

Scalpel to Scar with Ayurveda: Post-Debridement Application of KampillakaTaila in a Leprotic Ulcer Case to Avert Amputation – A Holistic Case Report

BACKGROUND:

The resurgence of *ShalyaTantra* as a modern surgical discipline remains incomplete without honoring its foundational science — *Vrana Chikitsa*. Chronic neuropathic wounds, particularly in leprotic conditions, pose challenges to both classical and contemporary treatment approaches. *KampillakaTaila*, derived from *Mallotusphilippensis*, is a time-tested Ayurvedic formulation recognized for its *Ropana* (regenerative) and *Krimighna* (antimicrobial) properties. This case study exemplifies a truly integrative, innovative, and holistic wound care model. **OBJECTIVE:** To evaluate the clinical effectiveness of *KampillakaTaila* in the post-debridement management of a chronic leprotic wound, using a holistic integrative protocol based on Ayurvedic *Vrana Chikitsa*, modern surgical hygiene, *Rasayana* therapy, and mind-body support. **Methodology:** A 53-year-old female with a non-healing leprotic plantar ulcer underwent surgical debridement, followed by some weeks of antibiotics. Thereafter, a fully integrative protocol was initiated: **Topical care:** *KampillakaTaila* application **Internal Rasayana:** *Guduchi*, *Ashwagandha* **Lifestyle & Support:** *SatvavajayaChikitsa*, balanced diet, foot offloading. **Monitoring:** Weekly wound assessment with five clinical parameters over 49 days (up to wound healing) **Results:** Surface area reduced from 1200 mm² to 14.2 mm² (98.8%) Pain, odour, discharge, and granulation scores reached 0 by Day 21 Mean healing rate: 24.2 mm²/day (± 12.72), 5.58%/day ($\pm 3.59\%$). No recurrence, reinfection, or second debridement required. **Conclusion:** This case successfully demonstrates how the integration of *KampillakaTaila* with surgical care, internal *Rasayana*, and psychosomatic healing forms a complete therapeutic system. It fulfills the holistic, evidence-based, and culturally rooted approach to modern surgery, where traditional wisdom informs innovation.

Keywords: *KampillakaTaila*, Leprotic Ulcer, Post-Debridement Healing, Integrative Wound Care, *Rasayana*, *SatvavajayaChikitsa*, Holistic Approach

INTRODUCTION:

The global incidence of leprosy is **21.2** cases per million individuals. In India, the rate of leprosy is **0.62** for every **10,000** people.¹ Research indicates that about **7%** of leprosy patients have foot ulcers. However, for those who have lost feeling in their feet, this rate can rise to **34%**.² This shows how important neuropathy is in causing ulcers. **Leprosy** is a chronic infectious disease caused by *Mycobacterium leprae*, primarily affecting the skin, peripheral nerves, mucosa of the upper respiratory tract, and eyes.³ It manifests in a wide clinical spectrum, from tuberculoid (paucibacillary) to lepromatous (multibacillary) forms, depending on the host's immune response. Neuropathy is a hallmark of the disease, leading to loss of sensation, muscle weakness, deformities, and secondary complications such as trophic ulcers. A **leprotic ulcer**, also referred to as a **trophic** or **neuropathic ulcer**, is characterized as a chronic ulceration occurring on an anesthetic foot.⁴ The presence of a leprotic ulcer significantly contributes to the morbidity associated with leprosy.

Chronic, non-healing lesions known as leprotic ulcers are common among individuals with **Hansen's disease (leprosy)**, particularly those who also have **peripheral neuropathy**. These ulcers have multifactorial aetiology with lesions due to weakening of the immune response, unnoticed trauma to affected areas, bacteriologic super-infection, loss of sensory detection and poor wound management.^{5,6} The ulcers are difficult to treat due to limited vascularization, ongoing mechanical loading and decrease in nociceptive response. They occur at sites of weight-bearing, typically on the plantar surfaces.⁷ These ulcers have a strong tendency towards recurrence and often require systematic and local treatment.

Leprosy (Hansen's disease) is one of the main skin diseases subsumed by **MahaKushta**, and is identified in Ayurveda as a form of **Kushta**.^{8,9} Leprosy is chronic, progressive, and deforming properties map exactly onto the definitions of **Kushta**, which contain more than one **Dhatu** (**Rasa**, **Rakta**, **Mamsa**, and **Lasika**), and all three **Dosha**.¹⁰ Other characteristics that are clinically present in leprosy can be frequently observed, as the clinical manifestations of both **Kitibha** and **KakapadaKushta**.¹¹

सप्तद्रव्याणिकुष्ठानां प्रकृतिर्विकृतिमापन्नानि^[३] भवन्ति।
तद्यथा- त्रयोदोषावातपित्तश्लेष्माणः प्रकोपणविकृताः,
द्रव्याश्च शरीरधातवस्त्वङ्मांसशोणितलसीकाश्चतुर्धा^[३] दोषोपघातविकृता इति।

(Cha. Ni 5/ 1, 2)

As a substantial discontinuity or breach of structural integrity in the body often represented as a wound, ulcer or lesion, **Vrana** is a technical term in Ayurveda.¹² There are references to **Vrana** in Indian Ayurvedic medical literature are innumerable, demonstrating its positional significance in **Shalya Tantra**. **Vrana** may be broadly classified into two categories: **Dushta Vrana** and **Shuddha Vrana**. **Dushta Vrana** is a chronic or infected wound, while, **Shuddha Vrana** is a clean or healing wound. **Dushta Vrana** represents non-healing, unpleasant, infected wounds with poor regeneration potential as a result of **Tridosha** vitiation and **DhatuKshaya** (tissue degeneration). Meanwhile, **Shuddha Vrana** typically depicts acute wounds with good granulation tissue and predictable healing.

