



A CASE REPORT ON THE MANAGEMENT OF A NON-HEALING LESION FOLLOWING SURGICAL TREATMENT FOR NECROTIZING FASCIITIS

Namrata Tripathi

M.S.(Surgery)(Ayu.), PGIA Jodhpur(Raj.)

Corresponding Author: diksha16tripathi@gmail.com

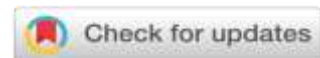
<https://doi.org/10.46607/iamj0711052023>

(Published Online: May 2023)

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Article Received: 22/04/2023 - Peer Reviewed: 27/04/2023 - Accepted for Publication: 09/05/2023.



ABSTRACT

A rare but potentially fatal soft tissue infection is necrotizing fasciitis. Local erythema, discomfort, and fever are the primary clinical symptoms of necrotizing fasciitis in its early stages. Although it can develop everywhere in the body, it is most frequently found in the perineum, abdominal wall, and extremities. It requires immediate attention, the right antibiotics, and thorough surgical debridement. In the beginning, splint skin grafting, and surgical debridement were used to treat this case of necrotizing fasciitis. The 17-year-old female presented the unhealed wound to the shalya tantra outpatient department in an agitated yet focused mood after two months of unsuccessful medical-surgical interventions and dressing. After taking Pitta Dosha, Rakta, Mamsa, and Meda Dhatu into consideration, the Ayurvedic diagnosis of Vidradhi was determined. For a month, she received treatment from medications and external therapies. It produced a fully healed wound with little to no scarring and a happy patient. Future research studies may use this Case as their starting point.

Keywords: External application, Necrotizing fasciitis, Vidradhi, Medicines

INTRODUCTION

One of the infections of soft tissues is necrotizing fasciitis. It is an uncommon yet fatal condition. There is a high death rate of 24-34%. It depends on when the

intervention is made and how quickly the illness spreads. Due to the increasing frequency of trauma, it seems to affect more men than women. The fascia and

subcutaneous tissue exhibit purulent necrosis, which is indicative of bacterial infection. It can be found anywhere on the body, although the extremities, abdominal wall, and perineum are where it is most frequently encountered. The most frequently recognised etiological cause is trauma. Diabetes mellitus, alcohol abuse, immunodeficiency, obesity, and peripheral vascular disease are co-morbidities and risk factors. Additionally, it has been reported in young, previously healthy people. Necrotizing fasciitis first manifests clinically as local erythema, discomfort, and fever. Skin necrosis is caused by blood vessel thrombosis at the fascia level and is frequently linked to severe sepsis. Debridement requires necrotizing fasciitis in particular consideration. Two or more pathogens are present in 70–90% of cases, necessitating the use of broad-spectrum antibiotics together with swift and forceful drainage and debridement. This case is handled taking Vidradhi into account. Because the evaluation of the included Dosha and Dhatu is the only requirement for therapy in Ayurveda, the participation of Dosha and Dhatu was specifically analysed.

Case studies

On February 24, 2020, a 17-year-old woman came to shalya tantra OPD with a wound on her right foot that wasn't healing. She hurt and swelled and had trouble walking. She also has a history of fever and acute pain in the right lower limb on September 10, 2019. Her illness worsened despite the general practitioner's treatment, turning into a high-grade fever, excruciating pain, erythema, vomiting, and loose stools. She was received and admitted to the ICU. Thrombocytopenia was detected on her hemogram, and she had a platelet count of 26000/l. Other tests like the kidney panel, electrolytes, and bilirubin came back with nothing noteworthy. She was made uncomfortable, and she started to discolor locally in a reddish hue. She was identified as having sepsis-related necrotizing fasciitis. Right lower limb colour doppler revealed subcutaneous soft tissue oedema. Due to previous long-term therapy, an unhealed wound, and mental instability, she was rather agitated when she was brought into OPD.

clinical results

The following conclusions were reached after a clinical evaluation. Local inspection reveals a reddish-black, lengthy, poorly defined lesion on the right foot's dorsum, extending from the ankle to the toe. There was a slight serosanguineous discharge that smelled bad. Edema and mild soreness were present in the immediate vicinity. General assessment: The patient was agitated and well-oriented. Icterus and pallor were not present. There were no painful or palpable inguinal lymph nodes. A systemic analysis found no anomalies.

