1. Introduction

Idiopathic granulomatous mastitis (IGM) is a chronic inflammatory disease of the breast which may present as painful, unilateral, discrete, breast masses with a tendency to recur. The pathogenesis is still unclear. In Ayurvedic literature, clinical features similar to IGM is seen in Stanavidradhi (breast abscess). We present the case of a 25-year old uniparous woman who had previously undergone excision biopsy for a breast lump and was diagnosed with IGM by histopathology examination. After one month, she developed pain, redness, and swelling at the operated site. She was treated for two months with corticosteroids and antibiotics, but the symptoms did not subside. After Ayurvedic treatment, the condition started to respond in a week and was completely resolved within three months. She was followed-up with medicines for three months and without medicines for another six months during which period, no recurrence was seen. The non-healing nature and high rate of recurrence of IGM necessitates prolonged treatment with steroids and antibiotics that have long-lasting adverse effects. In this context, Ayurveda may be able to offer an effective option with significantly fewer adverse effects, not only in the management of abscess and sinus, but also in prevention of recurrence.
In Ayurvedic literature, clinical features, similar to IGM are reported as Stanavidradhi. Vidradhi is a round or elongated swelling of the connective tissues associated with severe pain and burning sensation. Vidradhi is broadly classified as bahyavidradhi andantarvidradhi. Bahyavidradhi appears as visible external swellings or superficial abscesses. Antarvidradhi is a deep abscess affecting internal structures and is much more painful and fatal compared to bahyavidradhi. Stanavidradhi is elaborated by Acharyas Susruta, Vagbhata, and Charaka. Acharya Susruta explains that vitiated vatadi doshas vitiate rakta and mamsa and produce stanaroga (disease of breast) which exhibits the features of bahya vidradhi [12]. Unhealthy diet and lifestyle practices are implicated in the pathogenesis of stanavidradhi. While treating stanavidradhi or breast abscess, Acharya Vagbhata advises the treatment of sopha (inflammation) in the initial stage and that of vrana (wound/ulcer) after rupture of abscess [13]. As the present case presented after two months of onset with pain, redness, and oozing from sinus, it was considered as dushtavrana (chronic/infected ulcer) and treated likewise. A wide range of treatment options that can be used to treat vrana are elaborated in the classical texts and are decided upon by taking into consideration the predominance of doshas and other physiological and pathological factors involved.

2. Patient information

We present here, the case of a 25-year old uniparous female who underwent excision biopsy for a breast lump and was diagnosed with IGM by histopathology examination. The lump (6 cm × 5 cm) was in the lower inner quadrant of the left breast at 7–9 o’clock position. Mammogram reported BI-RADS 4a. Ultrasound-guided left breast biopsy revealed marked inflammation around the lobules with destruction and presence of histiocytes and occasional giant cells with numerous neutrophils. The inflammation extended to the interlobular stroma and also into the surrounding fat. Pockets of abscess formation were observed. Histopathologic diagnosis was lobulocentric granulomatous inflammation with abscess formation probably, idiopathic. The patient had no history of tuberculosis, sarcoidosis, or other infectious or granulomatous disease. No relevant family history was found. After one month of excision, she developed pain, redness, and swelling at the operated site. She was treated for two months with corticosteroids and antibiotics, but the symptoms did not subside and the pain increased. Anxious about the adverse effects of long-term steroid use, the patient decided to seek alternate options and consulted us at the Prasutitantra and Streeroga Department, Govt. Ayurveda College, Tripunithura, Kerala. Past medical history with signs and symptoms, date of hospital visit, investigation reports, and intervention is shown in Table 1.

3. Clinical findings

The patient presented with severe pain, redness, and oozing from a sinus in the left breast on 1/5/2020. She was para one, her last childbirth was four years back and she had breastfed her baby for two and half years. She was afebrile with normal rhythmic pulse 78/min and respiratory rate 22/min. Blood pressure was 110/70 mm Hg and weight was 55 kg. On examination her right breast appeared normal. The left breast was tender with redness and oozing from a sinus at 4-5 o’clock position. There was no retraction of either nipples. Small axillary lymph nodes were palpable on both sides.

