



Case Study

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A CASE STUDY ON DUSTAVRANA

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ABSTRACT

Background: Dusta vrana is the severe complication of untreated ulcers caused by varicose vein, Thromboangiitis Obliterans, atherosclerosis, trauma, etc. vrana with poothi gandha, vivarnata, bahu srava, maha ruja is known as dusta vrana. Such ulcers can be managed with Panchakarma chikitsa by following the bahya and abhyantara shodhana management line. Brief case report: A 75 years old male patient came with pain, swelling and ulcer over the left foot for six months with a history of trauma; he was a known case of Thromboangiitis Obliterans, having undergone amputation of 1st, 2nd, and 4th and 5th toes of left lower limb. The patient had a 60-70 % block of distal Anterior tibial artery and dorsalis pedis artery. Bahya shodhana was done by dhara with gomutra, sphatika jala panchavalkala kwatha and abhyantara shodhana by Manjistadi kshara basti in yoga basti pattern. Conclusion: Significant reduction was seen in slough and pain. The appearance of granulation tissue was observed. Sthanika dhara with gomutra, which has ushna, teekshna, and lekshana properties, removes slough and improves local circulation. Sphatika jala does lekshana and shodhana. Panchavalkala kwatha has vrana ropana property. Manjistadi kshara basti does srotoshodhana and enhances circulation by virtue of its kshareeya guna and acts as rakta prasadaka and vrana ropaka.

Keywords: Dhara, Dusta vrana, Manjistadi kshara basti, Shodhana

INTRODUCTION

An ulcer is a break in the continuity of the covering epithelium, skin or mucous membrane. It may either follow the molecular death of the surface epithelium or its traumatic removal¹. Arterial ulcer is caused by inadequate skin circulation. These occur in those parts of the limbs subjected to repeated pressure or trauma. These ulcers are primarily due to peripheral arterial disease and poor peripheral circulation. Atherosclerosis of the peripheral arteries is one of the most typical causes of this condition, commonly seen in old age people. Due to episodes of trauma and infection, it destroys the skin, which fails to heal because of poor arterial supply. These ulcers usually occur on the anterior and lateral aspects of the leg, on the toes, dorsum of the foot or the heel. Buerger's disease is one condition that presents with such ulcers. The incidence of the burgers disease in western countries is 0.5 to 5.6%. Pain is the main complaint; ulcers tend to be punched out and destroy the whole skin and the deep fascia and may expose the tendons on the floor of the ulcer². These signs and symptoms of Buerger's disease can be correlated to Dusta vrana.

According to Acharya Sushruta, the patient consuming apathya ahara vihara and vrana (ulcers) left untreated or not treated well will convert into dusta vrana³ (non-healing ulcers). lakshanas (symptoms) include ati samvruta, ati vivrata, ati kathina, ati mridu, utsanna, avasanna vrana with poothi puya mamsa, sira, snayu, and srava; amanogna darshana, gandha and athyartha vedana and it is deergha kalanubandi⁴. Buerger's disease can be correlated to Dusta vrana based on the signs and symptoms.

Acharya Sushruta advises Vamana, Virechana, Asthapana Basti, Rakta mokshana, dhavana with kashaya and taila prepared from Aragvadadi and Surasadi gana dravyas⁵.

A 75 year old male patient with a known case of Thromboangiitis Obliterans came with complaints of pain and ulcer over the dorsum of the left foot, which gradually covered the dorsum and plantar aspects of the left foot for six months and swelling of the left lower limb since one year; the pain was pricking type and continuous, aggravates on walking. The patient was advised for amputation of the limb below the knee. He was a chronic smoker, approximately ten beedis per day for 30 years. Due to its symptoms, signs and chronicity, the diagnosis of Dusta vrana was made and managed accordingly.

MATERIALS AND METHODS

A 75 years old non-diabetic, non-hypertensive male patient presented to the Shalya tantra OPD(OP/IP no 136/13343) of GAMC Mysuru, Karnataka, India, with pain and ulcer over the dorsum and plantar aspect of the right foot for one year, he was known case of burgers disease and had undergone for amputation of the right great toe. The patient also had a history of trauma to the left foot 6 years back, after which 2nd, 4th and 5th toes were amputated. 2 years back patient developed pain and blackish discolouration of the left great toe and Colour Doppler revealed atherosclerotic changes of bilateral lower limb arteries with 70-80% stenosis of anterior tibial artery (ATA) and dorsalis pedis artery (DPA) of right lower limb and 60-70 % stenosis of left ATA and DPA so patient was diagnosed as case of TAO and amputation of great toe was done. After the surgery, the patient

developed a wound over the dorsum of the left foot, which gradually covered the dorsum and plantar aspects of the left foot.

Discharge: Absent
Slough: Present.

This study was carried out as per the International Conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP) or as per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants' Informed consent was taken from the subjects before the participation in the study.