Treatment plan timeline

From September 14th, 2021, until February 23rd, 2022, the patient received medical-surgical therapy. The surgeon offered a second skin graft because the wound was not healing and there was no improvement, but he advised waiting because the patient was not emotionally prepared. She sought treatment at the Ayurveda OPD from 25 February to 27 March 2022. Modern medical and Ayurvedic management phases of treatment- SN. Treatment, Sept. 2021, Dec. 2021, Jan.2022, Feb. 2022, March 2022

contemporary medical management

1. Injections of pantoprazole, clindamycin, vitamin K, and piperacillin along with IV NS, dextrose, and platelet transfusion, 14/9/2021-21/9/2021
2. operative debridement, five days of taking 625 mg Augmentin three times each day 24/9/2021.
3. skin grafts with a splint December 17, 2019
4. Savlon wash, saline wash, part-dry, and three times daily massages with coconut oil from 24/12/2021 to 20/1/2022
5. Savlon wash, 1 twice daily, liquid paraffin for local application, and caps from A to Z, between 21/1/2022 and 23/1/2022

Managed by Ayurveda-

1. Yashad Bhasma, 125 mg twice daily with Dadim Avaleha 25/2/2022 to 25/3/2022
2. Kaishor Guggul 500 mg twice daily with water after meals
3. Take 250 mg of haridra twice daily with water.
4. Take 250 mg of amalaki twice daily with water.
5. Freshly made triphala phanta for use as a wound wash (morning and evening) 25/2/2022 to 1/3/2022
6. Freshly made triphala phanta for wound washing (morning only) 2/3/2022 to 16/3/2022

7. Jatyadi taila for twice-daily dressing from February 25, 2022, to March 16, 2022

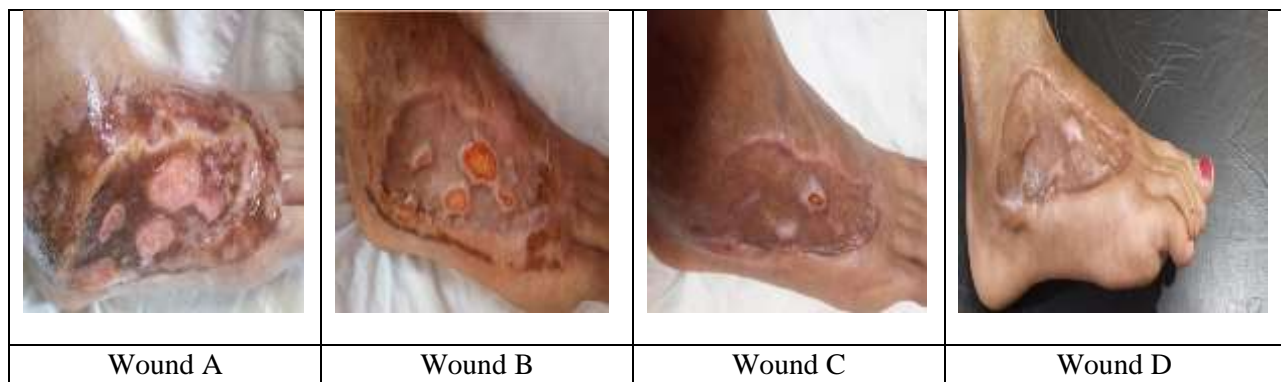
Intervention in therapy

Due to the unintended impact of the prior long-term treatment and the resulting unhealed wound, the patient was enraged and mentally unstable when she arrived at the outpatient clinic. We made our therapeutic decisions based on the patient's complete medical history, physical examination, and observation (Darshana). Pitta dosha, rakta, mamsa, and meda-dhatu participation were taken into consideration in accordance with the ayurvedic physiological paradigm. In order to change the implicated dhatus and pitta dosha, oral medications were employed as well as topical applications of pharmaceuticals with specialised actions to clean and subsequently heal the wound. The

patient's parents and guardian gave us their informed consent.

