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Dusta Vrana (Non-Healing Ulcer) Managed Conservatively with Ayurveda: A Case Report

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Abstract

The term "Vrana" refers to the interruption of biological tissue or a specific body portion (wound). Whithin a week, if there is no Doshik invasion (infection), the Vrana (wound) will naturally heal. Despite the best efforts of Bhishak, Dravya, Upsathata, and Rogi from Chikitsa Chatuspada, a wound known as Dushta Vrana either refuses to heal or heals very slowly. Dushta Vrana in Ayurveda can be corelated with the non-healing ulcers described in contemporary science. In this case study, a 49-year-old male with a history of Dusta vrana (a non-healing ulcer) on his right lower limb for two months came to the Shalya department for Ayurvedic management. Vranaprakshalana using panchawalkalaqwath, local application of Neem oil, followed by dressing using sterile gauze and bandage. Triphala guggulu, Arogyavardhini vati, Mahamanjisthadi qwath, and Kaishor guggulu were prescribed to the patient. This Shodhana karma and Shamana Aushadhis were continued for 45 days regularly, and they facilitated the vranasodhana and vranaropana activities to treat the ulcer successfully. In two months, the ulcer healed entirely. The efficacy of Ayurveda is the main topic of this case study. In treating such terminally sick ulcers, other medical specialities are limited to skin grafting. This treatment plan decreased the chance of recurrence while resulting in no complications. The patient saw improvements in just two to three months after obtaining this affordable treatment.

Keywords: Abhyantar Aushadhi, Dusta Vrana, Neem Oil, Non-Healing Ulcer, Panchawalkalaqwath.

Introduction

A wound is commonly referred to in Ayurveda as "Vrana." An area of Ayurvedic medicine called "varna management" is dedicated to treating wounds and injuries. The Charaka Samhita and Sushruta Samhita, two of the ancient Ayurvedic books, include extensive material on diagnosing and treating wounds. These old manuscripts include comprehensive information about the diagnosis, categorisation, and Ayurvedic treatment of wounds. They stress how crucial it is to comprehend each person's unique doshic imbalances and constitution (prakriti), which might have an impact on how wounds heal. The writings also include the application of several Ayurvedic oils, herbs, and treatments for wound care.

The phrase "Vrana Gatra Vichurnane, Vranayati Iti Vranaha" explains the meaning of Vrana. Vichurnane signifies breaking, rupturing, discontinuity, and destruction (of the body tissue), whereas Gaatra means tissue (body portion or body tissue).

Additionally, Acharya Sushruta has stated that wounds on Twaka (skin) will swiftly heal, but they will also self-appear on other Dhatus, such as Mamsa (muscle) and Shira (tendons), which are challenging to cure. Severe injuries receiving the awful Amanogya darshan (displeasing look), Durgandha yukta (unpleasant smell), Putipuya Sravayukta (putrefying smell pus), Dahayukta (a feeling of burning), Pida yukta (painful), or uncomfortable, and faced with Dusta vrana is Upadrava, or difficulties (1).

Non-healing ulcers are characterised as traumatising or spontaneous lesions, mainly confined to the lower limbs that do not heal in a predetermined amount of time or do not improve with first therapy. The underlying aetiology of these lesions may be systemic. According to a study, lower extremity wounds in India are caused by trauma (11%), venous illness (11%), diabetes (23%), and leprosy (40%) (2).

The patient in this case had a wound that was not healing for two months and had symptoms comparable to those of Amanogya darshan (displeasing look), Putipuya srava (putrefying

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smell of pus), Daha (burning sensation), and Pida (pain and tenderness). Thus, as taught by Acharya Sushruta, we adhered to therapies such as Vrana Prakshalana, Lepa, and Kashayapaana under the Shashti upakrama of Vrana chikitsa (3).

Pathophysiology in Delaying the Rehabilitation of Ulcers

The pathophysiology of varicose ulcers begins with venous hypertension, which stretches the veins due to malfunctioning venous valves. Blood proteins can now seep into the extravascular area as a result of this. It stops growth factors and excess cellular matrix molecules from aiding in wound healing. In a comparable manner, fibrin accumulates around blood vessels to block the flow of oxygen and nutrients to cells due to fibrinogen leakage and fibrinolysis deficiencies. Additionally, this clogs the veins surrounding the wound, leading to ischaemia and a delay in the healing process. Additionally, leukocyte accumulation in tiny capillaries brought on by venous insufficiency releases inflammatory substances that lead to the development of chronic wounds (4).

Case Report

A 49-year-old male reported of an open wound for two months at our hospital. The patient had no previous medical history of fever, but there was a history of being pricked by an unidentified item while working on the farm, and the wound was extremely poorly cleaned thereafter. A record of discomfort, pus discharge, foul smell, development of slough, and mild oedema was present. There were no exacerbating or aggravating circumstances. Upon closer inspection, the floor had slough, the edges were irritated, there were indentations all over, and there was a little temperature increase. The diagnosis of Dushta Vrana (non-healing wound) was made based on the patient's history and a local inspection.

