Wound healing activity of Thumari oil (Securinega leucopyrus) in the management of Stanagatvrana (Breast wound) – A single case study

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Abstract:
Stana Vidradhi is described by Aacharya Sushruta in Nidana sthana 10th chapter and Bhedan Chikitsa. Stana Vidradhi can be co-related with breast abscess which is commonly seen in lactating women. Bacteria enter the breast during baby sucking through the cracked nipple and breast abscess occurs. Thumari is used in rural area for boils, wound and cuts which is mentioned in textbook plants of Saurashtra. In this case study, a 21 years lactating female patient was diagnosed as a left side breast abscess. So under short GA incision, drainage and debridement of necrosed tissue was done. A big post operative wound (12cm x 13cm x 6cm) was created due to excision of involved large breast tissue. Wound was painful (VAS-6) pus discharge with unhealthy tissue. So it was treated with local application of conventional medicament but not responding. So regular dressing was started with innovative Ayurved formulation Thumari oil once in day for 2 months. In first week after of dressing started with Thumari oil patient reported relief in pain (VAS-2) was found without analgesics. So dressing continue with Thumari oil and on 2nd week all slough and necrosed tissue was slough out and wound became clean with healthy granulation tissue. Wound contraction was started after 3rd week and wound reduced remarkable (4cm x 5cm x 1cm) on sixth week. Finally wound was healed completely after 2 month with minimum scar. The additional property of this oil is Savarnikaran (normal skin texture). Study concluded that post operative big breast wound can be managed with local application of Thumari oil (Securinega leucopyrus).

Keywords: Ayurveda, Breast abscess, Securinega leucopyrus, Stana vidradhi, Thumari Wound.
Introduction:

Acharya Sushruta described Stanaroga & its management in Nidan Sthana 10\textsuperscript{th} chapter.\textsuperscript{[1]} Breast abscess occurs during pregnancy or in breast feeding mothers which is also mentioned by Aacharya Sushruta.\textsuperscript{[2]} Doshas vitiated due to their specific causes and reaches to the breast, specially in the dilated Siras of breasts of lactating or non-lactating woman, vitiated Rakta and Mamsa produce hard swelling characterised with features of five types of external abscesses. Acharya Dalhan says that non- lactating and lactating words refer to pregnant and delivered woman respectively. When incisor teeth are developed in baby due to teeth injury during sucking, minor ulceration occur in the breast, this result in breast abscess. It is mostly due to staphylococci and streptococci infection.\textsuperscript{[3]} Acharya Shusruta mentioned Shastra Karma in Stana vidradhi. In modern era also incision and drainage is mentioned in treatment of breast abscess.

Thumari is used in rural area for cuts, boils and wounds. It is mentioned in plants of Saurashtra. This plant is similar to the Katupila (Sri-Lanka) which was found effective in diabetic wound at PG level research.\textsuperscript{[4]} It has been identified and described the drug in illustration of the forest flora of north-west and central India. It is also mentioned that this plant is found in the secondary forest situation in Sri-Lanka.\textsuperscript{[5]} Flora of Saurashtra in Gujarat India, here, the plant is described under the name Securinega leucopyrus (wild) with local name as “Humari” mentioned with some references in text.\textsuperscript{[6]} The extract of Securinega leucopyrus was found to be highly effective against all organisms such as Gram positive, Gram negative and single fungal strain. Katupila reported as a medicinal plant in different research papers on wound healing potential.\textsuperscript{[7]}

Case Report:

A 21 years lactating female patient came in OPD of Shalya tantra, IPGT & RA, hospital Jamnagar with complaints of pain in left breast, feeling hard swelling and burning with redness at left breast for 5 days. Pain was very severe though patient could not able to move her hand also. Recurrence of fever was also present. On examination there was redness, tenderness, hard swelling and local temperature increased in left breast (Fig-1). She was diagnosed as left Breast abscess. So, under short GA incision, drainage and debridement of necrosed tissue was done after admitted in IPD female ward. A big post operative wound (13cm x 12cm x 6cm) was created due to excision of large involved breast tissue. Wound was painful (VAS-6), pus discharge present with unhealthy tissue. Local conventional dressing was done with antiseptic along with antibiotics and analgesic but not responding. So wound was cleaned with normal saline and dressing with Thumari oil was done once a day for 2 months.

Preparation of thumari oil: The oil was prepared with sesame oil base as per classical Snehapaka Kalpana API in which til taila, kalka of thumari leaves and kwath of thumari leaves were taken in the ration of 1:4:16 respectively.\textsuperscript{[8]}
Fig-1: Breast abscess: Fig-2 to 8: Post operative progress, Fig-9: healed wound scar

Pre-Operative Breast abscess

Post-Operative after I &D

Wound status after 1 Week

Wound status after 2 Weeks

Wound status after 3 Weeks

Wound status after 4 Weeks

Wound status after 5 Weeks

Wound status after 6 Weeks

Wound status after 8 Weeks

Result & Discussion:

The relief in wound status was weekly observed. After the 1st week of Thumari oil dressing, patient reported relief in pain (VAS-2) without analgesics. On 2nd week, all slough and necrosed tissue was sloughed out and wound became clean with healthy granulation tissue that indicates Shodhan and Lekhan property of Thumari oil.

The drug has Sandhankara properties means it helps in wound contraction, Shodhan which helps in purification of wound. Ropan property that helps in
healing, and Stambhana properties which helped to stop discharge from the wound. Tikta rasa also having Lekhan, Shoshhana properties dries up the pus, surface study shows anamocytic stomata. Stem section and its powder show the presence of calcium oxalate crystals, large amount of tannin and oil helpful in the treatment of cuts and wound. [9] The Thumari is having scavenges off the free radicals, but also inhibits the generation of free radicals antibacterial, [10] anti-inflammatory and immune-modulatory activities [11]. These properties are responsible for proper healing of the wound and helpful to promote healthy granulations tissues.

Wound contraction was started after 3rd week and wound reduced remarkable (5cm x 4cm x 1cm) on sixth week that indicates Ropan property of Thumari oil. (Fig-2-8) Finally wound was healed completely after 2 months with very minimal scar that indicates Savarnikaran property of Thumari oil (Fig-9).

Conclusion:

This case study concluded that Thumari oil (Securinega leucopyrus) possesses Shodhan, Ropan, Lekhan and Savarnikaran properties and had potential to heal big post operative wounds.

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