

Ayurvedic Management of *Dagdha Vrana* with respect to Second Degree Burn: A Case Report

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ABSTRACT:

Burns involve coagulative tissue necrosis and epithelial loss due to drastic change in temperature. In diabetic individuals, such injuries are often complicated by persistent discharge, delayed tissue repair, hypertrophic scarring, and contractures. Despite advances in modern medicine, gaps such as prolonged antibiotic use, delayed epithelialization, recurrent contractures, and high treatment cost remain. Ayurveda offers promising alternatives that promote faster recovery and minimal scarring. A 63-year-old male with type 2 diabetes mellitus presented with a non-healing ulcer over the anteromedial aspect of the left knee joint, one month after an accidental hot water burn. The wound showed slough, pale granulation tissue, and purulent discharge. The condition was diagnosed as a second-degree burn and correlated with *Durdagdha Vrana* in Ayurvedic parlance. Treatment included *Vrana Prakshalana* (wound irrigation) with *Nimba Kwatha* and dressing with *Apamarga Kshara Taila* for 21 days, followed by application of *Yashtimadhu Ghritha* until healing. Oral medications—*Kaishora Guggulu* (one gram, thrice daily before food with warm water) and *Eranda Bhrishtha Haritaki* (five gram at bedtime with warm water) were administered throughout the treatment period. The patient achieved complete wound healing by Day 72, with restoration of knee joint function and no complications such as infection, hypertrophic scarring, or contracture. Notably, the ulcer was located at the knee joint, a site described by *Acharya Sushruta* as *Krcchrasadhya* (difficult to heal) due to constant movement, yet the outcome demonstrates successful management. This case demonstrates the novel application of *Apamarga Kshara Taila* in burn wound debridement, integrated with Ayurvedic wound-healing strategies, offering a safe and cost-effective approach in metabolically compromised patients.

KEY WORDS: Burn, *Dagdha Vrana*, *Durdagdha Vrana*, *Apamarga Kshara Taila*, *Yashtimadhu Ghritha*.

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INTRODUCTION

Burn is defined as a wound in which there is coagulative necrosis of tissue. A burn represents damage to the body's tissues caused by various factors, including heat, chemicals, electricity, sunlight, or radiation. The most common causes of burns include scalds from hot liquids and steam, building fires, and exposure to flammable liquids and gases.^[1] Burn injuries can result in swelling, blistering, scarring, and in severe cases, shock and even death. Treatment depends on the cause, depth, and extent of the burn. Modern medicine uses antibiotic creams to prevent or treat infections. More severe burns require wound cleaning, skin replacement, careful management of fluids and nutrition, and prolonged pain management. Systemic and oral antibiotics are often administered early, which significantly reduces the chances of complications. However, persistent serous secretion after antibiotic use is a common complaint and may lead to contracture formation.^[2]

Āchārya Sushruta, has described burn injuries in detail in the *Agnikarma Adhyāya* of the Sushruta Samhita (*Sutrasthāna*). He classified burns into four types based on the extent and depth of tissue damage. *Plushta* refers to a mild, superficial burn without blistering—similar to a first-degree burn. *Durdagdha* is a more severe form with partial skin damage, blistering, and pain—comparable to a second-degree partial thickness burn. *Samyak Dagdha* represents (*Itaratha Dagdha*) and is compared with full-thickness burns, while *Atidagdha* indicates an excessive burn where deeper tissues like muscle and bone are affected, akin to third-degree burns in modern terms.^[3] The treatment for *Durdagdha* is the use of *Sheeta* (cold) and *Ushna* (hot) therapies along with

the use of *Ghritha* for *Seka* (pouring) and *Alepana* (anointment).^[4]

Rationale for Case Selection and Treatment Protocol: This case was selected due to its clinical complexity, involving a 63-year-old male with type 2 diabetes mellitus presenting with a chronic post-burn ulcer over the knee joint, a site described by *Āchārya* Sushruta as *Kṛcchrasadhyā* (difficult to heal) owing to constant movement and poor immobilization.^[5] Such prognostic factors usually delay recovery and increase the risk of contractures. *Apamarga Kshara Taila* (*AKT*) has been widely documented in the management of non-healing and diabetic ulcers, but there is a scarcity of reports on its use in burn wound management. In this case, it was selected specifically for the debridement phase, owing to its *Lekhana* (scraping), *Shodhana* (cleansing), and tissue debriding actions.