Charaka elucidates the chronicity of **Dushta Vrana**—its deformity and excess discharge, but **Sushruta** lists its assortments of proprieties as: blackish discoloration, purulent exudate, putrid odor, severe pain, and irregular margins¹³. In Ayurvedic pathogenesis, these wounds may occur from imbalances within (**Nija Vrana**), or external traumas (**Agantuja Vrana**).¹⁵ Therapeutic options commonly include **Vrana Shodhana** (disinfecting/cleaning), **Vrana Ropana** (healing), **Rasayana** (rejuvenation) along with lifestyle modifications; thus, emphasizes a holistic approach to management and aims to restore both dynamics locally and systemically in the body.¹⁶

वृणोति^[३९] यस्माद्ब्रूतेऽपि व्रणवस्तुन नश्यति ।
आदेहधारणात्तस्माद्ब्रूण इत्युच्यते बुधैः^[४०] ॥४०॥

121 Symptomsofleprosy can be classified as *Nija Vrana Kushta*, whichisan ulcerative skin
 122 disease of internal origin dueto systemic *Dosha* vitiation, in the chronic conditionin which
 123 ulceration is occurring. This provides conventional classification for the treatment and a
 124 deeper understanding of the disease's pathophysiology. Conventional wound
 125 managementistypicallytheprovision of antibiotics and surgical debridement, butchronic ulcers
 126 relatedto leprosy often have a delayed response or recurrence. This highlights the importance
 127 of combined integrative treatment plans,whichinclude evidence-based *Ayurvedic*formulations
 128 withcontemporarybiomedicaltreatment plans, forinstance,*KampillakaTaila*.*Kampillaka* is the
 129 Latin name for *Muell, Mallotusphilippinensis. Arg.*, and it is partof the *Euphorbiaceae*
 130 family. ¹⁶Among eight *Sadharana Rasas*¹⁷ which have been classified,it was described as a
 131 *Phalinidravya*¹⁸ by *Acharya Charaka* and included in the *Shyamadi varga*¹⁹by *Acharya*
 132 *Sushruta*.*Suvarnadivarga* in *Raja Nighantu*has this plant,*ChandanadiVarga*²⁰
 133 of*DhanvantariNighantu*has it. ²¹*Kampillaka*hasbeenmentionedtocurevarious ailments,
 134 including *udara, gulma, krimiroga, prameha, raktvikara, kshatha, kushta, and virechana*²²;
 135 however, of significance is its use in (wound) *vrana*. While discussing
 136 *vrana*,*AcharyaCharaka*inthe discussiononthe*DwivraniyachikitsaAdhyaya*,
 137 stated*KampillakTaila'svranaropak*²³ property

138 “दूर्वास्वरससिद्धंवातैलंकम्पिल्लकेनवा।

139 दार्वीत्वचश्चकल्केनप्रधानं व्रणरोपणम् ।”

140 (Ch.Chi.25/93)

141 These typesof treatment aim to restore tissue integrity and systemic equilibrium holistically
 142 aswellasalleviatesymptoms. Leprosy and *AyurvedicKushta*conveystriking similarities, which
 143 reinforce the importance of anintegrative treatment plan that utilizes*Shodhana*(detoxifying),
 144 *Shamana* (palliative), and *Rasayana*(rejuvenative)therapies.²⁴This integrative
 145 frameworkpromotes the inclusion of both modern dressings and approaches to wound care
 146 with traditional *Ayurvedic* treatments to better address complex chronic wounds. The aim of
 147 this study is to illustrate how effectively*KampillakaTaila* works to enhance wound healing
 148 after debridement in leprosy ulcers, though a modern integrativeframework.

149 CASE PRESENTATION:

150 A 53 year old female,accompanied by her son,presented to our OPD of *Shalyatantra*with
 151 complaints of Non-healing ulcer at plantar aspect of right foot associated with a foul smell for
 152 the past 3 years,pain and pus discharge from ulcer from last 8 days.She also had toe
 153 deformities.She was previously advised below knee amputation at another hospital and came
 154 to us for a second opinion .After taking history found that she was a known case of leprosy
 155 since 12 years with no history of Diabetes, Hypertension and any other systemic illness.

Vitals of patients were within normal limits.No any systemic abnormality detected.Routine blood test were within normal limits.Orthopaedic consultation was taken advised below knee amputation due to deep seated infection involving bone.Considering patients relatively middle age,potential postoperative disability and impact on quality of life ,we opted for a conservative surgical approach.

