World Journal of Pharmaceutical and Life Sciences

www.wjpls.org

Impact Factor: 8.21 Coden USA: WJPLA7

A COMPARITIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF KAMPILLAKADI TAILA AND JATYADI TAILA IN THE MANAGEMENT OF DUSHTA VRANA VIS-A-VIS VENOUS ULCER.

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How to cite this Article: Dr. Apoorva K.[1], Dr. Duragappa Harijan[2] (2026). A Comparitive Clinical Study To Evaluate The Efficacy Of Kampillakadi Taila And Jatyadi Taila In The Management Of Dushta Vrana Vis-A-Vis Venous Ulcer.. World Journal of Pharmaceutical and Life Science, 12(2), 226–237.

Article Received on 05/01/2026 **Article Revised on 25/01/2026** **Article Published on 04/02/2026**

ABSTRACT

Dushta Vrana vis-a-vis Venous Ulcer is a chronic non-healing wound commonly affecting the lower limbs, accounting for 60–80% of all chronic ulcers and showing a high recurrence rate of 54–78%. Conventional management such as systemic or topical antimicrobials, hyperbaric oxygen therapy, negative pressure wound therapy and skin grafting.Skin grafting is often expensive and carries potential complications, highlighting the need for effective Ayurvedic alternatives. Dushta Vrana is treated with various methods under Shashti Upakrama, among which Taila upakrama is significant. Kampillakadi Taila, described in Gada Nigraha as having vrana shodhana and ropana properties, was evaluated in comparison with the established Jatyadi Taila from Sharangadhara Samhita. Forty diagnosed patients with Dushta Vrana vis-a-vis Venous Ulcer were randomly divided into two groups of twenty each: Group A received Kampillakadi Taila dressing and Group B received Jatyadi Taila dressing for 28 days. Assessment showed that both formulations significantly reduced itching, ulcer area, discharge, odour, and enhanced healthy granulation tissue, with results highly significant at $p < 0.005$. Overall, both tailas were effective, but Kampillakadi Taila demonstrated a comparatively superior impact due to its potent shodhana and ropana actions.

KEYWORDS: Dushta Vrana, Venous Ulcer, Shashti Upakrama, Kampillakadi Taila.

INTRODUCTION

Shalya Tantra, one of the eight branches of Ayurveda, focuses on surgical and para-surgical techniques for diagnosing and managing various conditions such as abscesses, trauma, fractures, foreign bodies, and wounds. Its foundation lies in the Sushruta Samhita, authored by Acharya Sushruta, revered as the "Father of Surgery," who detailed surgical instruments, techniques, and comprehensive wound-care protocols that remain relevant today. Within Shalya Tantra, the management of Vrana (wounds) holds prime importance, with Ayurveda classifying wounds based on their cause, appearance, and healing pattern, giving special emphasis to Dushta Vrana—chronic, contaminated, or non-healing ulcers that are difficult to treat. Venous ulcers are a major type of such chronic ulcers, commonly affecting the lower limbs due to chronic venous insufficiency, where malfunctioning venous valves lead to blood pooling, increased venous pressure, tissue damage, and eventual ulcer formation. These ulcers account for 60–80% of all leg ulcerations[1], with a prevalence of about 1.08% and an incidence of up to 1.33%[2], and they heal slowly with a high recurrence rate, significantly impacting quality of life. Wound healing itself is a complex physiological process involving haemostasis, inflammation, proliferation, and maturation[3], but various factors such as poor vascularity, infection, contamination, or local tissue damage can impair healing. Acharya Sushruta elaborates Vrana Chikitsa through Shodhana and Ropana procedures, using medicated ghee (Sarpi), medicated oils

(Taila)[4], and numerous therapeutic procedures aimed at cleansing, promoting granulation, preventing infection, and restoring tissue integrity. Many of these formulations possess antimicrobial, anti-inflammatory, and regenerative properties, making them relevant for modern chronic ulcers like venous ulcers. The present study has been undertaken to compare the effectiveness of Kampillakadi Taila[5] described in Gada Nigraha and Jatyadi Taila from Sharangadhara Samhita in the management of Dushta Vrana vis-a-vis venous ulcer.