CASE REPORT:

A 63-year-old male, a farmer by occupation, presented with a non-healing wound involving the left knee joint. The injury had occurred one month prior due to accidental hot water spillage. He initially sought medical care at another hospital, where he was admitted and treated for seven days. However, due to unspecified reasons, he discontinued treatment and was discharged with no medical records available for review. He subsequently reported to the Outpatient Department of Shalya Tantra for further wound management. The patient is a known case of type 2 diabetes mellitus for the past one year and has been on Tablet Metformin 500 mg (one tablet twice daily before food) and Tablet Glimepiride 2 mg (one tablet once daily before food). He is also a diagnosed case of Benign Prostatic Hyperplasia (BPH) for the past seven months and has been taking Capsule

Tamsulosin Hydrochloride 0.4 mg (one capsule at night) for symptomatic relief. His past medical history included a blood transfusion in January 2025 for low Haemoglobin and a fracture of the right wrist joint sustained 53 years ago. His addiction history reveals chronic tobacco chewing approximately 3-4 packets per day for the past seven years.

Clinical findings:

On general examination, pallor and clubbing were present, while icterus, cyanosis, and lymphadenopathy were absent. Systemic examination revealed normal S1 and S2 heart sounds in the cardiovascular system; the patient was conscious and well-oriented to time, place, and person in the central nervous system; and bilateral clear air entry was noted in the respiratory system. Vital signs at the time of admission were within normal limits: pulse 78/min, blood pressure 128/76 mmHg, respiratory rate 18/min, temperature 96.1 °F, and SpO₂ 98%. Local examination of the wound has been given in Table 1 and relevant haematological, biochemical and other investigations has been given in Table 2. Other findings of haematological and biochemical, urine routine investigation were within normal limits and serology reports were negative.

DIAGNOSIS: *Dagdha Vrana* (Second Degree Burn)

THERAPEUTIC INTERVENTION:

Interventions used in the management has been given in Table 3. The medicines used in this case were procured from the Institute Pharmacy, where they are prepared in accordance with classical references under standardized procedures. The formulations were authenticated and their purity was ensured through routine institutional quality

control measures. The patient was admitted in the Shalya Tantra ward (IPD) and received once-daily supervised wound care until complete healing. Blood sugar level was checked every 15 days and it was found under control. As his haemoglobin was low, Tablet Iron and Folic acid 1mg (one tablet once daily after food) was continued.

Timeline of the study

The timeline of the study has been given in Table 4.

Local Care and Patient Advice: During the admission period, strict aseptic precautions were maintained during all wound care procedures. The patient was advised to keep the wound area clean, avoid trauma or friction at the knee joint, and wear loose cotton clothing to prevent irritation. Dietary advice (*Pathya–Apathya*) included easily digestible, light food, avoiding oily, spicy, and heavy meals, while encouraging adequate hydration to support wound healing. The patient was counselled regarding the importance of rest, regular follow-up, and adherence to medications.

Assessment:

Assessment of wound healing was done periodically. Assessment criteriae are given in Table 5. Progressive stages of wound healing are given in Figure 1 and assessment of wound is given in Table 6. The patient achieved complete wound healing in 72 days. The wound, which initially presented with delayed healing and persistent discharge, responded well to the therapeutic interventions. After 21 days of *Nimba Kwatha Prakshalana* and dressing with *Apamarga Kshara Taila*, there was a marked reduction in exudate and slough formation. Subsequent application of *Yashtimadhu Ghrita* promoted epithelialization and soft

tissue regeneration. Oral administration of *Kaishora Guggulu* and *Eranda Bhrishtha Haritaki* supported systemic detoxification and metabolic balance. By the end of the

treatment course, the patient had regained full functional use of the affected knee joint, with no signs of infection, hypertrophic scar, or contracture.