Examination findings

Table 1: Dashavidha Pareeksha

Examination	Observation
Prakriti	Vata - Pitta
Vikriti	Vata
Sara	Madhyama
Samhanana	Madhyama
Pramana	Avara
Satmya	Avara
Satwa	Avara
Aharashakti	Madhyama
Vyayamashakti	Avara
Vaya	Vridhdha

Systemic examination: CVS, CNS, RS – No abnormality detected.

Examination of Ulcer

Site of ulcer: Dorsum and plantar aspects of left foot

Size: Dorsum of foot - 9 × 11 cm (max), Plantar aspect of foot 5 × 3 cm (max)

Shape: Irregular in shape, and the edge was edematous and ragged.

Floor: Pale

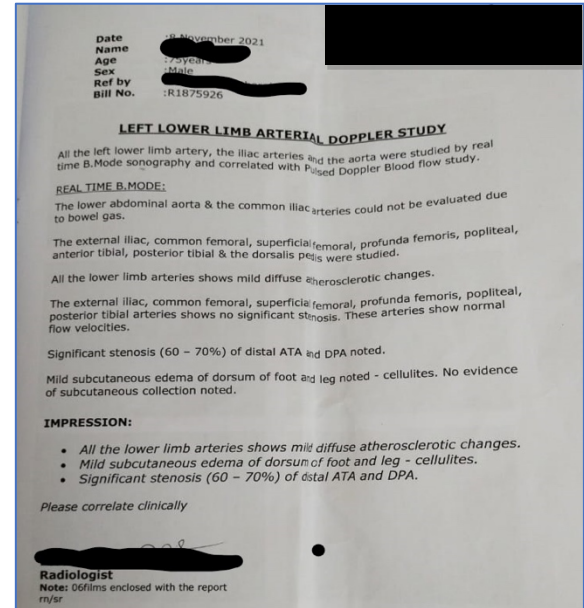


Figure 1: Investigations –Arterial Doppler study Before treatment

Based on clinical findings, a diagnosis of Dusta vrana was made. Management was planned according to the Dusta vrana chikitsa by adopting shodhana (bio purification) and shamana chikitsa (oral medications) along with bahya vrana upakrama (external wound management).

Table 2: Timeline of Treatment

Date	Treatment / Procedure	Details
05-03-2022 to 03 – 04 -22	Sthanika dhara (left lower limb from knee to foot) – for 45 minutes	1. Gomutra arka – 15 minutes
		2. Sphatika jala – 15 minutes
		3. Panchavalkala kwatha dhara -15 minutes
05-03-2022 to 20- 04-22	Vranopa krama	1. Vranadhoopana with Haridra and ghrita
		2. Kasisadi taila application
		3. Vrana bandhana
20- 03- 22 to 27- 03- 22	Basti	Manjistadi Kshara basti in Yoga basti pattern (1 st course)
13 – 04 – 22 to 20- 04-22	Basti	Manjistadi Kshara basti in Yoga basti pattern (2 nd course)
19- 05 - 2022	Follow up	Arterial color Doppler study

Table 3: Contents of Manjistadi ksharabasti

Ingredients	Quantity
Guda paka	40 gm
Saindava lavana	5 gm
Manjistadi taila	60 ml
Chincha kalka	30 gm
Manjistadi kwatha	300 ml
Avapa - Gomutra (diluted)	80 ml
Total	365 ml
Anuvasna basti	Manjistadi taila – 60 ml

Average retention time

Manjistadi kshara basti - 10-20 minutes

Anuvasna basti - 3-5 hours

OBSERVATIONS AND RESULTS



Figure 2: Before commencement of treatment



Figure 3: After dhara



Figures 4 and 5: After 1st course of Kshara basti



Figures 6 and 7: After 2nd course of Kshara basti

Follow-up and outcome

During the follow-up period, the growth of healthy granulation tissue was observed, and the colour Doppler study was repeated, revealing the popliteal artery's recanalisation. VAS for pain before treatment was 7 to 9 (very severe); during the follow-up period it was 4 to 6 (moderate).

Table 4: Visual Analogue Scale

BT	AT
7-9	4-6

DISCUSSION

Arterial ulcer (Dusta vrana) is a type of vascular ulcer caused by inadequate circulation to the skin. Conditions responsible for arterial ulcers are TAO, atherosclerosis, and trauma. In this case, it was due to stenosis of ATA and DPA, which can be correlated

to Dusta vrana because of maharaja (severe pain), vivarnatha (discolouration), poothigandhatha (foul smell). Dusta vrana chikitsa was adopted with bahya and abhyantara shodhana⁵. Initially, external therapies, mainly dhara with gomutra, sphatika jala, panchavalkala kwatha, followed by dhoopana with Haridra and ghrita, application of Kaseesa taila and dressing were done.