Monitoring and results

For the patient to fully heal, four visits were needed. The first follow-up appointment after the initial checkup on February 24, 2022, took place on day 7. (2nd March 2022). Swelling and drainage both significantly decreased. From moderate to mild, tenderness has lessened (Fig. A and B). On March 16, 2022, at the second follow-up, all ulcers had healed except for one (Fig. C). The patient did not experience any tenderness. The patient moved around with ease. On the 27th of March 2022, when the patient was last seen, it was discovered that every ulcer had fully recovered (Fig. D). Only a little itching and no soreness were noted by the patient.



DISCUSSION

This patient was trauma-free and did not have any comorbid conditions. She was a 12th-grade student. She used to study late into the night and eat a spicy diet while sitting for 5–6 hours nonstop. According to Ayurveda, the primary hetu (etiological element) of vidradhi is mithya ahar-vihar (faulty lifestyle). The characteristics of the initial wound resembled *pittaj* and *raktaj* vidradhi i.e., *shyav sphot* (blackish-red boil) with *tivra daha*, *peeda* (burning pain), and *jvara* (fever). *Acharya Sushruta* had described *vidradhi* as a severe condition having lesions of different discoloration including red and blackish discoloration. The type of swelling is described as broad-based, rounded,

or elongated. *Acharya Charaka* has also explained that *vidradhi* is a disease caused by *rakta dushti*. The treatment was outlined as per the involvement of *dosha* and *dhatu*. The treatment comprised *abhyantar* and *bahya chikitsa* (internal and local treatment). For internal treatment, the following medicines were preferred considering their *Pittashamak* (~alleviation of *pitta*), *Raktashodhak* (blood-purifier), *Shothashamak* (anti-inflammatory), and *Vranaropak* (wound healing), and *Rasayan* (rejuvenation) properties. External medicines were selected for their *Vranashodhak* (wound cleaning), *Krimighna* (antimicrobial), and *Vranaropak* action.

Following is the probable mode of action of medicines-

Yashad bhasma was chosen among all pittashamak medications due to its Kashaya rasa, Vranaropak characteristic, and particular indication in Dushta vrana. It served to dry the wound region by removing the excess discharge and warmth, which was associated with the clinical signs of oozing. Zinc is derived from Yashad bhasma, which is given to the body in a herbo-metallic form. Biochemically, zinc is necessary for the growth and activation of T-lymphocytes, an important immune system component. From the proliferation to maturation phases, it is crucial. In order to reinforce the wound, it also quickens the re-epithelialization process. Although it is well recognised that zinc contributes significantly to the healing of wounds, there is insufficient data to support routine zinc supplementation. Guduchi, triphala, trikatu, Dantimoola, Trivrut mula, vidanga, guggul, and Goghruata are all ingredients in Kaishor Guggul. In Vrana, Vatarakta, and Kushtha, it is mentioned. It is a brand-new combination of medications with anti-bacterial, blood-purifying, and anti-inflammatory qualities, including Krimighna, Raktashodhak, and Shothashamak. The study discovered that Haridra has potent moderating effects on wound healing. Jatyadi taila, which mostly contains Jatipatra, Haridra, Daruharidra, Neem, Tuttha, Lodhra, and Haritaki, was specifically chosen for dressing over Jatyadi ghrita. Except for Tuttha, Lodhra, and Haritaki, which have Shothahara (anti-inflammatory), Vedanasthapan (analgesic), and Vranaropana (wound healing) characteristics, all the constituents in taila and ghrita are the same. It is recommended for a variety of ulcers brought on by toxins, wounds, and bites. In a study by Shailajan S. et al. to assess the effectiveness of jatyadi taila for treating a rat excision wound model wound, they discovered that the wound healed more quickly than using a current topical formulation.

CONCLUSION

This Case illustrates how to observe a wound methodically in a clinical setting and make a diagnosis that closely matches the standard medical literature. To accomplish speedy and effective wound healing, medications were selected and used successfully in accordance with Vidradhi's clinical recommendations. Thus, ayurveda offers resources for both medical-surgical failures in the treatment of necrotizing fasciitis as well as for urgent and emergency therapy of non-healing wounds.