Table-1: Local examination of the wound

1. Inspection	
Site	Antero-medial aspect of Left knee joint
Number and size	One in number with 7.5 cm × 7 cm × 0.5 cm (Approx.)
Shape	Circular
Margins	Regular
Edges	Slopping
Floor	Pale granulation tissue with slough
Discharge	Purulent
Surrounding areas	Blackish hyperpigmentation
2. Palpation	
Size	7.5 cm × 7.3 cm × 0.3 cm
Margins	Regular
Base	Subcutaneous tissue
Tenderness	Absent
Temperature	Normal
Surrounding areas	Blackish hyperpigmentation
Lymphadenopathy	Absent
Peripheral pulses	Present (Femoral, Popliteal)
Peripheral sensation and joint position sensations	Present

Table-2: Relevant Haematological and Biochemical investigations

Investigation	Value
Haemoglobin	10.5 %
Total WBC	6800
Neutrophils	49.2
Lymphocytes	35.1
Eosinophils	7.4
Monocytes	7.4
Erythrocyte Sedimentation Rate	73 mm/hr
Random Blood Sugar	154 mg/d
HbA1C	7.5%
Albumin	3.51g/dL
Globulin	4.31 g/dL
S. HIV	Negative
S. HBsAg	Negative
S. HCV	Negative

S. VDRL	Negative
ECG	Right bundle branch block with left axis deviation and ST elevation.
Echocardiography	Good left ventricular systolic function (EF 60%) with mild bi-atrial dilatation and pulmonary hypertension (RVSP 40 mmHg).
Abdominal and pelvic ultrasonography	Mild BPH with features of chronic cystitis and bilateral moderate hydronephrosis with hydroureter and left-sided varicocele. There were no abnormal findings in other organs.

Table-3: Therapeutic intervention

Type of Intervention	Details
Local Treatment	<i>Vrana Prakshalana</i> (Wound Irrigation) with <i>Nimba Kwatha</i> - Topical application of <i>Apamarga Kshara Taila</i> for 21 days. - Topical application of <i>Yashtimadhu Ghritha</i> from Day 22
Oral Medications	<i>Kaishora Guggulu</i>: One gram thrice daily before food with warm water. <i>Eranda Bhrishtha Haritaki</i>: Five grams at bedtime with warm water.

Table- 4: Timeline of the study

Date	Procedure	Oral Medicines
16/02/2025 Day of first OPD visit	Advised IPD admission	
17/02/2025 to 26/02/2025 (Day 1 to 10)	<i>Nimba Kwatha Prakshalana</i> , <i>Apamarga Kshara Taila</i> local application followed by bandaging.	- Tablet <i>Kaishora Guggulu</i> (1 gram, thrice daily before food with warm water) <i>Eranda Bhrishtha Haritaki</i> (5gm at night with warm water) - Tablet Metformin 500 mg (one tablet twice daily before food) and - Tablet Glimepiride 2 mg (one tablet once daily before food) - Capsule Tamsulosin Hydrochloride 0.4 mg (one capsule at night) - Tablet Iron and Folic acid 1mg (one tablet once daily after food)
27/02/2025 to 09/03/2025 (Day 11 to	<i>Nimba Kwatha Prakshalana</i> , <i>Apamarga Kshara Taila</i> local application followed by bandaging.	Same as above

21)		
10/03/2025 to 28/03/2025 (Day 22 to 40)	<i>Nimba Kwatha Praksbalana, Yashtimadhu Ghritha</i> local application followed by bandaging.	Same as above
29/03/2025 to 17/04/2025 (Day 41 to 60)	<i>Nimba Kwatha Praksbalana, Yashtimadhu Ghritha</i> local application followed by bandaging.	Same as above
18/04/2025 to 29/04/2025 (Day 61 to 72)	<i>Nimba Kwatha Praksbalana, Yashtimadhu Ghritha</i> local application followed by bandaging.	Same as above