OBJECTIVES OF THE STUDY

•To evaluate the efficacy of '*Kampillakadi taila*' in the management of *Dushta vrana* vis-a-vis Venous Ulcer.
•To evaluate the efficacy of '*Jatyadi taila*' in the management of *Dushta vrana* vis-à-vis Venous Ulcer.
•To compare the efficacy of '*Kampillakadi taila'* and '*Jatyadi taila'* in the management of *Dushta vrana* vis-a-vis Venous Ulcer.

METHODOLOGY

Hypothesis

Null hypothesis There is no significant difference between the effect of *Kampillakadi taila* and *Jatyadi taila* in the management of *Dushta vrana* vis-a-vis to Venous ulcer.

Alternate Hypothesis

H1-There is significant effect of *Kampillakadi taila* in the management of *Dushta vrana* vis-a-vis to Venous ulcer.
H2 -There is significant effect of *Jatyadi taila* in the management of *Dushta vrana*.

MATERIALS AND METHODS

Source of data

Subjects with clinical features of *Dushta Vrana* fulfilling the inclusion criteria approaching the OPD and IPD of *Shalya tantra dept*,teaching hospital attached to Government Ayurveda Medical College, Bengaluru were selected for the study. The sample collection was initiated after approval from the institutional ethics committee. This study was conducted between January 2024 to September 2025.

Methods of collection of data

Study Design

An open label double arm randomized comparative clinical study.

Sampling technique

The subjects who fulfil the inclusion criteria and complying with the informed consent (IC) were selected using method of simple random sampling.

Sample Size

Subjects diagnosed with *Dushta Vrana vis-a-vis* Venous ulcer were randomly assigned into two Groups, Group A and Group B comprising of 20 Subjects each. A special case proforma containing all the necessary details pertaining to the study was prepared.

Inclusion criteria

1) Patient presenting with classical features of *DushtaVrana*; *puti srava, vedana, vrana gandha, kandu.*
2) Patient presenting with clinical features of venous ulcer.
3) As per Wagner's classification of ulcer.
Grade 1: Superficial ulcers involving full skin thickness.
Grade 2: Ulcer deeper to subcutaneous tissue exposing soft tissues or bone.
4)Subjects of age group between 18-70 years.

Exclusion criteria

1) As per Wagner's classification of ulcer
Grade 3: Ulcers with cellulitis /Abscess formation underneath / osteomyelitis.
Grade 4: Gangrene of part of the tissues/ limb/ foot
Grade 5: Gangrene of entire one area/ foot.
2) Patients suffering from disorders like Tuberculosis, Malignant ulcers, HIV I & II, Hepatitis B, Traumatic ulcer, Diabetic foot ulcer, Buerger's disease, Osteomyelitis, Cellultis, Gangrene.
3) Patients suffering with systemic disorders like uncontrolled DM and HTN.

INTERVENTION

40 subjects with clinical features of *Dushtavrana vis-a-vis* Venous ulcer were selected and randomly assigned into two groups, Group A and Group B consisting of 20 subjects each.

GROUPS	TOPICAL TREATMENT	Duration
GROUP A	*Kampillakadi taila*	28 Days
GROUP B	*Jatyadi taila*	28 Days

Procedure followed

Group A- Treated with *Kampillakadi taila*

Poorva karma

•Subjects selected for study was asked to lie down or sit in comfortable position.
•Materials required for dressing were kept ready as mentioned above.

Pradhana karma

• Under aseptic precautions,ulcer was cleaned with gauze piece.
• *Vrana prakshalana* was done with *Panchavalkala kwatha.*
• Debridement of necrotic tissue whenever present was done.
• Sufficient quantity of *Kampillakadi taila* was taken in gauze, and in the form of *kavalika* was applied over Ulcer site and pad was kept.