Anubhandi Vedana

Difficulty walking.

Past medical history family, psychosocial history of the current condition: The patient's medical history was not especially significant. The patient was under stress because of the skin discolouration and ongoing itching, which caused insomnia. There was no evaluation of genetic predisposition. No prior surgical experience; no history of medicinal sensitivities. In the past, there were no cases of diabetes, hypertension, cancer, or metabolic problems.

Past interventions and outcomes: Prior to August 2023, the patient was in good condition. However, he later discovered a small pus-filled wound in his right foot's medial malleolus, along with some minor discomfort and itching. It finally grew large and covered the entire medial ankle area in two months. Most of these lesions broke out at night. However, he declined the advice of a physician. After two months, the wound got worse, so he came to our Ayurvedic Hospital for advice. The patient was encouraged to wear regular dressings and was prescribed oral and topical Ayurvedic remedies (the patient does not recall the names of the medicines). The patient-maintained treatment at the Ayurvedic Hospital for six months after noticing improvements in the first week.

Local Examination

Inspection: The ulcers were located in the right lower limb ankle region and the antero-lateral peroneal of the lower limb. On the first visit, the ulcers measured 30 cm by 15 cm and 4 cm by 3 cm, respectively, and were oval in shape, 10 mm to 12 mm deep, with a sero-purulent discharge that was usually shallow, with irregular slopping edges and fibrotic margins. The ulcers' floor consisted of fibrinous exudate and unhealthy granulation.

Palpation: On palpation, there was tenderness but no active bleeding. There was no lymphadenopathy. Base had a little induration.

Lab Investigations

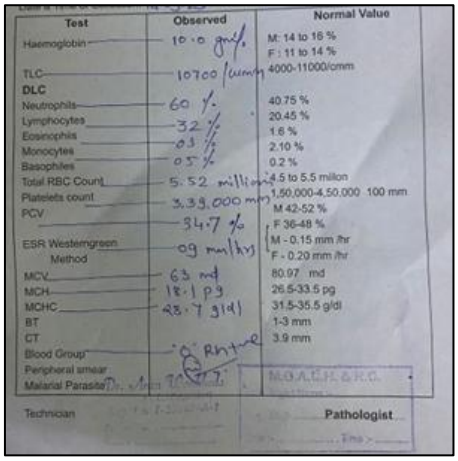

Figure 1: Complete Blood Count

Figure 2: HIV and HbsAg

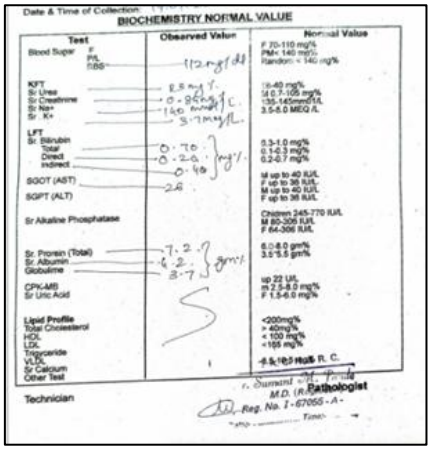

Figure 3: Liver Function Test and Random Blood Sugar

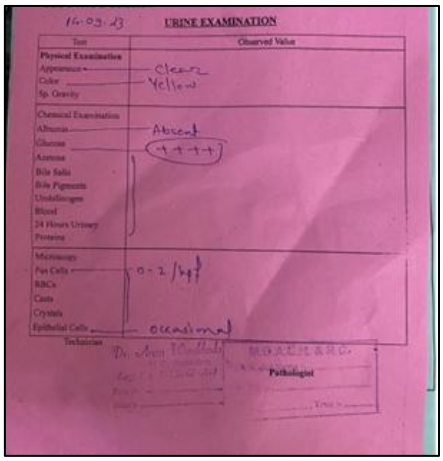

Figure 4: Kidney Function Test and Urine Routine and Microscopy

Pathological Parameters: The patient's pathological parameters for HIV and HbsAg were negative and non-reactive, as shown in Figure 1. Figure 2 shows a complete blood count with a low Hb% and a slightly elevated total red blood cell count. Figure 3 shows a urine examination with glucose present along with mild pus cells and epithelial cells. Figure 4 shows a biochemical examination with RBS and a liver function test that is within normal limits.

Diagnosis

Biomedical Diagnosis: Blood proteins can now seep into the extravascular area as a result of this. It stops growth factors and excess cellular matrix molecules from aiding in wound healing. In a comparable manner; fibrin accumulates around blood arteries to block the flow of oxygen and nutrients to cells due to fibrinogen leakage and fibrinolysis deficiencies. Additionally, this clogs the veins surrounding the wound, leading in ischemia and a delay in the healing process. Additionally, leukocyte accumulation in tiny capillaries brought on by venous insufficiency releases inflammatory substances that lead to the development of chronic wounds (5).