Table No 1. Ulcer Assessment Criteria

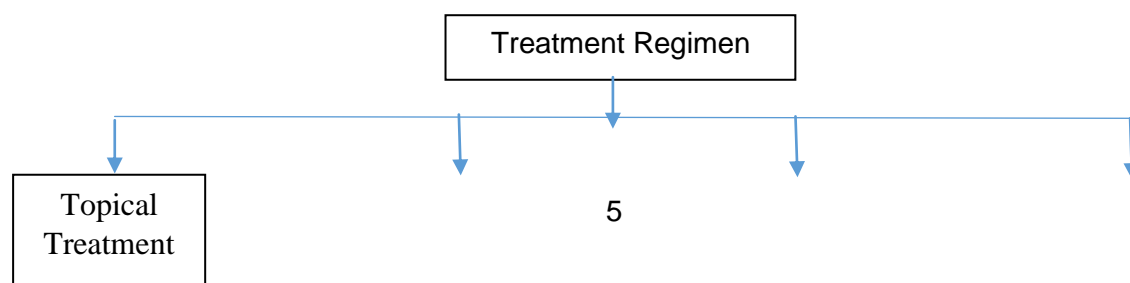
Sr No.	Criteria	Findings
1	Location	Plantar aspect of right foot and at webspace between 2 nd and 3 rd toe
2	Number	3
3	Size	3^3 cm ,2^1 cm,1^1cm
4	Shape	Oval
5	Exudate (Amount and Consistency)	Mild ,Thick
6	Necrotic Tissue (Slough)	Present
7	Margins	Irregular and oedematous
8	Edges	Irregular ,not well defined
9	Floor	Pale yellow
10	Odour	Mild
11	Surrounding Skin	Swelling
12	Sinus tracts and tunnelling	Present

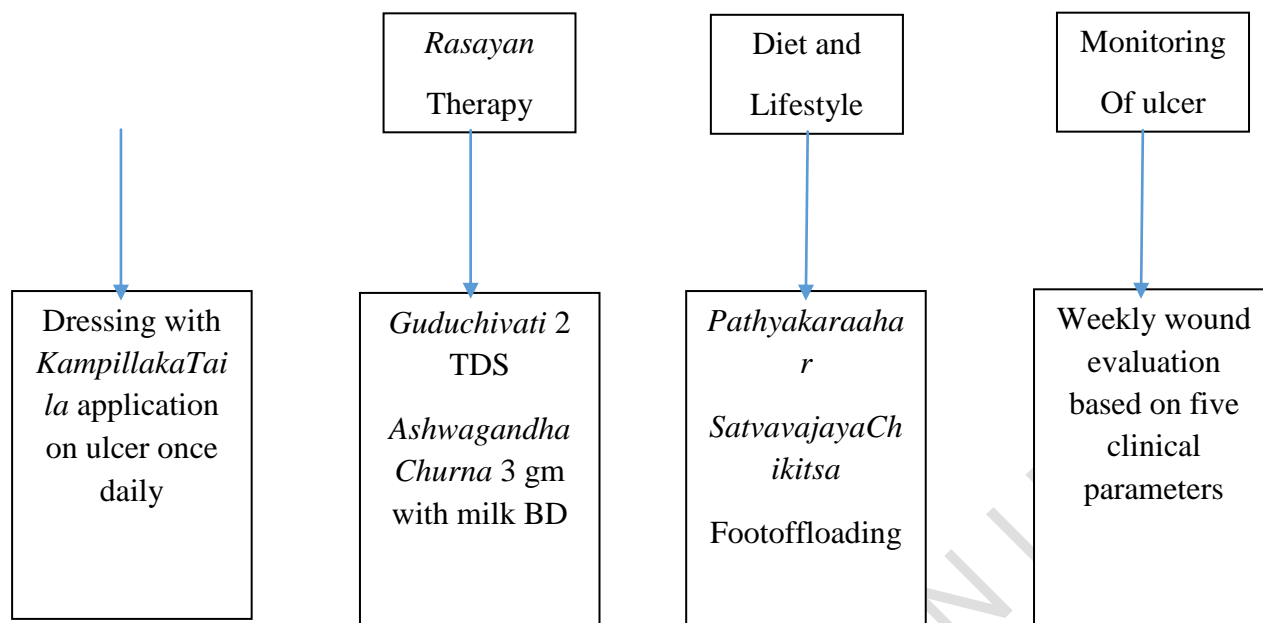
The patient was admitted and underwent surgical debridement of ulcer .After that following postoperative protocol administered for 5 days to prevent secondary infection,as the ulcer extended to the bone level.

Postoperative Management:

Sr No.	Drug Name	Route	Dose
1	InjPiptaz 4.5gm in 100 ml NS	IV	TDS
2	Inj Pan 40 mg	IV	OD
3	Tab Acticlosp	Oral	BD
4	Tab Chymoral Forte	Oral	BD
5	Tab Limcee 500 mg	Oral	BD

Above treatment was given for 5 days and then following treatment regimen given :





CLINICALASSESSMENT CRITERIA FOR STUDY :

Subjective criteria – 1. *Vrana Vedana* (Pain)

Objectivecriteria -

1. *Vranaakruti* (Surface area)
2. *Vrana strava* (discharge)
3. *Vranagandha* (odour)
4. *Vranavarana* (color of granulation tissue)

SUBJECTIVE CRITERIA:

VranaVedana (Pain):

Pain will be assessed on Visual analogue scale.

