



An integrative ayurvedic approach in management of breast abscess – A case report

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ABSTRACT

A focus has been placed particularly on the description of breast abscesses (*sthana vidradhi* in Ayurveda terms). Breast inflammation known as mastitis has the potential to develop into a breast abscess in the future. The term "stana roga," refers to breast disorders and describes breast abscesses, is mentioned in the ancient works Sushruta Samhita, Madhava Nidana, and Bhavaprakasha. Breast abscesses are typically treated surgically by making an incision over the area of greatest fluctuation (or pain) and breaking the abscess septa with digits. For a few days, the abscess chamber is left untreated or gauze-packed, with dressing changes made as needed to facilitate wound granulation. The current report was aimed at management of the breast abscess through an integrated approach comprising surgical and medicinal interventions as mentioned in Ayurveda classics. A 32-year-old female patient with pain and swelling in right breast was diagnosed with breast abscess in Shalya (Surgery) OPD and managed primarily by incision and drainage which was followed by regular dressing and ayurvedic medications which encouraged appreciable granulation in a short period of time with complete healing of the abscess. This case study presents the successful management of breast abscesses with both surgical & Ayurvedic management.

1. Introduction

Breast abscesses (BA) are included under ICD-10 code N61.1, according to contemporary literature. BA are lumps or swellings brought on by infections. Because they develop below the areola, they are frequently referred to as subareolar breast abscess. Along with pain, pus is accumulating in the breast tissues. Breast inflammation known as mastitis has the potential to develop into a breast abscess [1]. Prevalence of breast abscess is quite common in lactating women. One out of five women with mastitis developed breast abscesses, in which 2.9 percent of women received antibiotics for mastitis and 0.4 % of women who started nursing [2]. Bacterial cultures of a large number of breast abscesses proved that causative organisms have changed in the era of rising methicillin-resistant *Staphylococcus aureus* (MRSA). In a microbiological study it was concluded that (32.8 percent lactational abscess, 67.2 percent non lactational) the most prevalent isolate was *Staphylococcus aureus* (51.3 percent) and MRSA was 8.6 %. Mixed anaerobes (13.7 %) and anaerobic cocci were other prevalent organisms (6.3 percent) [3]. (Figs. 1 and 2)

The term "*sthana roga*," refers to breast disorders and describes breast abscesses, is mentioned in the ancient works Sushruta Samhita, Madhava Nidana, and Bhavaprakasha. Acharya Vagbhata gave a small description of breast abscess along with the description of general external abscess. Charaka Samhita has description of abscesses in *stana*. Acharya Kashyapa has described *sthanavajra* or *sthanakilaka* in the place of *stana vidradhi*. Even though there are differences in etiological factors, clinical features are quite common.

[4] Acharya Sushruta has mentioned common etiologies for general abscesses and breast disorders namely – *vata*, *pitta*, *kapha*, *sannipataja* and *abhigataja*, whereas Acharya Vagbhata included *raktaja* as the sixth type [5]. He also mentions that mothers who are breastfeeding or who are pregnant can develop breast abscesses [6]. When *doshas* get vitiated due to their unique origins, they can affect the breast, particularly in the dilated vessels (*siras*) of lactating or non-lactating women's breasts, where they can generate a hard swelling that resembles five different forms of external abscesses. According to Acharya Dalhan, the terms lactating and non-lactating are used to describe pregnant and postpartum women, respectively. When a baby's incisor teeth erupt as a

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Fig. 1. Pre-operative.

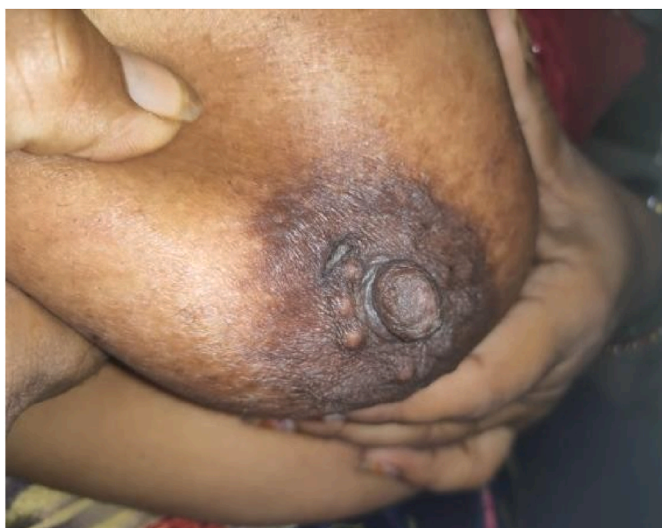


Fig. 2. Healed abscess cavity.

result of tooth damage sustained during sucking, a small breast ulcer develops, leading to a breast abscess. Infection with staphylococci and streptococci is primarily to blame [7]. Here a case of sthana vidradhi, ED- 9.8(National Ayurvedic morbidity code) was treated successfully by using the complete treatment modality as described by Sushruta Samhita[8].