Ayurvedic Diagnosis: As a wound's impression lasts a lifetime and never goes away, even after full recovery. The knowledgeable refer to it as vrana. Vrana is that which causes a person to pray to the end of his life and reveals the body's inner workings (6). A varna with an unpleasant smell, peculiar color, profuse discharge, extreme pain, and a long healing period is called a dusta. A Dushta Vrana's qualities are determined by the predominant Dosha that exists within it (7). The Lakshanas of Dusta Vrana with one of the colors krushna, Rakta, Atisamvrutha or ativivrutha are Atikatina or Mrudu, Utsanna or Avasanna, and Atisheeta or Usna, according to Acharya Sushruta also Poutipooya, Maamsa Sira, Snaayu, and Peeta,

Bhairava release excessive dusta shonita and dheerga kaalaanubanda and others as they move in an oblique tract (8).

Dusta Vrana

The two words that make up the word Dusta Vrana have two distinct meanings. Dusta can indicate spoilt, damaged, wounded, deprived, or Durbal (unhealthy) or Adhmah (degraded). Dusta-Vrana is an extremely damaged state brought on by external injuries (Agantuja Vrana) that cause exudation of Durgandhayukta puyam (pus), pain, temperature, inflammation, redness, itching, and also oozing of Durgandha-yukta raktam with no intention of healing. It is characterized by vitiation of Mamsa and Medha dhatus and Dosha (Nija Vrana) (9).

As per Sushruta, when a patient mismanages himself or the physician improperly, a vrana will turn into a Dushtavrana because of excessive vitiated doshas (10). A vrana can either be a Dushta vrana from the start based on its characteristics, vrana location, etc., or a plain vrana can transform into a Dushta vrana because of a number of etiological reasons, such as:

This can take the shape of necrosed tissue, blood clots, flies, broken bones, etc. If Shuddha doesn't make this wound properly, it cannot heal at all or take longer to heal.

Any carelessness from the time the wound is diagnosed until it is treated could eventually result in the development of Dushta vrana.

The patient may also bear some of the blame for vrana to transform into Dushta vrana by incorrect food practices, excessive daytime sleep, physical activity, etc., and medical care from inexperienced doctors. Aside from this, Dushta vrana is also caused by a few related disorders including Kustha, Prameha, Shotha, etc.

Table 1 explains the timeline of treatment advice to the patient. Table 2 describes the follow up of patient post treatment. The entire treatment ptotocol advised in the patient can be understand from the Table 3 along with its duration and dosages.