Table no. 1:

Explanation	Score	Grade
No pain	0	0
Mild pain	1-3	1
Moderate pain	4-6	2
Severe pain	7-10	3

Objective Criteria –

1. *Vrana Akruti* (Surface area):

197 Size of wound will be taken by length and width of Wound.

198 This equation is to calculate the area of irregular surface

199 Kundin's formula - $Akun = L \times W \times 0.785 \text{ mm}^2$

200 **2.Vrana Strava (Discharge):**

201 **Table no.2.: Assessment criteria for Strava (Discharge)**

Signs	Grade
No discharge	0
Mild discharge (If the patients wets 1 gauze piece in 24 hrs)	1
Moderate discharge (If the patients wets 2 gauze pieces in 24 hrs)	2
Severe discharge (If the patients wets more than gauze pieces in 24 hrs)	3
Excruciating discharge (Continuous and profuse discharge)	4

202 (Size of gauze piece – 10 cm ^10cm double layered)

203 **3.Vrana Gandha (Odour)**

204 **Table no. 3: Assessment criteria for Gandha (odour)**

Signs	Grade
No smell	0
Minimal bad smell	1
Tolerable unpleasant smell	2
Foul smell which is intolerable	3

205

206

207

208 **4. VranaVarna (color of granulation tissue):**

209 **Table no. 4: Assessment criteria for Varna / Granulation tissue formation**

Signs	Grade
Normal pigmentation	0
Brown color	1
Grey color	2
Pale yellow /blue /reddish color	3

210

211 **Drug Name:** *Kampillakataila*(prepared in our rasdept)

212 **Dose:** 2 to 3 ml as per requirement of local application on wound

213 **Duration:** Till complete healing of wound

214 **Follow up:** 1st, 7th, 14th, 21st upto wound healing



215

216

Fig. 01 *KampillakaTaila*

217 **OBSERVATION:**

218 The patient was observed over a period of 49 days following surgical debridement and the
219 initiation of an integrative treatment protocol involving *KampillakaTaila*, Internal *Rasayana*,
220 and supportive therapies.

Day	Vrana Vedana	Vranaakruti(mm2) Length ^ Breadth	Vranastrava	Vranagandha	Vranavarna
1 st	2	1200	3	2	1
7 th	2	857.1	2	1	1
14 th	1	714.2	1	1	1
21 st	0	571.4	0	0	0
28 th	0	342.8	0	0	0
35 th	0	257.1	0	0	0
42 nd	0	114.2	0	0	0
49 th	0	14.2	0	0	0

221

222 The five *Ayurvedic* clinical parameters—*Vrana Vedana* (pain), *Vrana Akruti* (surface area in
223 mm²), *Vrana Strava* (discharge), *Vrana Gandha* (odor), and *Vrana Varna* (color/granulation
224 tissue appearance)—were used in assess the progress of the patients wound healing abilities.
225 The assessment of **Day 1** revealed a large painful ulcer, measuring **1200 mm²** in surface area,
226 with dusky granulation tissue, huge amounts of discharge and an offensive odor. During
227 further assessments for a weekly basis evidence presented with consistent improvement
228 value. At **Day 14** the granulation tissue became more ordered with pain and discharge
229 significantly decreased. By **Day 21**, the *Vrana Akruti* decreased the surface area to **571.4**
230 **mm²** simultaneously the pain, discharge, odor and appearance of color and granulation tissue
231 were resolved (all scoring 0). After **49 days**, only **14.2 mm²** of surface area remained,
232 **98.82%** reduction in wound surface area, and the wound nearly closed completely due to
233 time and consistency of *KampillakaTaila* and supportive care, demonstrating that the
234 subjective and objective issues, have all been resolved.

235

236



Figure 3. Before Surgery Figure 4. Day 1

Figure 5. Day 7
(Granulation Tissue Formation)



Figure 6. Day 35th (Healing Stage)

Figure 7. Day 49th (Healed Scar)