2. Patient information

A 32-year-old female patient came to OPD of Shalya Tantra with pain and swelling in right breast for the past ten days, which gradually increased in size. She developed intermittent fever and chills on and off in the successive days with associated complaints of anorexia and general weakness. She has no history of trauma in breast and she is not lactating.

The patient was apparently well before 10 days. After that, she successively developed the above symptoms. She had taken allopathic conservative management in the initial days. Antibiotic regime of Amoxicillin for followed for 5 days, but did not get relief and as condition worsened she approached us for further management.

There was no history of diabetes, hypertension, or any other serious ailment and has a normal menstrual history of cycle once in 28-30 days,

with 3-4 days of normal bleeding.

G₁P₁L₁A₀ is her obstetric history and she had LSCS in the year 2013, with no other surgical history or blood transfusions.

3. Clinical findings

During local examination, inspection revealed erythematous appearance around areola medially and laterally towards the upper outer quadrant with no punctum or any active discharge. On palpation an induration around 6-7 cm long with severe tenderness and fluctuant smooth swelling with raised local temperature was noted. Right axillary nodes were mildly palpable.

In general examination, she was weak, non-icteric, febrile (100.9⁰F) with chills, malaise and mild anorexia. Her blood pressure was 110/70 mm of Hg and pulse rate around 98/minute. Other parameters were non-significant. Her weight was around 64 kg and her BMI was 24.1.

On admission, a complete blood count, ESR, Hemoglobin and other routine investigations were done. Ultrasonography of bilateral breasts and axillary region dated 15th September 2021 revealed ill-defined hypo-echoic lesion around 45.3 mm * 25.6 mm of size containing debris within seen in right upper inner and outer quadrants of right breast along with reactive right axillary lymph nodes around 14.4 * 6.5 mm and 13.1 * 6.9 mm with maintained hilum. There was no focal lesion noted in left breast and left axillary region.

The total leucocyte count was 14,900 cumm, before the treatment which reduced to 8300cumm after the treatment. The erythrocyte sedimentation rate was 54 mm/in the 1st hour before treatment which reduced to 19 mm/ in the 1st hour after the treatment. No significant changes was seen in Hemoglobin value which remained 12.2g/dL.

4. Diagnostic assessment

Mastitis, inflammatory breast cancer, galactocele, plugged duct, Mondor's syndrome and fibroadenoma were the suggestive differential diagnosis. Right breast abscess was diagnosed based on the clinical signs and symptoms correlating with the ultrasonography report.

5. Assessment

The following assessment parameters were checked before and after the treatment

1. Discharge (*Srava*) – which is measured by the number of 4*4 cm gauze piece it wets.
2. Pain – Nature, duration and intensity is assessed.
3. Size of the wound – wound depth was measured using a sterile probe, while size was directly assessed by using sterile bloating paper.

Grade	Parameters
G0	No discharge
G1	wets 1 pad of 4x4 cm gauze piece (mild)
G2	wets 2 pads of 4 × 4 cm gauze piece (moderate)
G3	wets more than 2 pads of 4 × 4 cm gauze piece (profuse)

Grade	Parameters
G0	Absence of pain/no pain
G1	1 to 3 mark on scale (mild pain)
G2	4 to 6 mark on scale (moderate–pain cannot be ignored, interferes with function, and needs treatment from time to time)
G3	7 to 10 marks on scale (severe– required constant attention).

Grade	Parameters
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Table 1
Surgical and medical intervention: (Shastra and Bhesaja karma).