Gomutra is ushna and teekshna with katu rasa pradhanata. It does lekhana karma, removes slough, and has shoolagna property⁶. It contains allantoin, urea, creatinine, aurum hydroxide, carbolic acid, phenols, calcium, manganese, phenolic acids (gallic, caffeic, ferulic, O-Coumaric, Cinnamic, And Salicylic Acids) and Uric acid, these constituents help in the healing of the wound, preventing infection and repairing of damaged DNA.⁷

Sphatika is kashaya rasa, ushna veerya and vrana ropaka⁸. Kashaya rasa, by its grahi action, reduces the discharge and prevents bleeding from the ulcers. Sphatika also has bacteriostatic activity, which prevents the growth of harmful bacteria⁹.

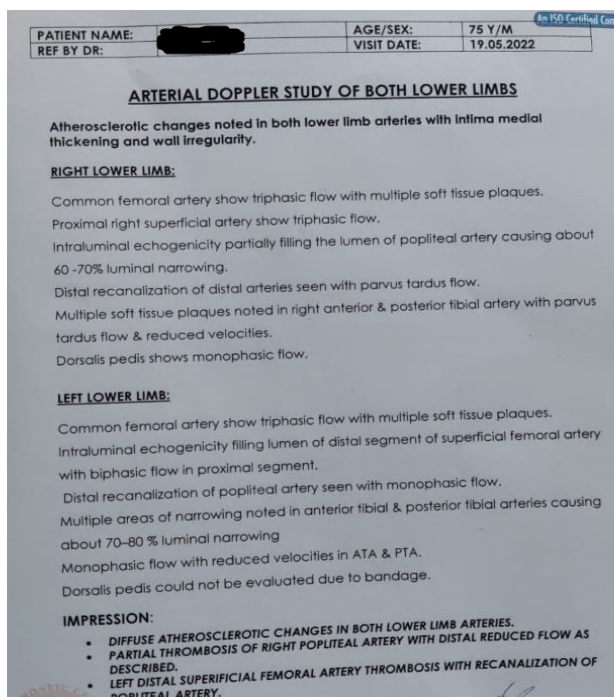


Figure 8: Arterial Doppler study after treatment

Panchavalkala contains tannins, phytosterols, and flavonoids, which have anti-inflammatory, antimicrobial and analgesic activity and promote healing and epithelialization¹⁰.

Acharya Sushruta advises urdhva (Vamana) and adha shodhana (purgation) in dusta vrana chikitsa, and Dalhana explains adhoshodhana as Virechana (purgation) and Asthapana⁵ (enema). Also, vrana, situated in adhobhaga, basti, has been advised.¹¹

Manjistadi kshara basti is a type of shodhana basti. Manjistadi kashaya contains Manjista, Triphala, Nimba, Haridra, Katuki, and Guduchi¹². The majority of these drugs are tikta rasa, Rakta shodhaka and Rakta prasadaka in nature, and Manjistadi taila is also Rakta shodhaka, Rakta prasadaka.

Gomutra is an antimicrobial and antioxidant agent and helps in collagen synthesis. Chinchu is ushna, teekshna and srotoshodhaka. It contains cardiac glycosides, malic acid, tartaric acid, mucilage and pectin, arabinose, xylose, galactose, glucose, and uronic acid and acts as an anti-inflammatory, analgesic and wound healing agent¹³.

Overall, Manjistadi kshara basti removes blocks, improves circulation, augments healing, ceases further spreading of ulcers and prevents recurrence.

2nd course of basti was administered after 16 days of 1st course of basti (dwiparihara kala). One month after 2nd course of basti. Another colour Doppler study was done, which showed atherosclerotic changes and recanalisation of the popliteal artery, suggesting the improvement in circulation.

CONCLUSION

Arterial ulcers that TAO and stenosis cause are the reasons for the amputation of limbs, which leads to permanent disability. Thus, there is a need for conservative treatment, which can be achieved through bahya and abhyantara shodhana.

In sequence, Bahya shodhana by dhara with gomutra, sphatika jala, and gomutra helps in vrana shodhana, prevent infections, improves circulation, and promotes healing.

Manjistadi kshara basti and bahya chikitsa like dhara, dhoopana and dressing help in vrana shodhana and vrana ropana by sloughing and reducing stenosis. Hence the combined effect of bahya and abhyantara shodhana helps in the effective management of Dusta vrana.

In the present case, changes were observed in parameters such as swelling, pain, and slough. After the intervention, there was a moderate reduction in pain, a moderate reduction in swelling, complete removal of the slough, growth of healthy granulation tissue and clean edges of the wound were observed.

Further large-scale studies are needed to evaluate the efficacy and limitations of Panchakarma chikitsa in managing Dusta vrana.

ABBREVIATIONS

TAO – Thromboangiitis Obliterans,
 ATA – Anterior tibial artery,
 DPA – Dorsalis pedis artery,
 VAS – Visual analogue Scale.

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