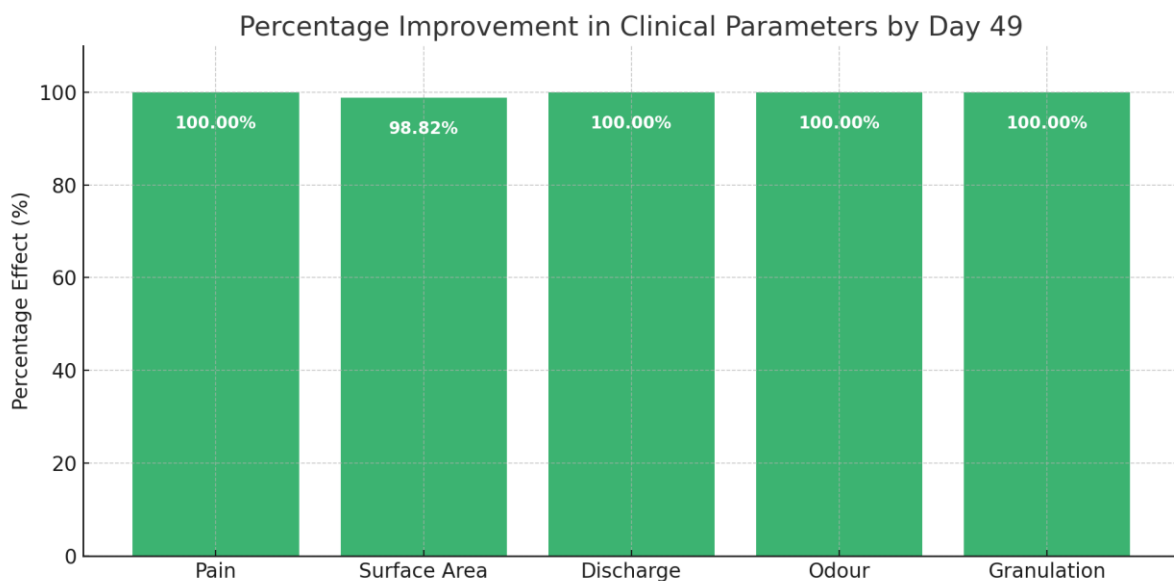
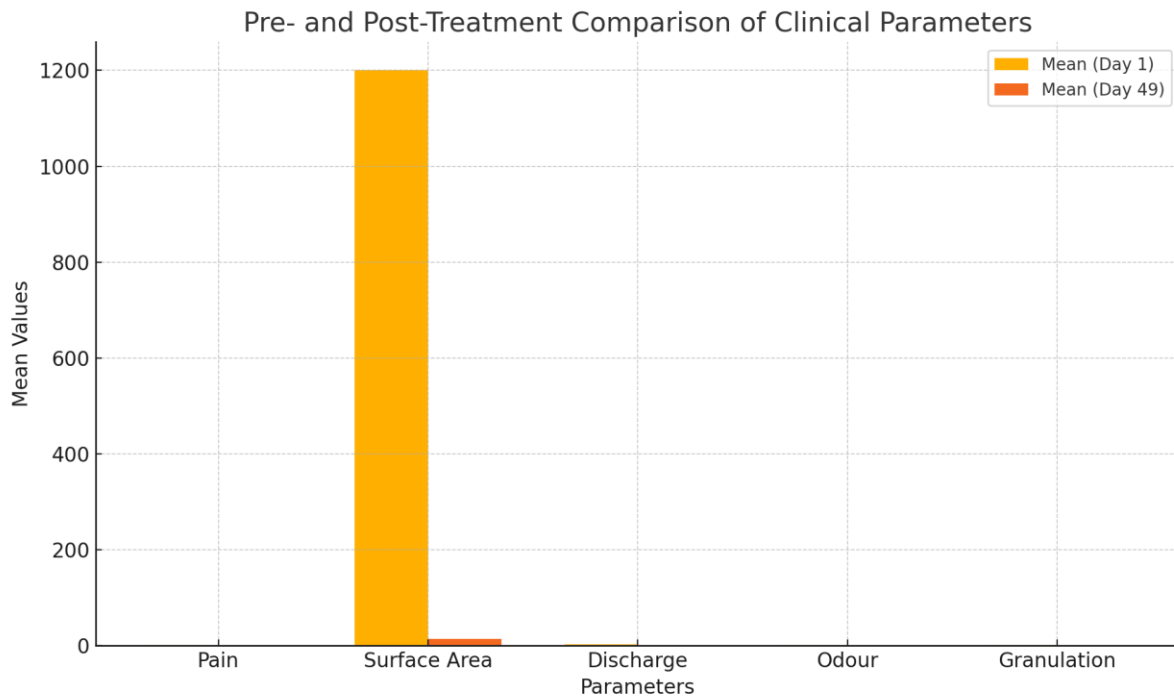
STATISTICAL ANALYSIS:

By **Day 49**, all parameters subjected to assessment had shown statistically significant clinical improvements attributed to the standardized holistic wound management protocol. In the case of the **pain** score, the mean decreased from 2.0 to 0.0, a **100% decrease** ($p < 0.05$, Wilcoxon signed-rank), with a **standard deviation of 0.92**. In the case of **discharge and odor**, the mean baseline scores were 3.0 ($p < 0.05$) and 2.0 ($p < 0.05$), and both reached 0.0 by Day 49,

with **standard deviations of 1.16 and 0.76** respectively, again representing **100%** improvements. In one important objective measure, the wound **surface area** decreased from **1200.0 mm² to 14.2 mm²**, a contraction of 98.82 percent, with a **standard deviation of 402.92**. This was statistically significant ($p < 0.05$). The **granulation tissue** score increased from 1.0 to 0.0 (100 percent effect, **SD=0.52**) . The **Wilcoxon signed-rank test** was employed to verify the changes were not due to chance, but represented an actual therapeutic benefit. These outcomes demonstrate the effectiveness of the *KampillakaTaila* ,*InternalRasayana* And Lifestyle Regulations in facilitating complete and sustained wound healing.