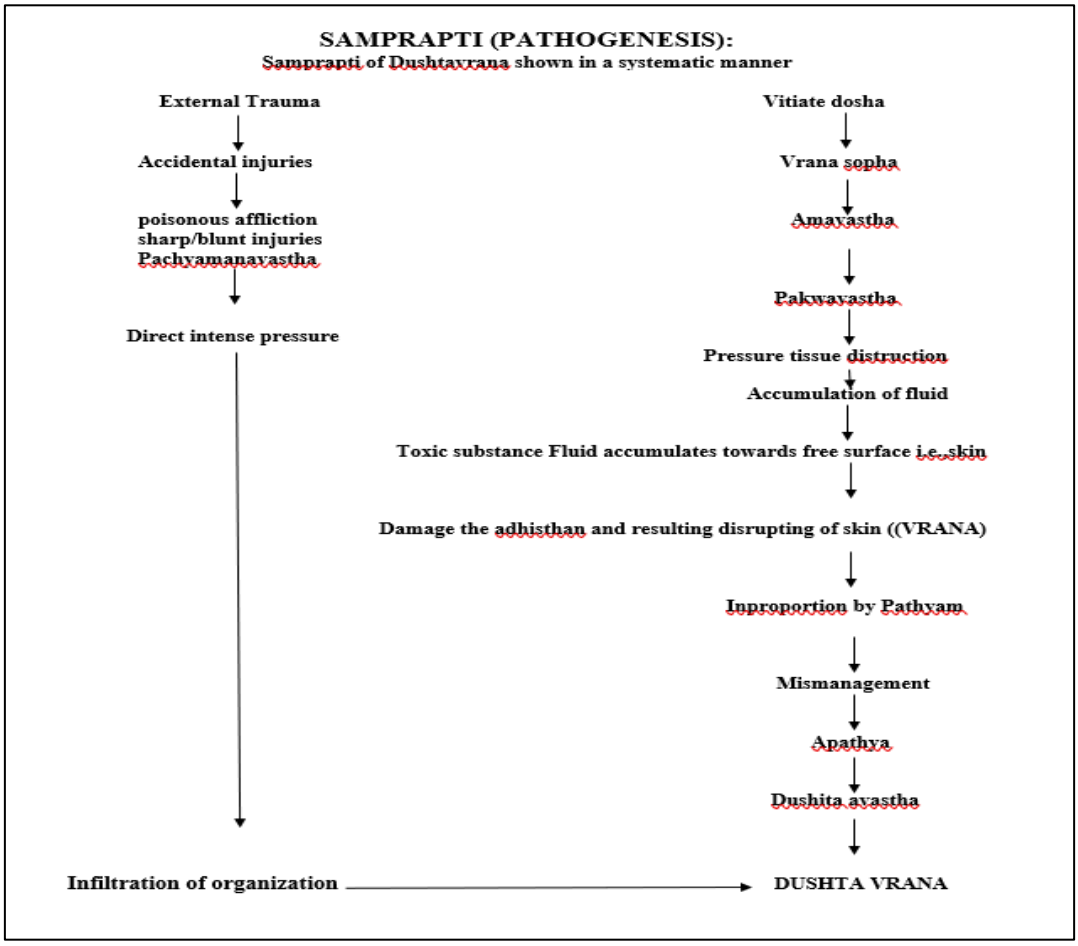

Figure 5: Samprapti of Dusta Vrana

Table 1: Timeline

Date	Patients' complaints	Interventions
Sept 7, 2023	On the first visit patient had the painful ulcers measuring 30 cm by 15 cm and 4 cm by 3 cm, respectively, and were oval in shape, 10 mm to 12 mm deep, with a sero-purulent discharge that was usually shallow, with irregular slopping edges and fibrotic margins as seen in Figure 1	Start with Internal treatments such as Mridu Shodhana, Pachana, and Shamana; three months of medicated oils were recommended to moisturize the skin and restore its natural color. Ayurvedic internal medications for Vranaprakshalana was done twice a day by Panchawalkalaqwath for 2 months. Neem oil used locally facilitates the completion of Vranasodhana and Vranaropana activities. Dressing was done with sterile gauze and bandage.
October 7, 2023	Following a month on medicine, the patches started to become lighter. Both the ache and dryness subsided. There was occasional itching.	Ayurvedic external medications for Vranaprakshalana was done twice a day by Panchawalkala qwath for 2 months. Neem oil used locally facilitates the completion of Vranasodhana and Vranaropana activities. Dressing was done with sterile gauze and bandage daily BD.
November 2023- January 2024	On assessment, the size of the wound had reduced along with the tenderness and discomfort, pain, and itching.	Dressing was done with Yatimadhu ghrit Pichu local application and bandage.
February 2024	There was no discomfort, tenderness, itching, or dryness; the skin only showed faint signs of the early lesions.	Dressing was done with Yasti Madhu ghrit Pichu and bandage.

Table 2: Follow up

March 2024 - April 2024	During the phone call, the patient stated that they have no new lesions and are symptom-free.	Quit using all of the Ayurvedic drugs. Only locally Yasti Madhu ghrit application used.

Table 3: Treatment Protocol

Date	Interventions	Dosage	Adjuvant	Duration
7 Sept 2023	Tab. Cefibact	200mg BD	water	5 days
	Tab. Pantop	40 mg OD	water	5 days
	Tab. Emanzen DP	400 mg BD	water	5 days
13 Sept 2023	Tab. Cefibact	200mg BD	water	5 days
	Tab. Pantop	40 mg OD	water	5 days
	Tab. Emanzen DP	400 mg BD	water	5 days
25 Sept 2023- 25 November 2023	Tab. Triphala Guggulu	500mg BD	Luke warm water	60 days
	Tab. Aarogyavardini vati	500mg BD	Luke warm water	60 days
	Tab Kaishor guggul	500mg BD	Luke warm water	60 days
	Mahamanjistha qwath	10 ml (4 tsp)	Luke warm water	60 days
15 November 2023-15 February 2023	Yasti Madhu ghrit	Local application	-	90 days

Treatment Protocol

Treatment had been provided by Sthanika and Abyanatara Shodana / Shamana Chikitsa.

Materials and Methodology

Vranaprakshalana was done twice a day by Panchawalkalaqwath.

Neem oil used locally facilitates the completion of Vranasodhana and Vanaropana activities.

Dressing was done with sterile gauze and bandage. This process was continued for 6 months regularly.

Pathya (Dietary and Lifestyle Changes Recommended)

The patient was placed on a strict vegetarian diet and instructed to stay away from curds, spicy foods, brinjal, green chiles, puttu, idli, and sambar. Foods that were sour, pungent, or too salted were also forbidden. She was told to include natural, readily digested items in his diet that don't trigger allergies. Avoiding daytime sleep, eating regularly, staying up late at night, and using irritating cosmetics were among the lifestyle changes advised. This was the recommended diet for both episodes. In contrast, the second episode had improved patient compliance.

Clinician and Patient-Assessed Outcomes

In the Out-Patient based therapy: The other symptoms had faded by the time the patient last came in for a consultation following the Patient based treatment, and the skin only showed minor signs from the early lesions. The skin's texture was similarly typical.

Pain from the lesions subsided immediately, which the patient could appreciate. Within a day of using Panchawalkal qwath dhavan and nim oil topically, the pain began to lessen in severity. The patient also noted that after beginning oral Ayurvedic therapy, no new lesions developed. This is a noteworthy outcome. The patient also said that stress was decreased since the skin returned to its typical texture and look (Figures 7 to Figure 9).