4. Therapeutic intervention

The prognosis of this case was krichrasadhya as the site of vrana was the breast [14]. Moreover, the condition had become chronic and was not responding to high doses of steroids and antibiotics.

| Symptoms and signs | Date of hospital visit | Investigations | Interventions |
|--------------------|------------------------|----------------|--------------|
| Breast lump with pain | 28/2/2020 | Mammogram - BI-RADS 4a | Excision biopsy |
| O/E - lump of 6 cm × 5 cm in the lower inner quadrant of the left breast at 7–9 o’clock position. | | | |
| Pain in the operated site | 21/3/2020 | | |
| O/E-no redness, no fever, minimal induration lateral to scar | | | |
| Pain along with pus discharge | 26/3/2020 | Pus aspirated for culture and sensitivity. | |
| Pain with discharge | 30/3/2020 | C&S- no growth | |
| O/E-minimal discharge with small gap | 4/4/2020 | Frank pus aspirated. Sent for C&S | |
| Pain and redness | | | |
| O/E-Redness- more in the outer central quadrant, induration over the scar, but no fever | | | |
| O/E-larger area of induration in lateral quadrant with some area of softening, No evidence of fever or s/o inflammation | 9/4/2020 | C&S - sterile | |
| Symptoms have subsided but large area of induration with small sinus. | 15/4/2020 | Ultrasonogram - hypoechoic liquefied collection in the left breast at 5 o’clock position about 5 cm from nipple, tracking along the subcutaneous tissue towards the skin surface measuring 3.6 × 1.1 × 1.6 cm (approximate volume 3 ml) suggestive of a liquefied abscess | |
| Pain and redness persisting | 28/4/2020 | | |

Tab Wysolone (Prednisolone) 10 mg OD and Tab Eterocoxib 90 mg, advice to come for review if pain persisted.

Bactrim DS (Sulfamethoxazole) and Prednisolone 10 mg OD continued. Continued on Sulfamethoxazole Prednisolone reduced to 5 mg – 1 week Recurrence suspected.

Prednisolone raised to 30 mg OD for four days to be tapered to 20 mg OD for two weeks along with Azithral (Azithromycin) 500 mg for the first five days. Aspirated some amount of blood stained fluid. Steroid same dose continued (20 mg) Prednisolone continued in same dose for 2 weeks as she seems to respond to it.

Tried to aspirate granuloma, small collection obtained. Prednisolone 20 mg for two weeks, plan for surgery if needed.
The patient was very stressed and anxious, as she was not getting any relief even after excision of lump and prolonged use of steroids. We advised her to taper off the steroids after consulting her previous doctor, but this was ignored and unknown to us, she stopped steroids within two days of starting Ayurvedic treatment. This came to our notice only by the next review but no adverse event was reported by her. The details of internal and external medications prescribed are shown in Table 2.

Classical reference, ingredients, and therapeutic effects of prescribed medicines are given in Supplementary Table 1.

5. Follow-up and outcomes

Periodic follow-up was done with necessary changes in medicine. Timeline of follow-up is depicted in the following table (Table 3).

Ultrasound scan on 18/11/2020 reported nil focal lesions in both breasts and post-operative changes in the left breast. All medicines were stopped by end of November 2020 and as of 31/05/2021, she has had no recurrence.

6. Discussion

The clinical picture showed aamavastha and involvement of all three doshas, with sopha and dushatvavarna. The initial line of approach was deepana, ama pachana, srotoshodhana, sophasara and kleda hara. This was achieved with Punarnavady kashaya, Sur-yaprabhagulika, Pushyanamga choorna along with Triphala choorna, Nalpamara kashaya dhara and vilwadi gutika.