Sr. No	Parameter	Mean(Day 1)	Mean (Day 49)	Standard Deviation	% Effect
1	Pain	2.0	0.0	0.92	100.00 %
2	Surface area	1200.0	14.2	402.92	98.82 %
3	Discharge	3.0	0.0	1.16	100.00%
4	Odour	2.0	0.0	0.76	100.00%
5	Granulation tissue	1.0	0.0	0.52	100.00 %

Graphical representation also shows a continued decrease in the mean scores for all parameters and confirmed that by **Day 49** clinical outcomes are **98 % to 100 % effective**. No recurrent signs, secondary infections, or further debridement were identified in one follow-up period. All wound parameters analyzed demonstrated significant change over the course of 49 days from the integrative treatment plan of topical *KampillakaTaila*, internal *Rasayana* therapy, and lifestyle modifications.



DISCUSSION:

Integrative Holistic Wound Care in a Leprotic Ulcer

This case shows how effective a thorough strategy can be in treating a chronic foot ulcer linked to leprosy. After the initial surgery to remove dead tissue and antibiotic treatment for the infection, the patient's plan combined *Ayurvedic* ideas with modern wound care. Key aspects included using topical *KampillakaTaila* dressings, administering *Rasayana* therapy with *Guduchi* and *Ashwagandha*, and providing additional support measures like stress

management through *SatvavajayaChikitsa*, a nutritional diet, and foot offloading. By treating the wound locally and improving the patient's overall healing ability and mental health, this approach created a favourable environment for recovery. The method draws from traditional *Ayurvedic Vrana Chikitsa* while connecting age-old wisdom with current surgical practices, illustrating how established knowledge can lead to new ideas in wound care.

1) *KampillakaTaila* – Traditional Wisdom and Wound-Healing Efficacy

The topical use of *KampillakaTaila*, an herbal oil made from *Mallotusphilippensis*, also known as Kamala, played an important role in managing wounds. *Ayurvedic* literature praises *Kampillaka* as a "**miracle remedy**" for injuries. It falls under *Sadharana Rasa* and is known for its strong wound-healing and antimicrobial properties. *Mallotusphilippensis* contains many bioactive compounds, such as **flavonoids, tannins, and saponins**, which offer **anti-inflammatory** and **antimicrobial benefits**. Applying this oil helps promote the growth of healthy granulation tissue and new skin cells. It improves local blood flow and keeps the wound moist and sterile. A pilot study on acute wounds found *KampillakaTaila* to be both safe and effective. Its benefits are related to **strong anti-inflammatory, antimicrobial, and pain-relieving effects**.

In this case, the wound's condition quickly improved after *KampillakaTaila* dressings were applied. Three weeks after beginning the oil treatment, the ulcer was filled with healthy granulation (as shown by those parameters scoring 0 by day 21) and all symptoms of infection and inflammation had all but vanished, including pain, discharge, and an unpleasant odor. The antimicrobial qualities of the oil probably kept the wound clean after debridement and avoided further infections. Its tissue-regenerating and anti-inflammatory properties would have facilitated the ulcer's rapid contraction and epithelialization. Crucially, over the course of **49 days**, the ulcer's surface area shrank by roughly **98.8% (from 1200 mm² to just 14.2 mm²)**, with an average healing rate of roughly **24 mm² per day**. This improvement demonstrates *KampillakaTaila's* efficacy as a natural wound-healing agent that supports the body's natural healing processes without the need for additional antibiotics or surgical debridement. Essentially, the herbal oil served as a bioactive dressing, continuously delivering antimicrobial and pro-healing agents to the wound site to sustain the healing process initiated by surgery.

s

2) *Rasayana* Therapy – Internal Rejuvenation and Immune Support

Guduchi(*Tinosporacordifolia*) and *ashwagandha* (*Withaniasomnifera*) alongwiththe*Ayurvedic*treatment*Rasayana*,bothweretakenorally. Rejuvenators such as *rasayanas*are thought to improve immunity, abilityto regenerate, and ability to withstand stress. These herbs providedimportant systemic help for chronicwoundhealing.

***Guduchi* (*Tinosporacordifolia*):**

Guduchi is a traditional *Rasayan* that **supports immunity and tissue repair**. *Ayurveda* claims that it has *vrana-rohana* (wound-healing) properties and is a **potent immunomodulator**. Ancient surgeons were aware of its efficacy in healing wounds. Recent research has validated *Guduchi's* role in wound healing; in experimental models, *Tinospora cordifolia* extracts have demonstrated a significant improvement in wound healing, including increased granulation tissue production, reduced inflammation, and faster re-epithelialization. Its antimicrobial and anti-inflammatory qualities can help promote healing by lowering the bioburden on the wound bed. Along with *Kampillaka Taila's* local action, *Guduchi* most likely improved the body's capacity for self-healing and the immune system's ability to prevent reinfection.