Table- 5: Assessment criteria ^[7]

Criteria	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Pain	No pain	Very light, barely noticeable pain	Mild Pain which is discomforting	Very noticeable pain	Strong deep pain. Distressing to patient
Burning sensation	No burning	Little localized and sometime feeling of burning sensation	Moderate localized and sometime feeling of burning.	More localized and often burning which does not disturb sleep	Continuous burning disturbing sleep
Discharge	No discharge	The gauze is slightly moist	The gauze is completely wet after opening the bandage	The bandage moist completely after 24 hours, but no need to change	Bandage moist completely in 24 hours and changed
Floor	Smooth regular floor with granulation tissue	Smooth, regular floor, pale granulation tissue, slight discharge without slough	Smooth, irregular floor, less granulation tissue slight discharge with slough	Rough floor, no granulation tissue with more slough.	

Itching	No itching	Slight localized itching sensation	Moderate localized itching sensation	More, localized but not disturbing sleep	Continuous itching which disturbs sleep
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Table- 6: Progressive stages of wound healing

Criteria	Day 1	Day 21	Day 41	Day 61	Day 72
Pain	3	3	1	1	0
Burning sensation	3	3	2	1	0
Discharge	4	2	0	0	0
Floor	3	2	2	1	0
Itching	4	2	1	0	0
Size	7.5 cm × 7.3 cm × 0.3 cm	5 cm x 5 cm x 0.1 cm	3 cm x 2.5 cm x 0.1 cm	0.5 cm x 0.5 cm x 0.1 cm	Wound healed Completely



Figure 1: Progressive stages of wound healing

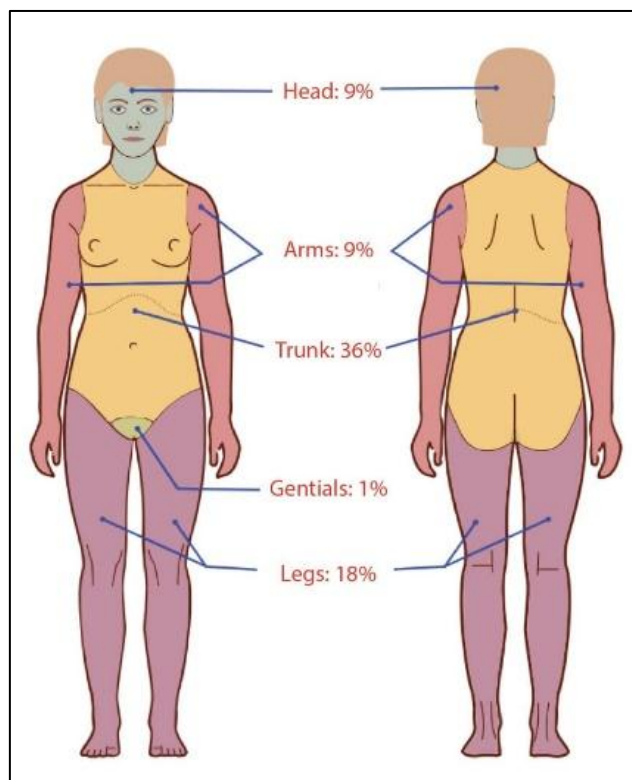


Figure- 2: Rule of Nines

OBSERVATIONS AND RESULT:

To objectively quantify the extent of burn injury, the Rule of Nines was employed. It offers to assess the Total Body Surface Area (TBSA) affected by burns.^[6] In the present case, the wound was localized over the anteromedial aspect of the left knee joint, as depicted in the red-circled region of the Figure 2. According to the figure:

- The anterior aspect of the left lower limb accounts for approximately 9% TBSA, and the affected region—being limited to the knee area only—was estimated to involve about 1–1.5% of TBSA.
- Despite being a small surface area, the involvement of a joint region, chronic non-healing nature, and the presence of underlying diabetes mellitus significantly increased the complexity of wound management.