Adverse and Unanticipated Events

For both occurrences, no significant side effects were seen for the whole period of therapy. A significant unforeseen occurrence occurred throughout the course of therapy. The patient received medication for purging during the in-hospital stay. It was anticipated that she would have at least five bowel motions. Most likely, the low dosage of the purgative that was given might be the culprit. The patient reacted well to the daily administration of a moderate purgative as a compensation later on in the follow-up medicine regimen.

Results

New, healthy tissue began to grow at the wound site, reducing the amount of detrimental granulation tissue that had previously formed in the slough. The wound's size was much diminished. The wound had healed to a normal skin level, leaving the depression region gone.

According to the Bates-Jensen Wound Assessment Tool the patient had a score of 45 at baseline then it got reduced upto total score of 12 after treatment. Significant reduction in ulcer size, exudate volume and pain within 1 month with no erythema, no lesions, no pus formation and size also decrease and tissue recovery was also observed there were no complications. Parameters of observation included Ankle flare, Perpheral Hyperpigmentation, Size of ulcer, Granulation tissues and relief in Pain as shown in Table 4. Patient was observed on above parameters on every 30 days of interval as shown in Table 5. From day 1st to day 90th we observed a significant improvement in the non-healing wound as shown in Figure 5 to Figure 10. On 120th and 150th day there was completely contraction of wound edges and improvement in wound healing as shown in Figure 11 and Figure 12 respectively.

Table 4: Parameters (11)

Parameters	Grade			
Ankle Flare	Base Line 100%	75%=3	50%=2	25%=1
Peripheral Hyper pigmentation	Base Line 100%	75%=3	50%=2	25%=1
Size of ulcer (in cm)	Base Line 100%	75%=3	50%=2	25%=1
Granulation Tissue	Base Line 0%	25%=1	50%=2	75%=3
Pain	Base Line 100%	75%=3	50%=2	25%=1

Table 5: Progressive Report of Case (12)

Parameters	7th Day	30h Day	60th Day	90th Day	120th Day	150th Day
Ankle Flare	Base Line 100%	75%	50%	25%	15%	0
Peripheral Hyper pigmentation	Base Line 100%	75%	75%	50%	25%	10%
Size of ulcer (in cm)	Base Line 100%	50%	25%	10%	5%	0
Granulation Tissue	Base Line 100%	50%	25%	10%	5%	0
Pain	Base Line 100%	75%	50%	25%	0	0

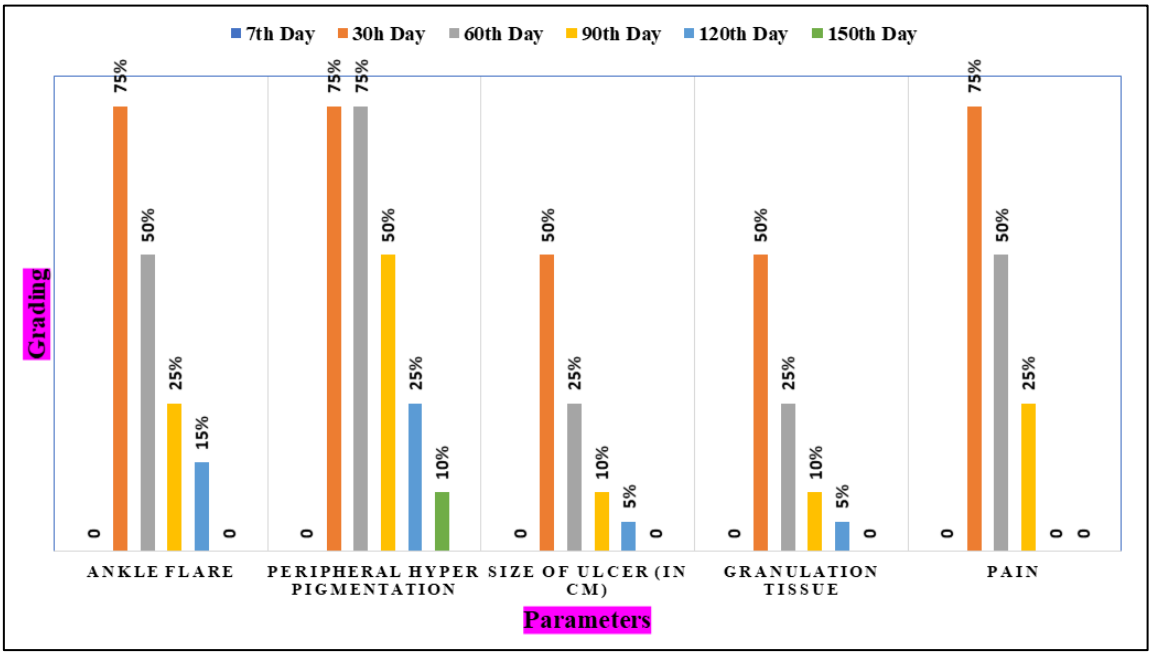

Figure 6: Progress Report during Treatment

Figure 7: Day 1, Before Treatment Right Lower Limb

Figure 8: Day 15, After Application of *Panchawalkal Qwath Dhavan and Application of Neem Taila*

