

## ***ROLE OF KSHARASUTRA AND KASISADI GHRITA IN THE MANAGEMENT OF STANAGAT NADIVRANA (TUBERCULAR MULTIPLE BREAST SINUSES) -A RARE CASE REPORT***

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### **ABSTRACT**

*Ksharakarma* is best among all surgical and para-surgical procedures due to multifold actions that are *Chhedan* (excision), *Bhedan* (incision), *Lekhan* (scrapping) and *Tridosha Shamaka*. In *Nadivrana*, *Sushruta* has clearly mentioned *Ksharasutra* for delicate persons and delicate organ. In this case report a 36 years old female patient visited in outpatient department of *Shalya Tantra* having complaint of multiple sinuses in left breast with pricking pain and muco-purulent discharge since last 6 months. Previously she was operated for antibioma in left breast and after that she suffers from multiple opening with discharge in the breast few days after operation. These sinuses were not healing in spite of regular dressing in private clinic and during that time pulmonary tuberculosis was diagnosed. So AKT was started and surgeon suggested for mastectomy. But mentally patient was not ready for surgery so she consulted to Ayurved hospital. In breast USG multiple sinus tract were reported at 4 o'clock and 8 o'clock position. Hence case was diagnosed as tubercular breast sinuses and was treated with local application of *Ksharasutra Varti* and dressing with *Kasisadi Ghrita* alternatively. *Kanchnar Guggulu* 1gm three times a day with warm water after meal was also prescribed orally till complete healing of sinus. All sinus tracts were healed completely within 3 months. Follow up was done up to 11 months and no recurrence was found. So this single case demonstrates the advantage of *Ksharasutra* and *Kasisadi Ghrita* in management of *Nadivrana* (TB Breast sinuses).

**Key words:** Breast sinus, *Nadivrana*, *Ksharasutra*, *Kasisadi Ghrita*, *Kanchnar Guggulu*.

### **INTRODUCTION**

Sinus is a blind ending tract, usually lined with granulation tissue communicating between epithelial surfaces and usually to the abscess

cavity. They are prone to infection and manifest in recurrent discharge, pain with inflammation. Sinuses are of two types congenital and

acquired. Acquired sinuses are usually secondary to presence of foreign body or necrotic material associated with sepsis or infected from certain type of microbial infection. Commonly encountered sinus is the suture sinus which is the result of non absorbable suture material acting as a focus of infection, more common after closure of contaminated wound.<sup>[1]</sup> Occasionally specific like actinomycosis or tuberculosis infection are present.

Tuberculosis of breast is a rare manifestation of extra pulmonary localization of this disease which accounts for <0.1% of surgical breast condition in developed countries but 3-4% in regions where incidence of T.B is more like India and Africa. It appears mostly in woman of reproductive age because female breast undergoes frequent changes during this period. Most common presentation is tumor in middle or upper outer quadrant with multifocal involvement. In early stage it often mimic with fibroadenoma and in later stage usually with breast carcinoma clinically and radiologically both. For the diagnosis mammography and FNAC (fine needle aspiration cytology /biopsy is essential.<sup>[2-3]</sup> Extra pulmonary T.B treated with 6 months regimen comprising 2 months of intensive phase with 4 drugs (Isoniazide, Ethambutol, Refampsin and Pirazinamide) continued with Refampsin and Isoniazide for 4 months. In modern surgery definitive treatment depends upon the specific cause, usually lay opening or excision of whole tract is done along with appropriate antibiotics. Proper drainage of abscess with full course of ATT (antitubercular drugs).<sup>[4]</sup> Removal of residual lump should be done and if patient is not res-

ponding to ATT, simple mastectomy with or without axillary clearance is required.

Sinus can be very much correlated with *Nadivrana* described by Sushruta which develops due to improper drainage of abscess due to which pus goes in to deeper tissues and forms the blind tract which may or may not open to external skin.<sup>[5]</sup> Sushruta mentioned *Ksharasutra* (a medicated thread/seton) application in *Nadivrana*, in *Avara Satwa* (weak patients) and in *Marma Sthan* (delicate/vital organ).<sup>[6]</sup> If wound is at *Marma Sthana* (vital part) then surgeon should avoid surgical intervention. In that circumstance *Ksharasutra* eventually does scrapping, debridement, drainage and healing of the *Nadivrana* at the same time. Sushruta has clearly mentioned in classics that *Kshara* (alkali/caustics) has two actions that are cleanser of untidy wound and promotes healing of clean wound. *Kshara* also absorbs secretion and act as a styptic agent.<sup>[7]</sup>