Paschat karma

• Roller bandage was applied.
• The same procedure was carried out daily for 28 days.

• In case of healing of the ulcer within the time period of 28 days, then patient was advised to stop treatment.

Group B- Treated with *Jatyadi taila*

Poorva karma

•Subjects selected for study was asked to lie down or sit in comfortable position.

•Materials required for dressing were kept ready as mentioned above.

Pradhana karma

• Under aseptic precautions,

• Ulcer site was cleaned with gloved hand with gauze piece.

• *Vrana prakshalana* was done with *Panchavalkala kwatha*.

• Debridement of necrotic tissue was done whenever present .

• Sufficient quantity of *Jatyadi taila* was taken in gauze, and in the form of *kavalika* applied over ulcer and pad was kept.

Paschat karma

• Roller bandage was applied.

• The same procedure was carried daily for 28 days.

• In case of complete healing of ulcer within the time period of 28 days, then patient was advised to stop further treatment.

Follow-up of Study

Follow-up of patients was done at an interval of 15 days for a period of 1 Month.

Assessment criteria

Assessment of the study was done before treatment, during and after treatment and at follow-up on the basis of assessment parameters as per case proforma.

Scoring parameters for assessment

The Subject's responses were assessed on the basis of assessment Criteria by assigning the suitable score to each parameter. The method adopted for Scoring was done as per grading mentioned below.

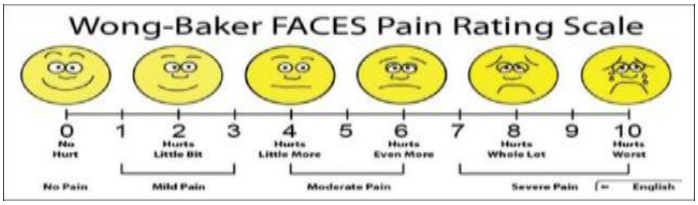
(A)Subjective parameters

1). Pain (*Vedana*)

The intensity of the pain was assessed by asking the patient to rate on the scale of 10.

GRADE	Score	PAIN
0	0	No pain
1	1-3	Mild pain
2	4-6	Moderate pain
3	7-10	Severe pain

As per the Visual Analogue Scale



In case of severe intolerable pain,analgesics were advised according.

2). Itching (*Kandu*)

The intensity of the itching was assessed by asking the patient to rate on the scale of 10.

GRADE	ITCHING
0	No itching
1	Slight localised itching sensation
2	More localised itching sensation but not disturbing sleep
3	Continous itching disturbing sleep

B). Objective parameters

1). Size of the ulcer (*Vrana Ayata)*

A clean thread is placed over the ulcer in two of its widest directions and length of the thread is measured on measuring tape in cm/mm.

GRADE	AREA OF ULCER
0	Healed completely
1	75% of the ulcer got healed
2	50% of the ulcer got healed
3	<25% of the previous area of the ulcer got healed.

Area of ulcer =length × width of the ulcer in cm/mm

2). Discharge (*Vrana srava*)

GRADE	DISCHARGE
0	No discharge
1	Small stains on gauze after 24 hours
2	Gauze fully wet but no need for the dressing to changed within 24 hours
3	Gauze and pad completely soaked in 12 hours or less, need to change dressing within 24 hours

3).Granulation tissue

GRADE	GRANULATION TISSUE
0	Healthy granulation tissue
1	Moderate granulation tissue, slight discharge, with absence of slough
2	Less granulation tissue and presence of slough
3	No granulation tissue ,more slough and profuse discharge

4). Foul smell (*Vrana gandha*)

GRADE	FOUL SMELL
0	No odour
1	Faint odour after opening the dressing
2	Strong odour after opening the dressing
3	Strong odour even with dressing

Overall Assessment of the Effect of the Therapy

The overall effect of therapy was assessed in terms of Marked Improvement, Moderate Improvement, Mild Improvement and No Improvement.

Complete Improvement: 100% relief in all the signs and symptoms provided by the Therapy.