Figure 9: Day 15, After Application of *Panchawalkal Qwath Dhavan* and Application of *Neem Taila* with Oral *Ayurvedic* Medicines

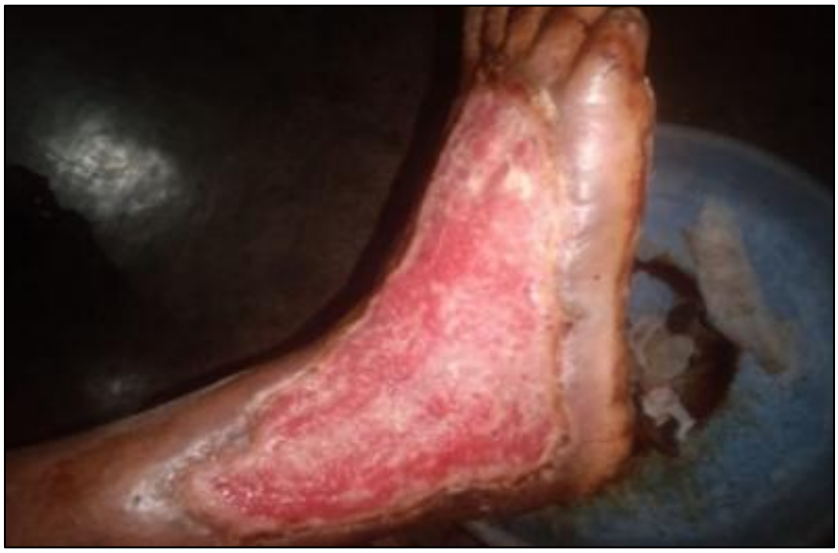

Figure 10: Day 30, After Application of *Panchawalkal Qwath Dhavan* and *Application of Neem Taila with Oral Ayurvedic* Medicines

Figure 11: Day 60, After Application *Yatimadhu Ghrit* Local Application

Figure 12: Day 90, After Application *Yatimadhu Ghrit* Local Application

Figure 13: Day 120, After Application *Yatimadhu Ghrit* Local Application

Figure 14: Day 150, After Application *Yatimadhu Ghrit* Local Application

Discussion

Triphala Guggul

The formulation of Triphala Guggulu has been shown to be effective in treating oxidative stress, hypolipidemia, piles, and inflammation. Amalaki, Haritaki, Vibhitaki, Pippali, and Guggulu make up Triphala Guggulu. The terms Virya, Vipaka, Rasa, Guna, and Karma are used to describe the medicinal advantages. The main elements of Triphala Guggulu are Tikta, Kashaya, Madhura Rasa, Ushna Virya, Katu Vipaka, Laghu, Ruksha, Ushna, Tikshna Gunas, Tridoshahara, and Shothahara karma. It reduces Kapha dosha because of Tikta, Kashaya Rasa, Laghu, and Ruksha Guna. Because of Ushna Virya, it decreases the doshas of Vata and Kapha. The drug's Tikta, Kashaya, and Madhura Rasa relieve Pitta dosha. While its Ushna, Tikshna, Laghu Guna, and Ushna Virya lower Srotorodha, their Ushna Virya and Laghu, Ruksha Guna stimulate Agni. Guggulu is Arsha (piles), Arbuda (tumours), Shopha (oedema), and Kledahara (removes soddening). It is also Kapha Vatahara (relieves Kapha and Vata). Because it is anti-microbial, (Jantughna) it is used to treat infections.The main cause of Shotha, the Kapha Dosha, is opposed to the bitter and pungent Rasa in Guggulu. The heat potency of guggulu soothes vitiated Vata, stops Kleda from remaining at the pathogenesis site and generating blockage, or Srotorodha, and promotes wound healing. Additionally, it balances out the dryness and coldness associated with Vata (vitiated air). The bitter taste and scraping texture clear the body's microchannels of Kleda dosha. As so, it slows down the pathogenic process and harmonises Kapha and Vata. Guggulu is used to treat wounds, lymphadenitis, boils, cysts, and other ailments, demonstrating its antibacterial, anti-inflammatory, and wound-healing qualities. All the study on the formulation and individual components of Triphala Guggulu indicates that its contents have anti-inflammatory, anti-microbial, and analgesic properties. These characteristics make this formulation a highly effective analgesic, antibacterial, and anti-inflammatory medication (11). Triphala Guggulu indicates that its contents have anti-inflammatory, anti-microbial, and analgesic properties.

Aarogyavardini Vati

By balancing the three Doshas, Arogyavardhini vati enhances general health. Medicine is often referred to as fatty liver remedy and natural liver cleansing therapy. It supports equilibrium, preserves liver function, and keeps the digestive tract in good condition. The Shoshan (assimilation) of various surplus Snigdha Dravya's (unctuous substances) that are present in the body is carried out by Arogyavardhini vati. It also performs the Raktavardhana (blood purification) and the Pathan (digestion) of Drava (liquid) and Kleda (clammy). It diminishes Snigdhatva and Dravatva in Meda Dhatu. Several adjuvants must be used with the medication in order to achieve the desired results. The medicine should never be self-medicated in order to prevent any negative side effects (12). Arogya vardhini vati is extremely beneficial in Cirrhosis of liver, jaundice and in case of poor liver functioning. It is used as an excellent measure for various types of acne problems. It provides total health and makes the body free from all types of diseases and brings a balance between the three Dosha. It is beneficial for leprosy, oedema, obesity, jaundice and various types of hepatic disorders. It is a good remedy for removal of excessive fat, clearing of various types of toxins from the body and helps in reduction of accumulated cholesterol in the body.

