remained unchanged	Not visible
3/9/16	++	++	widened	+	++	Not visible	Remained unchanged	Not visible
6/9/16	++	++	Remained unchanged	+	++	Not visible	Remained unchanged	Not visible
8/9/16	++	++	Remained unchanged	+	++	+	Remained unchanged	Not visible
12/9/16	++	-	Remained unchanged	-	++	+	Remained unchanged	Not visible
15/9/16	+	-	Remained unchanged	-	+	+	Remained unchanged	Not visible
17/9/16	+	-	Remained unchanged	-	+	++	Remained unchanged	Not visible
20/9/16	+	-	Remained unchanged	-	+	++	Remained unchanged	Not visible
22/9/16	+	-	Remained unchanged	-	+	+	Remained unchanged	Not visible

24/9/16	+	-	Remained unchanged	-	+	+	Remained unchanged	Pale
27/9/16	+	-	Remained unchanged	-	+	-	Widened	Pale
29/9/16	Minimal	-	Remained unchanged	-	+	-	Remained unchanged	Reddish
3/10/16	Minimal	-	Remained unchanged	-	+	-	Widened	Reddish
6/10/16	Minimal	-	Narrowed	-	+	-	Remained unchanged	Reddish
8/10/16	Minimal	-	Narrowed	-	-	-	Narrowed	Reddish
13/10/16	-	-	Narrowed	-	-	-	Narrowed	Reddish
16/10/16	-	-	Remained unchanged	-	-	-	Remained unchanged	Reddish
21/10/16	-	-	Remained unchanged	-	-	-	Narrowed	Reddish
24/10/16	-	-	Narrowed	-	-	-	Narrowed	-
27/10/16	-	-	Closed	-	-	-	Closed	-



BEFORE TREATMENT



DURING THE TREATMENT

Abdomino-pelvic ultra sonography on 14/9/16

On high resolution scan:

No mass or collection in the RIF and LIF

No evidence of bowel wall thickening



AFTER TREATMENT

Date of kshara pichu change	Length of the sinus tract
27 th Aug 2016	5.5 cm
29 th Aug 2016	5.5 cm
31 st Aug 2016	5 cm
3 rd Sep 2016	5 cm
6 th Sep 2016	5 cm
8 th Sep 2016	4.5 cm
12 th Sep 2016	4 cm
15 th Sep 2016	4 cm
17 th Sep 2016	4 cm
20 th Sep 2016	4 cm
22 nd Sep 2016	4 cm
24 th Sep 2016	4 cm
27 th Sep 2016	4 cm

Date of Jatyadi thaila pichu change	Length of the sinus tract
29 th Sep 2016	4 cm
3 rd Oct 2016	4 cm
6 th Oct 2016	4 cm
8 th Oct 2016	3.5 cm
13 th Oct 2016	3.5 cm
16 th Oct 2016	3.5 cm
21 st Oct 2016	3.2 cm

Thereafter opening got narrowed, thus probing couldnot be done.

DISCUSSION

The management of stitch sinus in an effective manner has always been a challenge to the surgeons world wide. The conventional operative treatment of stitch sinus is to lay open or complete excision of the sinus track and allowing healing by open granulation.

The *Kshara pichu* treatment in sinus of infected mesh origin, evaluated in this study is having many advantages without complications and thus can be considered as preferable method of treatment for the following reasons –

1. It is technically easy, non invasive, safe, simple and does not require any special paraphernalia. It can be carried out in the outpatient department which is cost effective and tissue damage,scarring are minimal.

2. It does not require hospitalization and patients could continue with their normal routine work, thus patient's social, psychological and economic status is not disturbed during the treatment.

Surgeons should be aware of this complication of hernioplasty when consenting patients and should consider the use of absorbable sutures to minimize the risk of stitch sinus following mesh repair.

USG abdomen was repeated for accurate detection of any associated deep abscess cavity/ complex deep extensions of the sinus tract which is highly important for successful treatment and to prevent recurrence of the sinus either at the same site or an adjacent location.

No systemic side effects are encountered with *Kshara pichu* therapy, although transient infection, local burning sensation, mild pain observed which rarely needs medication.

In chronic sinus, there is a chronic inflammation over a long period leading to unhealthy granulation and fibrosis. With the application of *kshara pichu*, the chronic inflammation turned into acute inflammation which was managed by *Triphala guggulu* and *Gandhaka rasayana*, so that healthy granulation tissue was formed and fibrosed tissue was drained out.

CONCLUSION

The *Kshara pichu* treatment, a unique method of drug delivery, most appropriate for healing the sinus track offers an effective, ambulatory and safe alternative treatment in patients with stitch sinus.

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