REFERENCE

1. Use of admission serum lactate and sodium levels to predict mortality in necrotizing soft-tissue infections. Yaghubiian A, de Virgillio C, Dauphine C, Lewis R.J., Mathew L. 2007;142:840-846. Arch Surg. [PubMed] Using Google Scholar Necrotizing fasciitis: categorization, diagnosis, and management.
2. Lancerotto L., Tocco I., Salmaso R., Vindigni V., and Bassetto F. 2012;72:560-566 J Trauma Acute Care Surg. [PubMed] Using Google Scholar
3. Necrotizing fasciitis by Wilson B. 1952 April;18(4):416-431 in Am Surgery. [PubMed] Using Google Scholar
4. Necrotizing fasciitis, by Green R.J., Dafoe D.C., and Raffin T.A. Chest, July 1996; 110(1): 219-229. [PubMed] Using Google Scholar
5. Khanna S.K., Adhikary S., Babu K.S., Ray P., and Singh G. Soft tissue necrotizing infections: a clinical profile. 2002;168(6):366-371 in Eur J Surg Acta Chir. [PubMed] Using Google Scholar
6. Martinschek A, Evers B, Lampl L, Gerngroß H, Schmidt R, and Sparwasser C. Evaluation of the clinical result of 55 patients: prognostic factors, survival rate, and risk factors in patients with fourniere's gangrene and necrotizing soft tissue infections. 2012;89(2):173-179. Urol Int. [PubMed] Using Google Scholar
7. Original variables impacting mortality in Hong Kong patients with upper limb necrotizing fasciitis, by Yeung Y., Ho S., Yen C., Ho P., Tse W., Lau Y., et al. 2011;17(2):96-104 in Hong Kong Medical Journal. [PubMed] Using Google Scholar
8. Roje Z, Roje Z, Eterovi D, Druzijani N, Petri E, Roje T, et al. Retrospective cohort study evaluating the effects of adjuvant hyperbaric oxygen therapy on short-term problems after surgical reconstruction of upper and lower extremities combat wounds. 2008

- April;49(2):224-232. Croat Med J. [Free PMC article] [PubMed] Using Google Scholar
9. Machairas A., Bagias G., Patapis P., Sotiropoulos D., Kanavidis P., and Misikos E.P. prevailing theories for treating necrotizing fasciitis. 2014;1:36 Front Surg. [Free PMC article] [PubMed] Using Google Scholar
10. Choukhamba Vidyabhavan, Varanasi: 2015, Vol. 180, Ed. Tripathi B., p. 181. (Doshabhediya adhyaya; Ash-tang Hridayam, Sutra sthan). verses 64 and 67 of [chapter 12]. Using Google Scholar Editor Thakral K.,
11. Nidan sthan, Sushrut Samhita. Varanasi: 2017; Choukhamba Orientalia, p. 797. Verse 4 and 5 of [Chapter 9]. Using Google Scholar
12. Editors: K. Shashtri and G. Chaturvedi. Agnivesha, Charaka, Dridhabala, Sutra Sthana, and Kiyanta Shiraseeya Adhyaya's Charaka Samhita. Varanasi: Chaukhamba Bharti Academy, 2007, p. 358. Verse 94 of [Chapter 17]. Using Google Scholar
13. Tenaud I., Sainte-Marie I., Jumbou O., Litoux P., and Dréno B. Zinc, copper, and manganese modulate keratinocyte wound healing integrins in vitro. 1999 January;140(1):26-34 in Br J Dermatol. [PubMed] Using Google Scholar
14. Zinc in wound healing modulation by Lin P-H, Sermersheim M, Li H, Lee P-H U, Steinberg S-M, and Ma J. 2017 December 24;10(1) Nutrients [Free PMC article] [PubMed] Using Google Scholar

Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Namrata Tripathi: A Case Report on the Management of a Non-Healing Lesion Following Surgical Treatment for Necrotizing Fasciitis. International Ayurvedic Medical Journal {online} 2023 {cited May 2023} Available from:

http://www.iamj.in/posts/images/upload/1063_1067.pdf