Kaishor Guggulu

The primary uses of Kaishore guggulu are for its blood-purifying, antimicrobial, and antiallergic qualities. Kaishore guggulu helps maintain connective tissue, muscles (in fibromylegia), healthy joints (in gout), and back discomfort. It functions as a natural blood purifier, an anti-aging skin health enhancer, and a dietary herbal supplement that can help with a variety of medical issues like diabetes and skin disorders. A small amount of scientific research has been done on the pharmacological properties of Kaishore guggul. Thus, this review aids the researcher in investigating this formulation for further Kaishore guggul pharmacological activity (13). Kaishor guggul manage skin infections. These herbs help to balance the vitiated tridoshas in body (vata, pitta and kapha). These herbs help to boost up immune system because the weakened immune system is also a cause of skin problems. Being packed with antimicrobial, inflammatory, antiseptic properties, they are quite good to fight against skin infections.

Mahamanjistha Qwath

This research aims to offer comprehensive details about the most popular species of medicinal plant

known as Rubia Cordifolia (Manjishtha). Research on modern pharmacology has shown that this plant possesses remarkable biological potential. It is firmly believed that the information provided in this paper of the usage of the plant Rubia Cordifolia (Manjishtha) in Ayurvedic and folk cultures may encourage researchers to include this plant into contemporary medical treatments. This plant's variety of phytochemicals may provide a potential source of antimicrobial, hepatoprotective, cardioprotective, and nephroprotective medications.Manjishta (Rubia cordifolia) hydrogel and alcoholic extract both have the ability to cure wounds. The ability of Rubia cordifolia to cure wounds was established in research using an excision wound model in mice. Ethanolic extract made a major contribution to the wound's healing (14). Mahamanjistadi qwath widely used in skin disease, gout, syphilis, non-healing wounds and also used in skin eczema and obesity due to its properties. Manjishta (Rubia cordifolia) hydrogel and alcoholic extract both have the ability to cure wounds.

Panchavalkala Qwatha

Panchavalkala Qwatha has many additional characteristics, such as antiseptic, anti-inflammatory, antioxidant, antibacterial, and antimicrobial activities, and according to Ayurveda, they include the ability to promote wound healing and Vrana ropana (wound healing). The aim of this study is to investigate the antimicrobial characteristics of Panchavalkala Qwatha (PWK) and validate its conventional Ayurvedic application in wound care. Part of the study involves carefully creating Panchavalkala Qwatha and Panchavalkala Arka. The well-diffusion test was used to assess the antibacterial effectiveness of Panchavalkala Qwatha and Panchavalkala Arka against Escherichia coli and Staphylococcus aureus. When it comes to E. Coli and S. aureus, Panchavalkala Qwatha has a notable zone of inhibition that measures 25 mm and 28 mm, respectively. Strong antibacterial activity is shown by the antimicrobial effectiveness, which is comparable to that of ciprofloxacin. Panchavalkala Arka, on the other hand, has no microbial growth-inhibiting properties. These findings demonstrate that Panchavalkala Qwatha has potent antibacterial action against S. aureus and E. coli, but Panchavalkala Arka has no activity. Primary evidence supporting Panchavalkala Qwatha's antibacterial capabilities against S. aureus and E. coli is shown in this study (15). According to Guna Karma, Nyagrodha (Ficus bengalensis Linn.) has the attributes of Varnya, Visarpa-daahagna, Yonidoshhruta, Vyanga naashanama, and Raktapittavinashana. Ficus glomerata Roxb., or udumbar, has characteristics with Raktapittaghna, Ropana, and Vranashodhana. Ficus religiosa Linn., also known as Ashvathha, is a shaman who shares characteristics with Varnya, Yonivishodhana, and Raktadaaha. The characteristics of Murcha-pralaap-bhramanaashana, Raktadoshahara, Raktapittahruta, and Plaksha (ficus lacor). According to traditional wisdom, this indicates that the Samprapti of illnesses is broken due to the properties of drugs like Katu, Tikta, Kashaya Rasa, Laghu, Ruksha, Teekshna Guna, Ushna Veerya, Katu Vipaka, and Kaphapittaghna. Unlike modern views, Panchavalkala has phytochemically dominant phenolic group components, like flavonoids and tannins, which are primarily responsible for the plant's remarkable antiseptic, anti-inflammatory, immune-modulatory, antioxidant, antibacterial, antimicrobial, and wound-purifying effects, as well as its healing and astringent qualities (16).