*Kasisadi Ghrita* mentioned by *Sharangdhara* contains 31 ingredients, was advised for external use (Table-1) It is herbomineral Ayurvedic medicated *Ghrita* containing heavy metals indicated externally for skin disorders (*Kushtha*) *Nadivrana* (sinus), *Dushta Vrana* (non healing ulcers/infected wounds), *Shotha* (inflammatory conditions), spider poison. It is also indicated for *Shodhan* (Cleansing), *Ropan* (healing) and *Savarnikaran* (Normal skin texture) of wounds.<sup>[8]</sup> *Kasisadi Ghrita* having same properties like *Kshara* so it would help in cleaning of tract with healing and soothing effect of *Ghrita* which decreases inflammation. In classic *Kanchanar Guggulu* (*Kancha-*

nar, Triphala and Guggulu are main ingredients) is indicated in *Granthi*, (Inflammatory lesions) *Vrana* (wounds), *Bhagandara* (Fistula-in-ano).<sup>[9]</sup> So *Ksharasutra* made up of *Apmarga Kshara* was used in this case to scrap out the granulomatous tissues from the sinus, *Kasisadi Ghrita* was used to promote healing and orally *Kanchanar Guggulu* was given for systemic effect

Hence in this case report application of *Ksharasutra Varti* in sinus tract and dressing with *Kasisadi Ghrita* was done on alternate day and *Kanchanar guggulu* was given as internal medication which showed the complete cure of multiple sinus tract without recurrence.

#### **Case history:**

In this case study 36 years female came to OPD of *Shalya Tantra* having complaint of multiple sinuses in left breast with pain and discharge since last six months. Pain was pricking in nature and discharge was mucopurulent stained with blood associated with increased temperature of local part. Patient gave the history that first she developed pain in left breast which increases on bending forward and revealed as a small lump. She went for treatment to the local hospital in July 2015 where several non specific antibiotics were given but no improvement of symptoms was found and swelling increased in size. So histopathologic examination was done and antibioma was diagnosed. Wide excision of antibioma was done under general anesthesia in September 2015 and antibiotics and anti-inflammatory drugs were given. After 4 days of operation gapping and serous discharge were found in sutures. Sutures were removed

and dressing started with betadine but wound was not healing.

Tuberculosis was suspected so for confirmation serum ADA (Serum Adenosine Deaminase) chest X-ray PA view and FNAC was advised. Biopsy from wound was sent for histopathology which showed indurated mass (gumma with T.B lesion) with granulomatous mastitis. Serum ADA was 30 U/L, ESR-70mm/hr and TLC-12900/cumm. Hence the case was diagnosed as Koch's breast with Koch's axillary lymphadenopathy. Patient was also known case of hypothyroidism and taking medicine (tab thyroxin 70 mg once a day) now  $AKT_3$  was started for 6 months along with dressing. In spite of  $AKT_3$  and daily dressing, wound was not healing and pain and discharge were persistent for 5 months. Surgeon suggested for mastectomy but being young she was not mentally prepared for this and refused for operation.

So patient consulted to Ayurved OPD of *Shalya Tantra* in March-2016. On examination 2-3 small openings were found in left breast at 8 o'clock and 4 o'clock positions and non healing wound of previous operation was found at 3 o'clock [Figure-1]. On palpation tenderness was present along with hardness of breast tissue with blood stained muco-purulent discharge. There was no clinical manifestation of disease to the nipple or areola so factors like breast lump, multiple sinuses with intact nipple and areola were predictive of T.B breast and not malignancy. USG breast was done and showed multiple branching irregular shaped wide calibrated sinus with maximum axial length of 10 cm and 9 cm at lower qua-

drant of left breast. So the case was diagnosed as *Stanagata Nadivrana* i.e. Tubercular multiple breast sinuses.

### Methodology:

The patient come to us with diagnosed as tubercular multiple sinuses under AKT. We explain the prognosis of disease and informed written consent was taken prior to start the treatment. Along with local dressing with *Ksharasutra* and *Kasisadi Ghrita* AKT was continued. *Apamarga Ksharasutra Varti* prepared in department was put in sinus tract and next day *Varti* was removed and discharge was cleaned after that *Kasisadi Ghrita* was pushed with syringe in the tract at every alternate day. Along with this *Kanchnar Guggulu* 1gm three times a day with luke warm water was prescribed and continued for 3 months. Patient was showing relief in pain and discharge within one week so we find a ray of hope that case will be cured. So we continued the same treatment and assess the patient weekly.