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Table 2

| Sl No | Formulation | Dose, frequency and time | Adjuvant/method of use | Duration |
|-------|-------------|--------------------------|------------------------|----------|
| 1     | Punarnavady kashaya | 20 ml of kashaya, twice daily on empty stomach | 40 ml of lukewarm water | 01/05/2020 to 09/06/2020 |
| 2     | Suryapraba guilka | 1 tablet twice daily | Punarnavady kashaya | 09/06/2020 |
| 3     | Pushyanuga churna | 5 gms twice daily, before food | 100 ml of lukewarm water | 01/05/2020 to 09/06/2020 |
| 4     | Triphala churna | Twice a day, Topical application | 50 gm powder boiled in 2 L of water and cooled | 09/06/2020 to 15/7/2020 |
| 5     | Nalpamara kashaya seka | Topical use (Slow washing) | Lukewarm water | 09/06/2020 to 15/7/2020 |
| 6     | Avipathichoorna - virechana | 15 gm in the morning for one day, 5 g, evening after food, daily from next day of virechana | 40 ml of lukewarm water | 01/05/2020 to 09/06/2020 |
| 7     | Mahatiktakakashaya | 20 ml kashaya, twice daily on empty stomach | Ginger juice and honey | 01/05/2020 to 09/06/2020 |
| 8     | Vilwadi guilka | One each twice daily, after food | Mahatiktaka kashaya | 09/06/2020 to 15/7/2020 |
| 9     | Sudarshan guilka | One each twice daily | 25 gm Nalpamara choorna and 25 gm Mahatiktaka kashaya choorna boiled in 2 L water | 09/06/2020 to 15/7/2020 |
| 10    | Nalpamara kashaya | Seka | Mahatiktaka kashaya | 09/06/2020 to 15/7/2020 |
| 11    | Mahatiktaka kashaya | 20 ml of kashaya, twice daily on empty stomach | 40 ml of lukewarm water | 01/05/2020 to 09/06/2020 |
| 12    | Gulgulupanchapala choorna | 10 gm, twice daily before food | Honey | 03/08/2020 to 30/11/2020 |
| 13    | Mahatiktaka ghrita | 15 gm, twice daily before food | Honey | 03/08/2020 to 30/11/2020 |
disorders especially saama pitta. It is purgative and has antioxidant, anti-inflammatory and anti-uler activity.

When recurrence was suspected, Guggulutikthaka kashaya, [24] that is especially effective in deep seated abscesses was started. It is deepana, raktha prasadana, svrotosodhana, lekhana, chedana, kush-tahara, vrana ropana, sopahara, vrana sodhana, kleda hara, and paakahara. It is indicated in naadi vrana, vidrada, kushtha, etc.

After complete healing was attained, in niraama avastha for prevention of recurrence, Mahatiktaka ghrita [20] which is deepana, srotoshodhana, rasayana with immunomodulatory action and Guggala panchapala choorna [25] is very effective in prevention of abscess, sinuses, fistulae for three months. It is kapha vata hara, paakahara, pachana, kapha vata hara, lekhana.

If recurrence still occurs, then mridu virechana treatment option with significantly fewer adverse effects than newer treatment options with lesser adverse effects are being explored. In this context, Ayurveda may be able to offer an effective treatment option with significantly fewer adverse effects than conventional medicines and surgery, not only in the management of abscess and sinus, but also in preventing recurrence.

### 7. Conclusion

There is no definitive treatment for IGM till date. The natural history of IGM is complicated with periods of exacerbations causing considerable distress to the patient. The non-healing nature and high recurrence of IGM necessitates prolonged treatment with steroids and antibiotics that have long-lasting adverse effects. There is considerable debate regarding the benefit of these and newer treatment options with lesser adverse effects are being explored. In this context, Ayurveda may be able to offer an effective treatment option with significantly fewer adverse effects than conventional medicines and surgery, not only in the management of abscess and sinus, but also in preventing recurrence.

### 8. Patient perspective

The patient was very happy with the outcome of treatment. On her first visit to us, she and her husband had expressed fear about the wound not healing and having to undergo surgery once again. They were concerned about the consequences of long-term steroid use. All this had affected their quality of life. After treatment, as the symptoms were relieved and the condition has not recurred, their fears have been allayed.

### 9. Informed consent

Informed consent was taken from the patient for this study.

### Source(s) of funding

None.

### Conflict of interest

None.

### Author contributions

**Dr. Maya Balakrishnan:** Conceptualisation, Methodology, Validation, Investigation, Resources, Writing original draft, review and editing. **Dr Shibila K:** Data curation, Visualisation.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jaim.2021.06.023.

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