Intervention details	Procedure and medication	Duration
Surgical intervention		
Preparation (Purva karma)	Glycerated Magnesium sulfate dressing	From the day of admission till the second day.
Main intervention (Pradhan karma)	Incision and drainage under LA (10 ml local infiltration of 2% xylocaine and distilled water in 3:2 ratio)	On the second day after admission
Post-treatment (Paschat karma)	Triphala kashayam – cleaning the wound (vrana prakshalam) Nimba taila pichu application – twice a day Bala taila Pichu application – once a day	Postoperative day (POD) 1 to POD 20 POD 1 to POD 7 POD 8 to POD 25.
Medical intervention		
Antibiotic regimen and analgesia during the procedure	●Inj. Ceftriaxone 1.5 g IV -BD ●Inj. Pantaprazole 40 mg IV -OD ●T. Emanzen DP 400 mg – BD	On POD 0 and POD 1
Ahara	Laghu pathya ahara	For entire duration of the treatment
Deepana - pachana	Trikatu churna – 1g BD (before food at 8 a.m. and 6.30 p.m.) with warm water	POD 0 TO POD 5
Vrana shodhana and ropana	T. Gandhak rasayan 250 mg 2 BD -AF With Luke warm water	POD 0 TO 15
Utsadana karma	Bilwa avaleha – 2 tsp – BD – after food T. Sapta vimshati Guggulu 250 mg–2 BD – after food With Luke warm water	POD 0 TO 20

(continued)

Grade	Parameters
G0	0 to 1 cm ²
G1	Within 1.1-4 cm ²
G2	Within 4.1-9 cm ²
G3	Within 9.1-16 cm ²

6. Therapeutic intervention and assessment

Glycerate magnesium sulphate dressing was done thrice a day from the day of admission. After the spontaneous rupture of the abscess, incision and drainage was done on the second day under local anesthesia. The opening was made wide by an linear incision and using sinus forceps the cavity was drained. All the loculi was broken and the cavity was washed and betadine packing was done. Pus culture was sent for culture and sensitivity test. Sterile dressing was done twice a day regularly with the following internal medications (Table 1).

7. Outcome

Pain, discharge and size of the wound were assessed before and after the treatment. Patient had moderate continuous throbbing pain before the treatment, which significantly reduced after the treatment. She had profuse pus discharge soaking 3-4 pieces of gauzes completely, before treatment which was adequately reduced during the treatment resulting in complete absence of any discharge. The size of wound was around 6*3 cm after the surgery, which granulated and completed healed after the treatment.

8. Discussion

Various causes of breast abscess in non-lactating periods include sudden prakopa of doshas and dilation of siras leading to dushita dosha sanchaya and prakopa in the same site forming vidradhi. Here the dominant doshas are kapha and vata signified seeing the thick pale

discharge and irregular nature of pain and itching.

Treatment of general abscess includes vranasotha (inflammation) and vrana (ulcer) according to their respective stages. In apakwavastha and amavastha, it is treated like vrana shotha and in pacchyanavastha, it is treated like vidradhi [9]. In pakwavastha and after bhedana (its rupture) vranavata chikitsa with repeated squeezing (vimlapana) was done every day to facilitate adequate drainage of pus. Magnesium sulphate dressing was done in the initial two days which due to its exothermic and hygroscopic properties leads to rapid change from apakwavastha to pakwavastha aiding for spontaneous rupture [10]. After spontaneous rupture, further incision and drainage was done under local anesthesia, breaking all the loculi of the abscess to prevent recurrence. Pus culture test revealed presence of cultures of *Staphylococcus aureus*, which is a leading causative organism for non-lactational breast abscess.

Astringent properties of triphala kashaya aid in pus drainage and drying and it also possess significant broad -spectrum anti-microbial activity [11]. The active components in neem leaves, such as nimbidin and sodium nimbidate, have anti-inflammatory, antibacterial, anti-fungal, and antiviral properties that aid in the healing process. Neem leaves also have excellent nutrition, which is essential for the production of collagen and the growth of new capillaries and hence Nimba taila [12, 13] helps in reducing the slough and pus discharge [14]. By minimising wound surface, decreasing discharge, encouraging epithelization and granulation tissue, and preventing the development of hypertrophic scars, the Bala taila [15] pichu was effective. It results from the action of fatty acids, cholesterol, anthraquinones, and oil base, which promotes progressive healing. The presence of polysaccharide, protein, Vitamins A and C, flavonoids, and tannin speeds up the healing process. Additionally, the oil base maintained the site wet, and the fatty acids speed up the migration of the epithelium, enhancing granulation [16]. The use of jeevaniya and brimhaniya dravya for utsadana karma was mentioned by Acharya Charaka [17] and the use of Bala (*Cida cordifolia*) for utsadana karma was mentioned by Acharya Vagbhata [18]. Along with krimighana (antibacterial, antifungal effect) karma, Gandhak rasayana possesses kaphahara properties making it a significant component for vrana ropana and shodana [19].