### DISCUSSION

Breast T.B is classified in to 5 types out of which nodular type is most common and presented as localized lump associated with or without sinus and often mistaken with benign or malignant lesion of breast. Multiple discharging sinus is the rarest condition as mentioned by Tewari et al who reported a series of 30 patients out of which only 4 patients had multiple discharging sinus. In this case report patient was advised for simple mastectomy for which patient was not ready so the treatment was planed according to Ayurveda at the local

and systemic level. *Ksharasutra* and *Kasisadi ghrita* used externally for local effect and *Kanchnar Guggulu* was given internally for systemic manifestation.

Many factors like poor blood supply, foreign body, necrotic tissue, granulomatous or dense fibrous tissue underneath the tract affects the healing process, so the concept of wound toiletting and wound debridement is there in modern which actually removes devitalized tissue from the wound leaving tissue with visual vascularization which promotes healing. This same concept of wound management was given in *Ayurveda* by Acharya Sushruta very rationally in *Dwivraniya* chapter of *Chikitsa Sthana*. He told *Shodhana* (cleansing) of *Dushta Vrana* should be done first and then *Ropan* (healing) of clean wound can be achieved. Sushruta clearly indicated *Kshara karma* for *Shodhana* in chronic non healing wound.<sup>[10]</sup> In this case *Apamarga Kshar Sutra* was used made up of linen barber thread with coating of *Snuhi Ksheer*, *Apamarga Kshara* and *Haridra* in the department. Smearred *Kshara* on *Ksharasutra* is alkaline in nature (pH-10.39) which is capable to inhibit the bacterial growth.<sup>[11]</sup> The *Apamarga Kshara* having properties of *Chhedana* (excision), *Bhedana* (incision), *Ksharana* (debridation), *Stambhana* (haemostatic), *Shodhana* (purification/sterilization), and *Ropana* (healing). *Chhedana* and *Bhedana* properties of *Kshara* excises the fibrotic tissue by action of *Ksharana* and removes unhealthy fibrous tissue and debris; make the sinus tract healthy by *Shodhana* property. A.M. Rasik et al determined wound healing activity of latex of *E. nerifolia*,

which showed facilitated healing process as evidenced by increase in tensile strength, DNA content, epithelization and angiogenesis which clearly indicates wound healing properties of *Snuhi Ksheer*.<sup>[12]</sup> *Haridra* has anti-inflammatory as well as anti bacterial property so it is capable to make wound clean healthy and promote early healing. Role of curcumin (Phytochemical) present in rhizome of *Curcuma longa* is supported by number of scientific papers that have confirmed its anti-inflammatory action both in vitro and in vivo.<sup>[13]</sup>

In the first consultation patient had complaints of pain, discharge and swelling in the left breast. After one week of *Kshar Sutra* application and *Kasisadi Ghrita* dressing pain was significantly reduced [Figure-2]. So we found a ray of hope and continued the treatment and after one month of continuous dressing i.e. scrapping with *Ksharsutra* and inserting *Ghrita* inside the sinus on every alternate day along with systemic *Kanchanar Guggulu* 1gm three time; patient felt almost free from all the symptoms like pain, discharge swelling and the sinus tract was- significantly reduced in size [Figure-3]. These convincing results and patient satisfaction from the treatment were indicating towards the correct line of treatment. So we continued the *Ksharasutra* application and *Kasisadi ghrita* dressing, *Kanchanar guggulu* till complete healing that is up to 3 months. Finally after three months both the tracts were healed and USG breast (10<sup>th</sup> July-2016) showed completely healed fibrous tract with no sign of inflammation [Figure-4].