***Ashwagandha* (Withania somnifera):**

Another popular *Rasayana* that reduces stress and increases energy is *ashwagandha*. Chronic wounds are considered a local pathology and stress to the whole person; systemic stress can impair wound healing. Increases in stress on the body and mind elevate cortisol and sympathetic neurotransmitter levels that significantly decrease wound healing and could increase susceptibility to infection. *Ashwagandha* **decreases stress and increases the immune** system and healing hormones. Clinical studies have shown that administration of *ashwagandha* can decrease chronic stress levels and reduce serum cortisol. In addition, *ashwagandha* appears to have **antioxidant** and **anti-inflammatory** properties that could help support tissue healing. In the holistic treatment plan that was put in place, it is likely that *ashwagandha* helped reduce the patient's stress and the subsequent fatigue thereby indirectly hastening improved wound healing through neuroendocrine-immune regulation accelerating wound healing through **neuroendocrine-immune modulation**.

As internal co-therapies, *guduchi* and *ashwagandha* worked together to address systemic variables involved in the complex task of wound healing. *Ashwagandha* provides benefits in revitalizing & reducing stress and *Guduchi* provided immune system support, enhancing efficacy and supporting healing directly. In addition to facilitatively assisting tissue healing, this internal support likely improved the patient's energy, sleep, and overall sense of wellness throughout the healing process, which, although critical, are often overlooked treatment outcomes for wound healing.

3) Mind-Body Support and Lifestyle Interventions

The incorporation of lifestyle and mind-body interventions into the treatment plan is particularly remarkable in this case demonstrating a truly holistic approach. The *Ayurveda* method of mind-control and psychological therapy, *Satvavajaya Chikitsa* was used to enable the patient to cope with the emotional burden of a chronic illness and a non-healing wound. As psychological stress has been scientifically demonstrated to have a real negative impact on wound healing physiology, stress management strategies (**stress management**

counselling, meditation, or other mind-calming exercises) would have helped reduce anxiety and depression. Moreover, a motivated mentally balanced patient is more responsive to unloading the foot, maintaining hygiene in the wound area and adhering to dietary recommendations, thus psychosomatic support likely augmented patient compliance by keeping the patient upbeat and stress-free, as if an imaginary pharmacological intervention had a similar augmenting role in assistance with compliance.

The protocol also emphasized **dietary nutrition and offloading**, two pragmatic aspects of integrative care:

- A balanced diet rich in **proteins, vitamins A, C, and D, zinc** and other nutrients was recommended to provide the **building blocks for tissue healing**. The basis of wound healing is nutrition; for example: collagen formation requires sufficient protein, while vitamins C and zinc are important for the immune system and tissue regeneration. In this specific case, providing the patient with a healthy diet that was perhaps modified for easy digestion and anti-inflammatory according to *Ayurveda*, would have hastened the healing of the ulcer and fortified the integrity of the skin to act as a food-based *Rasayana*.
- **Offloading** was used to relieve pressure to the plantar ulcer. Offloading, that is using rest, specialized footwear or crutches to halt further stress on the ulcer and allow healing. Because the patient's ulcer was in a weight-bearing location, offloading would preserve newly formed tissues since the ulcer would have broken down with an activity pattern of regular walking.

RESULTS:

Five *Ayurvedic* clinical parameters—*VranaVedana* (pain), *VranaAkruti* (surface area in mm²), *VranaStrava* (discharge), *VranaGandha* (odor), and *VranaVara* (granulation tissue appearance)—were used to assess the patient's wound healing progress. The initial assessment on **Day 1** revealed a large, painful ulcer measuring a total surface area of **1200 mm²**, dusky granulation tissue, a foul odor, and moderate to copious discharge. All parameters showed consistent improvements with weekly assessments. By **Day 14**, a more organized granulation tissue was encountered, and pain and discharge had decreased significantly. The wound surface area continued to decrease by **Day 21** to **571.4 mm²** and all *VaranVedana*, *Strava*, *Gandha* and *Varna* were resolved (all had a score of 0). By **Day 49**, *KampillakaTaila* application was consistent along with internal *Rasayana* therapy and lifestyle changes. The wound was nearly closed with only **14 .2 mm²** of surface area remaining representing a **98.82 %** reduction of the surface area.

After 49 days, the wound area decreased from **1200 mm² to 14.2 mm² (98.8 percent)**; pain, discharge, odor, and granulation all returned to **normal by Day 21**; the **mean rate** of healing was **24.2 mm²/day (5.58 percent reduction per day)**; and there was no recurrence, reinfection, or need for second debridement.