Trikatu churna, a combination of *Zinziber officinale*, *Piper nigrum*, *Piper longum*, helps in achieving nirama avastha and addressing the pathology of abscess formation [20]. Bilva avaleha serves as both Agni Deepana and Amapachaka because of its Kashaya, Tikta Rasa, Katu Vipaka, and Laghu Guna. Ushna Veerya and Kashaya Rasa aid in

wound healing and granulation. The sangrahi characteristic of bilva is highly helpful in reducing slough and pus discharge. In addition to Bilva (*Aegle marmelos*), Prakshepa Dravyas in Bilvadileha include Dhanyaka (*Coriandrum sativum*), Jiraka (*Cuminum cyminum*), Ela (*Elettaria cardamomum*), Keshara (*Crocus sativus*), Twak (*Cinnamomum zeylanicum*), Trikatu, Musta (*Cyperus rotundus*), and they possess such attributes as deepana, pachaka, kaphahara, vedanasthapak, and rasayana [21]. Complex medications used in ayurvedic medicine are based on the principles of antagonistic and synergistic interactions to produce the desired effects. Saptavimshati guggulu mentioned in Yogaratnakara, Bhaisajya Ratnavali and Chakradatta is widely indicated in Dusta vrana and Bhagandhara and helps in wound healing and achieving healthy granulation [22]. No adverse events were seen during the management. No significant antagonistic or allergic reactions were seen in this integrative approach. Trikatu has proven less interaction potential with drug metabolizing enzymes [23]. Studies show Bilva has potent synergistic antibacterial activity [24]. More detailed herb drug interaction needs further extensive research.

The use of integrated approach is that both the efficiency and duration of treatment is significantly better. The benefits of antibiotics helps in the aggressive recession of microbes helping in wound Shodhana while the ayurvedic vrana shodana-ropana chikitsa, helped in synergistic antibiotic effects as well as efficient granulation without delay, which led to a better outcome of the management.

It generally takes around 3-5 weeks for the complete wound healing

Table 2
Empirical timeline of events.

Timepoint	Observation	Management
Day 0 (Pre-operative)	Diagnosed as Non Lactational breast abscess	Conservative antibiotic regime – 5 days
Day 5 (Pre-operative)	No relief seen and hence USG done.	Admitted in MGACHRC , Shalya department and Glycerated magnesium sulphate dressing started for abscess maturity.
Day 6 (Operative)	Spontaneous rupture of abscess	Incision and drainage done under LA , clearing all loculi. Post operative medications started.
POD 1-7 (Post-operative)	Discharge significantly reduced	Nimba Taila pichu application – twice a day
POD 8-25(Post-operative)	Wound granulation noted	Bala Taila pichu application – once a day
POD 1-20 (Post-operative)	Pain , discharge significantly reducing.	Triphala Kashayam cavity washing (Vrana Prakshalan)

following the standard treatment care according to the wound and healing mechanism. Following an integrative approach has given a better outcome post 3 weeks enhancing epithelialization and also improving the overall health of the patient. Economically the treatment was affordable for the patient and was easily followed by the patient (Table 2).

9. Conclusion

With an integrated ayurvedic approach of surgery, diet and internal administration of meticulous combination of drugs, the patient got significant relief and also rapid and efficient granulation was achieved with improvement in general overall health. With a high incidence and reluctance in usage of antibiotics for a longer time, an integrated ayurvedic approach is the need of the hour. In this case, not only in the management of abscess and sinus, but also in the prevention of recurrence, Ayurveda may be able to provide a viable treatment alternative with much less side effects than conventional medications. A detailed clinical research is warranted to generate more data to substantiate the outcomes presented in this case report.

Patient perspective

"I feel better physically, beyond wound healing. Ayurvedic treatment was my choice, as I firmly believed in its effects was the patient's final claim after the treatment."

Informed consent

The authors certify that they have obtained patient consent form, where the patient has given her consent for reporting the case. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Author contribution

Author 1 - Writing and Original Draft,
Author 2 - Guidance, Visualization and Validation.
Author 3 - Review and Editing.
Author 4 - Formatting.

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Declaration of competing interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jaim.2024.100890>.

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