DISCUSSION:

Burn injuries, especially in patients with diabetes mellitus, present a formidable challenge to wound management due to impaired immunity, delayed wound healing, and an increased risk of secondary infection and complications.^[8] In this case, the chronic non-healing ulcer over the knee joint highlighted the additional complexity associated with burns over joint regions, including risks of joint contracture and functional limitation.

From an Ayurvedic perspective, the case was diagnosed as *Durdagdha Vrana*—a condition characterized by the presence of *Sphota* (blisters), *Teevra Osha* (Severe dragging pain), *Daha* (burning sensation), *Raga* (redness), *Paka* (suppuration), *Vedana* (pain) and *Chiraat Upashaamyanti* (that endures for a prolonged duration). This classical correlation substantiates the use of current intervention tailored for *Durdagdha*, wherein

both *Shodhana* (cleansing) and *Shamana* (pacifying) therapies are emphasized to address the pathology described by *Acharya Sushruta*.

Rationale for the Chosen Interventions:

- **Vrana Prakshalana with Nimba Kwatha** ^[9]: *Acharya Sushruta* highlights *Kashaya* (astringent decoctions) as one of the primary modalities possessing dual action—both *Śhodhana* (cleansing) and *Ropana* (healing) properties.^[10] *Kashaya dravyas* help in reducing *Kleda* (moistness), controlling local infection through their *Krimighna* and *Kledahara* properties, and promoting granulation tissue formation by drying the wound bed and tightening tissues.^[11] *Nimba* (*Azadirachta indica* A. Juss.) has *Kushtagna* (anti-dermatosis), *Krimighna* (anti-helminthic), *Pitta Kaphahara* properties. *Neem* contains pharmacological constituents offering impressive therapeutic qualities, such as anti-viral, anti-fungal, antibacterial, anti-inflammatory, analgesic, and anti-carcinogenic. It has a complex of various constituents, including nimbin, nimbidin, nimbolide, quercetin, and sitosterol polyphenolic flavonoids from fresh leaves known to have anti-fungal, antibacterial activities.^[12] In the present case, the use of *Nimba Kashaya* for *Prakshalana* (cleasing) is supported by these attributes.
- **Apamarga Kshara Taila Dressing:** *Acharya Sushruta* has emphasized the use of *Pratisāranīya Ksāra* in the management of *Dushta Vrana*, supporting the rationale for its application in infected or non-healing ulcers for promoting healthy granulation and wound bed preparation.^[13] *Apāmārga Ksāra Taila*, originally mentioned in

Bhaishajya Ratnavali Karnarogadhikara, is known to possess excellent tissue debridement activity due to its potent *Shodhana* (cleansing) and *Lekhana* (debridement) properties.^[14] Additionally, its wound debridement properties, facilitate the removal of necrotic tissue from the wound floor and encourages healthy granulation, ultimately supporting the wound healing process and *Utsadana Karma* (induction of granulation).^[15] It contains *Apāmārga Kṣāra* (*Achyranthes aspera* Linn), which has tissue debridement property by creating an alkaline environment that helps dissolve slough and necrotic tissue.^[16]

- **Yashtimadhu Ghritha Dressing:** *Yashtimadhu Ghritha* was used further for external application owing to its *Vatahara*, *Pitta Shāmaka*, *Ropaka* (healing), *Dāhashāmaka* (soothing burns), and *Stambhaka* (astringent) actions. *Yashtimadhu* (*Glycyrrhiza glabra* L.) possesses *Madhura Rasa* (sweet taste), *Madhura Vipāka* (sweet post-digestive effect), *Śīta Vīrya* (cold potency), and *Vāta–Pitta Shāmaka* properties, which help in pacifying inflammation and supporting tissue regeneration ^[17,18]. It is also attributed with both *Vranaropana* (wound healing) properties.^[19] *Go Ghritha* serves as a soothing base, forming a thin film over the wound surface, thereby promoting early epithelialization. *Yashtimadhu* contains key phytoconstituents such as Glycyrrhizin and Asparagine—where Glycyrrhizin, a saponin, is well-documented for its anti-inflammatory properties, and Asparagine, an amino acid, exhibits analgesic and anti-inflammatory effects.^[20] *Yashtimadhu* also demonstrates healing, anti-ulcerogenic,

anti-inflammatory, and skin regenerative activities.^[21]