Panchawalkal qwath Kashaya Pradhana Rasa, it must have acted as Rakta Shodhaka (blood purifier). Pitta Shamaka, Vranya and shotahara, vrana shodana vrana ropaka propertiesof this formulation is very effective in controlling inflammation and infection. Kapha hara and ruksha guna propertiets present in these drugs, reduces shota, faciltates the debridement of slough Tanninus and flavonoids are present in these drugs promote anti-inflammatory, analgesic, antimicrobial and wound healing action. As the oxidation process hampers the healing, antioxidants fraction of the bark of Pareesha, Vata, Ashwatha and Plaksha has proven to possess good in vitro antioxidant property.

Neem Oil

Sulphur is a component of nigmidin, the main ingredient in neem oil, and it possesses keratolytic, antifungal, and antibacterial qualities. In addition, it is very bitter. Neem extract has been shown to have antimicrobial action against both Streptococcus mutans and Streptococcus faecalis. Because of its various biological properties, such as those of an antioxidant, anti-inflammatory, antibacterial, antifungal, and antiparasitic, neem

oil has been utilized in traditional medicine since ancient times (17). Furthermore, because of its moisturizing, anti-aging, and regenerative qualities—properties mostly linked to its lipophilic composition, fatty acid content (particularly oleic, palmitic, and stearic acids), and antioxidant potential—it is utilized in traditional Indian medicine. It's believed to be a helpful and efficient plant-derived oil for healing animal and human wounds. For this reason, it has been demonstrated that using neem oil topically is advantageous for treating persistent wounds that refuse to heal (18). Antimicrobial effects of Neem oil have been demonstrated against Streptococcus mutans and Streptococcus faecalis. Similarly, curcumin is an important constituent of turmeric powder, has shown faster wound closure of punch wounds by re-epithelialization of the epidermis and increased migration of various cells including myofibroblasts, fibroblasts, and macrophages in the wound bed.

Yasti Madhu Ghrit

Glycyrrhizin (glycyrrhizic acid, glycyrrhizinic acid), isoliquiritigenin, hydrophobic flavonoids, hemileiocarpin, formononetin, glabridin, hemileiocarpin, hispaglabridin B, 4'-O-methylglabridin, and paratocarpin B are some of the main ingredients in Yashtimadhu. 18 B-glycyrrhetinic acid, Licochalcone A., isoliquiritin, liquiritigenin, glyciram, and other compounds have qualities like antioxidant action, immunostimulating, anti-inflammatory, learning and memory, ant-fibrotic effect, anti-allergic, anti-depressant, anti-mutagenic, and anti-ulcerogrnic effect (19). Yastimadhu also has the Tridoshaghna influence, indicating his potential as Vrana Ropana, because of his status as Madhura Rasa, Guru Snigdha Guna, and Madhura Vipaka Dravya. Here, the main causes of Yastimadhu's Vrana Ropana Karma are its Madhura Rasa and Guru Sangdha Guna, as the Rasa and Guna described above contain Karma in the form of Jivaniya, Vrushya, and Balya, which are all regenerable and therefore beneficial in the Vrana Ropana (20). Yashtimadhu has madhura rasa, sheeta virya, madhura vipaka. It is vatapitta shamaka. Moreover, studies conducted on modern scientific parameters have proved the healing, anti-ulcer, antiinflammatory & skin regeneration activity of yashtimadhu. Ghrita has a daha shamaka property. Madhu has properties such as Madhura rasa, kashaya anurasa. It is guru, ruksha, sheeta. It aggravates vata, scrapes kapha normalises pitta and rakta and promotes healing process.

Conclusion

All symptoms and clinical aspects were evidently relieved by Prakshalan by Panchawalkalqwath, local neem oil application, and oral Triphala Guggulu, Arogyavardini vati, Kaishor Guggul, and Mahamanjistha qwath taken. Due to this understanding, Dusta Vrana is effectively controlled. Based on this case study, we may infer, at best, that Ayurveda holds promise for treating ulcers and varicose veins. During the course of the therapy, no serious bleeding, wound infection, or hypersensitivity occurred. The following case has been followed up for a period of 4 months with no recurrence. Patient gait improved pain and discomfort was relieved which interned improved the quality of life. The patient saw improvements in just two to three months after obtaining this affordable treatment.

Abbreviations

PWK: Panchwalkal, OD: Once Daily, BD: Twice Daily, TDS: Three Times a Day, Tsp-Tea spoon, DP-Diclofenac sodium and Serratiopeptidase.

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Author contributions

Dr. Abhishek Mavale: worked in software, methodology, conceptualization, investigation, visualization, reviewing and editing the manuscript. Dr. Devyani Dasar: curating data and preparing original drafts, supervising programmes and verification.

Conflict of Interest

According to the study's authors, there were no commercial or financial relationships that would

have increased the risk of a conflict of interest. Since every clinician who worked on the case in both episodes is named as an author, there is no conflict of interest. Furthermore, the treating physician in both cases was the same chief physician.

Ethics Approval

Not needed as it was case report. The patient gave their informed agreement for the publication of their de-identified medical records.

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