CONCLUSION:

- **Kampillaka Taila** which integrates *Ayurvedic* teachings with contemporary surgery, wondrously accomplished a **safe, low-cost, and culturally aligned model** for treating chronic wounds.
- **Holistic tissue repair** is accomplished when contemporary surgical methods are merged with *Ayurvedic* treatment.
- **Complete closure of a wound, resolution of symptoms, and no recurrence or complications** were obtained, which lends credence to the **classical framework of Vranachikitsa** and avoids the need for future surgeries or extended antibiotics. A new **biopsychosocial model** for wound care emerged.
- Through an integrative and holistic approach, this study aids in **treating the patient, not just the ulcer.**

REFERENCES :

1. World Health Organization (WHO). Global leprosy update 2023: Reversing the decline in new case detection. *Wkly Epidemiol Rec.* 2023;98(36):429–448.
2. National Leprosy Eradication Programme (NLEP). *Progress Report for the Year 2022–23*. Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India.
3. Britton WJ, Lockwood DNJ. Leprosy. In: Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, editors. *Harrison's Principles of Internal Medicine*. 20th ed. New York: McGraw Hill Education; 2018. p. 1253–1257.
4. Riyaz N, Sehgal VN. *Trophic, or neuropathic, ulcer* — a chronic ulceration of the anesthetic foot, situated in well-defined areas overlying bony prominences, resistant to local and/or systemic therapy, and characterized by a marked tendency to recur. *BMC Complement Altern Med.* 2017;15:123
5. World Health Organization (WHO). *Global leprosy update 2023: Reversing the decline in new case detection*. *Wkly Epidemiol Rec.* 2023;98(36):429–448.
6. National Leprosy Eradication Programme (NLEP). *Progress Report for the Year 2022–23*. Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India. Available from: <https://nlep.nic.in>
7. Ebenezer M, Andrews P, Solomon S. Plantar ulceration in leprosy: a retrospective study. *Indian J Lepr.* 2012;84(2):99–105.
8. Acharya YT, editor. *Charaka Samhita*, Chikitsasthana Chapter 7/26–30. Varanasi: Chaukhamba Surbharati Prakashan; 2009.
9. Sharma PV. *Sushruta Samhita with Nibandha Sangraha Commentary*. Nidanasthana 5/5–6. Varanasi: Chaukhamba Visvabharati; 2012
10. Acharya YT, editor. *Charaka Samhita* of Agnivesha, revised by Charaka and Dridhabala with commentary of Chakrapanidatta. Nidanasthana, Chapter 5, Shloka 1–2. Varanasi: Chaukhamba Surbharati Prakashan; 2009.

11. Chuneekar KC, Pandey GS, editors. *BhavaprakashaNighantu* of Bhavamishra. HaritakyadiVarga 2/130. Varanasi: ChaukhambaBharati Academy; 2012
12. Acharya YT, editor. *Sushruta Samhita* of Sushruta, with Nibandhasangraha commentary by Dalhana. Sutrasthana, Chapter 21, Shloka 40. Varanasi: ChaukhambaSurbharatiPrakashan; 2012.
13. Acharya YT, editor. *Sushruta Samhita* of Sushruta. Sutrasthana, Chapter 22, Shloka 9. Varanasi: ChaukhambaSurbharatiPrakashan; 2012.
14. Acharya YT, editor. *CharakaSamhita* of Agnivesha, revised by Charaka and Dridhabala, with commentary by ChakrapaniDatta. Chikitsasthana, Chapter 25, Shloka 85. Varanasi: ChaukhambaSurbharatiPrakashan; 2009.
15. Acharya YT, editor. *CharakaSamhita* of Agnivesha, revised by Charaka and Dridhabala, with commentary by Chakrapanidatta. Chikitsasthana, Chapter 19, Shloka 7. Varanasi: ChaukhambaSurbharatiPrakashan; 2009.
16. Sharma PV. *DravyagunaVigyan*, Vol. II. Varanasi: ChaukhambaBharati Academy; 2010. p. 521
17. Vaidya YadavjiTrikamji Acharya, editor. *Ayurveda Prakasha* of Madhava, Chapter 2, Shloka 335. Varanasi: ChaukhambaBharati Academy; Reprint edition, 2007.
18. Acharya YT, editor. *CharakaSamhita* of Agnivesha, revised by Charaka and Dridhabala with commentary of ChakrapaniDatta. Sutrasthana, Chapter 4. Varanasi: ChaukhambaSurbharatiPrakashan; 2009.
19. Acharya YT, editor. *Sushruta Samhita* of Sushruta, with Nibandhasangraha commentary by Dalhana. Sutrasthana, Chapter 38. Varanasi: ChaukhambaSurbharatiPrakashan; 2012.
20. Sharma PV (Acharya Priyavrat), editor. *DhanvantariNighantu*. ChandanadiVarga, Shloka 3/146. Varanasi: ChaukhambaOrientalia; n.d..
21. Chuneekar K, Pandey GS, editors. *Raja Nighantu*. SuvarnadiVarga. Varanasi: ChaukhambaKrishnadas Academy; 2011.
22. Sharma PV (Acharya Priyavrat). *DravyagunaVigyan*, Vol. II. Varanasi: ChaukhambaBharati Academy; 2010. p. 521
23. Acharya YT, editor. *CharakaSamhita* of Agnivesha, revised by Charaka and Dridhabala, with the commentary of Chakrapanidatta. Chikitsasthana, Chapter 25, Shloka 93. Varanasi: ChaukhambaSurbharatiPrakashan; 2009.
24. Acharya YT, editor. *Sushruta Samhita* of Sushruta, with Nibandhasangraha commentary by Dalhana. Chikitsasthana, Chapter 1, Shlokas 6–7. Varanasi: ChaukhambaSurbharatiPrakashan; 2012

477
478

UNDER PEER REVIEW IN IJAR