*Kasisadi Ghrita* having the properties of *Shodhana*, *Ropana* and *Savarnikarana* and it is indicated in *Kustha* (skin diseases), *Nadvirana* (sinus), *Dushta vrana*, *Shopha* (inflammation) in classics. Especially *Ghrita* and *Tail* dominates the formulations used for local application for healing purpose. This could be due to drug delivery by these formulations is more effective on *Dushta vrana*.<sup>[14]</sup> *Guggulu* (*Commiphora mukul* Hook.ex Stock) is analgesic and anti-inflammatory. It possess *Laghu*, *Ruksha Tikshna Vishad*, *Sara*, *Dipana Anulomana Medohara Hridya Raktaprasadaka Rasayana* (rejuvenation) *Balya* (strength) *Vrishya* (aphrodisiac) properties.<sup>[15]</sup> In this preparation (*Kanchanar Guggulu*) powerful decongestant such as *Kanchanar*, *Triphala*, a combination of fruits of *Hareetaki* (*Terminalia chebula* Retz.) *Vibheetaki* (*Terminalia belerica* Roxb.) and *Amlaki* (*Zingiber officinalis* Rosc.), *Mricha* (*Piper nigrum* L.) and *Pippali* (*Piper longum* L.) are mixed with *Guggulu*. This detoxifying blend supports proper functioning of lymphatic drainage along with *Varuna* (*Crataeva nurvula* Buch.Ham) and *Trijataka* which may also helpful in hypothyroidism, and in elimination of inflammatory toxins.<sup>[16]</sup> Patient was already immunocompromised and also suffering from hypothyroidism so *Kanchanar Guggulu* was proved to be effective because all of its properties.

## CONCLUSION

This single rare case report showed that multiple TB breast sinuses which are not responding to the anti-tubercular drugs and antiseptic dressing with modern medicine were successfully healed by adding Ayurvedic treatment

protocol along with ATT. Hence classical formulations *Ksharasutra* and *Kasisadi ghrita* are effective in the management of *Nadivrna*

(Tubercular Breast sinus) and need to be studied in more number of cases for its scientific validation.

**Table-1:** Ingredients of Kasisadi Ghrita:

Sanskrit name	Latin name	Part used
<i>Kasisa</i>	Ferrous Sulphate (Green Vitriol)	-
<i>Haridra,</i>	<i>Curcuma longa</i> Linn.	Rhizome
<i>Daruharidra</i>	<i>Berberis aristata</i> DC	Stem
<i>Manashila,</i>	Red Arsenic	-
<i>Hartala,</i>	Yellow Arsenic	-
<i>Kampillaka,</i>	<i>Mallotus phillippinensis</i> Muell-arg	-
<i>Gandhaka,</i>	Sulphur,	-
<i>Tuttha</i>	Copper sulphate (CuSo <sub>4</sub> )	-
<i>Vidanga,</i>	<i>Embelica ribes</i> Burm.f.	Fruit
<i>Guggulu</i>	<i>Commiphora mukul</i> Hook ex Stocks.	Oleo -resin
<i>Siktha</i>	Madhucchistha (Beewax)	
<i>Maricha</i>	<i>Piper nigrum</i> Linn.	Fruit
<i>Kushtha Gaursarshapa</i>	<i>Saussurea lappa</i> C.B.Clarke	Root
<i>Rasanjana</i>	<i>Bressica campestris</i>	Seed
<i>Sindur</i>	<i>Berberis aristata</i>	Stem extract
<i>Srivasa</i>	<i>Sarala Niryasa</i> –Pinus roxburghii	
<i>Raktachandana</i>	<i>Pterocarpus santanilus</i> Linn.	Exudate
<i>Irimeda</i>	<i>Acacia farnisiana</i> Wild.	Heart wood
<i>Nimbapatra</i>	<i>Azadirachta indica</i> A.Juss.	Stem bark
<i>Karanja</i>	<i>Pongamia pinnata</i> Pierre.	Leaf
<i>Sariva</i>	<i>Hemidesmus indicus</i> R.Br.	Stem bark
<i>Vacha</i>	<i>Acorus calamus</i> Linn.	Root
<i>Manjistha</i>	<i>Rubia cordifolia</i> Linn.	Rhizome
<i>Madhuka</i>	<i>Glycyrrhiza glabra</i> Linn.	Stem
<i>Jatamansi</i>	<i>Nardostachys jatamansi</i> DC.	Root
<i>Sirisa</i>	<i>Albizia lebbeck</i> Benth.	Rhizome
<i>Lodhra</i>	<i>Symplocos racemosa</i> Roxb.	Fruit
<i>Padmak</i>	<i>Prunus ceracoides</i> D. Don.	Stem bark
<i>Hareetaki,</i>	<i>Terminalia chebula</i> Retz.	Peri carp





Figure-1: Left Breast sinus 4 & 8 o'clock



Figure-2: Ksharasutra in situ after 7 days



Figure-3: After two months of treatment



Figure-4: After three months of treatment

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