- **Oral medicines:** *Kaishora Guggulu*^[22], plays a supportive role in *Dagdha Vrana Chikitsa* due to its *Tikta-Kashaya Rasa*, *Laghu-Ruksa Guna*, and *Ushna Virya*, which help reduce *Kleda*, digest *Ama*, and clear *Srotorodha* (channel obstruction). It acts as a *Rakta Shodhaka* and *Tridosha Shamaka*, aiding in systemic detoxification and controlling inflammation associated with chronic wounds. Its *Madhura Vipaka* and *Rasayana effect* support tissue regeneration and wound healing.^[23] *Eranda Bhrishta Haritaki*^[24] (roasted *Terminalia chebula* in castor oil) possesses *Anulomana* (mild purgative) and *Amapacana* (detoxifying) properties, which help eliminate accumulated metabolic waste from the *Koshtha* (GI tract) and *Shakha* (peripheral tissues). By promoting digestion and regulating bowel movements, it aids in clearing *Ama*—the undigested toxic metabolites that impairs *Jatharagni* (digestive fire) and obstructs circulation. In context of *Dagdha Vrana*, the systemic detoxifying action of *Eranda Bhrishta Haritaki* supports proper tissue perfusion and healing by improving *Srotoshodhana* (channel clearance) and *Dosha* balance, especially in chronic or non-healing wounds.

Follow-up and Outcomes

The patient was followed up for five months post-discharge, with no recurrence or functional limitation noted.

CONCLUSION

Burn management is a challenging task; even after complete recovery complications such as contractures, discoloration and keloid

formation occur invariably. The present case was successfully treated with an integrated approach, i.e. Ayurveda and Modern medicine. The wound healed completely within 72 days of the treatment. Ayurvedic treatment modalities, as described above, offer a safe, cost-effective, and holistic alternative, with the potential to enhance healing, maintain joint mobility, and minimize complications.

Future scope of the study

Although this is a single-case report, the outcome highlights the potential of Ayurvedic therapies in burn management. Further clinical studies with larger sample sizes are recommended to validate and standardize this approach.

Adverse Drug Reaction (ADR)

No ADR was noted and reported during and after the treatment course.

Consent of patient

Written informed consent was obtained from the patient for both the therapeutic intervention and publication of the case details and accompanying images. The patient was assured that his identity would be kept confidential and that all efforts would be made to ensure anonymity.

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REFERENCES:

1. S. Das, A comparative text book of surgery, Burns, CBS Publication, Calcutta, 4th edition 2000;50.
2. S. A. Rajgopalshenoy K, Manipal manual of Surgery, Burns, Skin grafting and Flaps, CBS Publishers and distributors, New Delhi, 7th edition 2020; 210.
3. Thakral KK. Sushruta Samhita Sutrasthana 12/16. Chaukhambha Orientalia, Varanasi; Reprint Edition 2020. P- 124.
4. Thakral KK. Sushruta Samhita, Sutrasthana 12/22. Chaukhambha Orientalia, Varanasi; Reprint Edition 2020. P-127.
5. Vaidya Jadavji Trikamji Acharya, Sushruta Samhita, Sutrasthana, Chapter 23, Shloka 6. Chaukhambha Orientalia, Varanasi; Reprint Edition 2019. P. 111.
6. <https://www.ncbi.nlm.nih.gov/books/NBK513287/> [Last accessed on 12th February 2024]
7. Reshma Rajeevan, Dudhamal T.S. Efficacy of Jaloukavacharana (Leech Therapy) and Kasisadi Taila in the management of Venous Leg Ulcer- A Single Case Report. J Ayu Int Med Sci. 2025;10(7):353-359.
8. Aldekhayel, S., Khubrani, A. M., Alshaalan, K. S., Barajaa, M., & Al-Meshal, O. Outcomes and complications of diabetic burn injuries: a single center experience. International journal of burns and trauma 2021; 11(3):220–225.
9. Rudra Prasad Giri, Dr. Ajit K. Gangawane, Dr. Sucheta Ghorai Giri. Neem the Wonder Herb: A Short Review, IJTSD, 2019;3(3):962-967.
10. Thakral KK. Sushruta Samhita Chikitsasthana 1/9. Chaukhambha Orientalia, Varanasi; Reprint Edition 2020. P-169.
11. Sharma PV. *Dravyaguna Vijnana*, Chapter: Rasa Panchaka. Chaukhambha Bharati Academy, Varanasi; Reprint Edition 2011, Vol. 2. P-45–46.
12. Protiva Talukdar, Shivani A C, Prasanna Narasimha Rao. Integrated approach towards management of venous ulcer with Nimba Tila Kalka: a case report, Jour. of Ayurveda & Holistic Medicine, 2023;11(5): 88-96.
13. Thakral KK. Sushruta Samhita Sutrasthana 11/7. Chaukhambha Orientalia, Varanasi; Reprint Edition 2020. p. 106.
14. Joshi F, Dudhamal T.S. Tissue debridement effect of Apamarga Kshara Taila and adjuvant medications in the management of nonhealing venous ulcer: A case series. Med J DY Patil Vidyapeeth. 2021;14(5):549–553.
15. Joshi F, Dudhamal T.S., Wound healing effect of Apamarga Kshara Taila and adjuvant drugs in the management of Diabetic Foot Ulcer, Annals of Ayurvedic Medicine, 2020; 9(4):320-327.
16. Singh N, Dasar D. Healing properties of *Apamarga Kshara* (*Achyranthes aspera*) in Ayurvedic medicine: A narrative review. J Clin Diagn Res. 2024;18(9):PE01–PE05.
17. Vaidya Jadavji Trikamji Acharya, Sushruta Samhita Sutrasthana 5/42. Chaukhambha Orientalia, Varanasi; Reprint Edition 2019. P-23.

18. W. Dinesh, Dharne Vidya, Kashikar Shrikant, Yadav Sanjeev. A Comparative Study of Effect of Yashtimadhu *Ghritha* and Tikdadi *Ghritha* Locally in the Management of Post-Operative Fistulectomy Wound, IJAHM, 2016;6(5):2359-2365.
19. Dhariya Sanket, Rathod Amarsing, Dwivedi Amarprakash, A clinical study to evaluate the antiseptic and bactericidal effect of Yashtimadhu *Ghritha* in non-infected surgical wounds, IJAAR, 2015;2(3):248-252.
20. Patel JR, Dudhamal T.S., A comparative clinical study of Yashtimadhu *Ghritha* and lignocaine-nifedipine ointment in the management of Parikartika (acute fissure-in-ano). AYU. 2017;38(1-2):46-51.
21. Bhati Ravindra, Manindra Kumar Vyas, Monika Das, Role of Yastimadhu *Ghritha* Pratisarana in management of oral cancer, WJPR, 2020;9(3):352-360.
22. The Ayurvedic Formulary of India, Part 1, 2nd edition, Department of AYUSH, Ministry of Health and Family welfare, Government of India New Delhi, 2003: 204-224.
23. Bharati PL, Agrawal P, Prakash O, A case study on the management of dry gangrene by Kaishore Guggulu, Sanjivani Vati and Dashanga Lepa, Ayu, 2019;40(1):48-52.
24. Dwivedi V. Bhavaprakasha Nighantuhu. New Delhi: Motilal Banarasidas Publication; 9th ed. Reprint 2007. P- 7.12.