Marked Improvement: 76-99% relief in all the signs and symptoms provided by the Therapy.

Moderate Improvement: 31-75% relief in all the signs and symptoms provided by the Therapy.

Mild Improvement: 26-50% relief in all the signs and symptoms provided by the Therapy.

Minimum Improvement: 0- 25% relief in all the signs and symptoms provided by the Therapy.

RESULTS

The statistical analysis is done by IBM SPSS Statistics Software.

The effect of therapy on different subjective and objective parameters were assessed after treatment and the values obtained were subjected to statistical tests to compare the mean values within the group and between the groups.

Statistical test for within the groups.

1. Wilcoxon signed rank test
2. Friedman test

Statistical test for between the groups

1. Mann Whitney 'U' test
2. Wilcoxon rank test

The differences in the mean values were considered, the corresponding p value was noted and the obtained results were interpreted as.

Highly significant at $p<0.001$ and $p<0.01$, significant at $p<0.05$ and not significant at $p>0.05$.

Pain – Within Group A & Group B.

DAY	Mean Rank (Group A)	Mean Rank (Group B)
BT	3.90	3.90
7th Day	3.90	3.60
14th Day	3.45	3.45
21st Day	3.15	3.30
28th Day	3.30	3.30
AT	3.30	3.45
Chi-Square	**18.421**	**10.625**
df	**5**	**5**
P value	**0.002**	**0.059**

Effect of treatment on Pain between the Group A and Group B.

Table No.35: Effect of treatment of Pain between the Group A and Group B.

Ranks				
Groups		**N**	**Mean Rank**	**Sum of Ranks**
BT	Group A	20	18.30	366.00
	Group B	20	22.70	454.00
	Total	40		
7TH DAY	Group A	20	18.95	379.00
	Group B	20	22.05	441.00
	Total	40		
14TH DAY	Group A	20	18.13	362.50
	Group B	20	22.88	457.50
	Total	40		
21ST DAY	Group A	20	17.43	348.50
	Group B	20	23.58	471.50
	Total	40		
28TH DAY	Group A	20	17.85	357.00
	Group B	20	23.15	463.00
	Total	40		
AT	Group A	20	17.38	347.50
	Group B	20	23.63	472.50
	Total	40		

Test Statistics[a]						
	BT	**7TH DAY**	**14TH DAY**	**21ST DAY**	**28TH DAY**	**AT**
Mann-Whitney U	156.000	169.000	152.500	138.500	147.000	137.500
Wilcoxon W	366.000	379.000	362.500	348.500	357.000	347.500
Z	-1.307	-.932	-1.471	-1.975	-1.672	-1.943
P value (2-tailed)	.191	.351	.141	.048	.094	.052
a. Grouping Variable: Groups						
b. Not corrected for ties.						

Itching – Within Group A & Group B

DAY	Mean Rank (Group A)	Mean Rank (Group B)
BT	3.95	3.85
7th Day	4.10	3.85
14th Day	3.85	3.55
21st Day	3.10	3.25
28th Day	3.00	3.25
AT	3.00	3.25
Chi-Square	24.679	11.154
df	5	5
P value	0.000	0.048

Calculation Table of itching: Between Group A and Group B.

Ranks				
Groups		**N**	**Mean Rank**	**Sum of Ranks**
BT	Group A	20	20.65	413.00
	Group B	20	20.35	407.00
	Total	40		
7TH DAY	Group A	20	21.10	422.00
	Group B	20	19.90	398.00
	Total	40		
14TH DAY	Group A	20	21.00	420.00
	Group B	20	20.00	400.00

	Total	40		
21ST DAY	Group A	20	19.50	390.00
	Group B	20	21.50	430.00
	Total	40		
28TH DAY	Group A	20	19.00	380.00
	Group B	20	22.00	440.00
	Total	40		
AT	Group A	20	19.00	380.00
	Group B	20	22.00	440.00
	Total	40		

Test Statistics[a]						
	BT	**7TH DAY**	**14TH DAY**	**21ST DAY**	**28TH DAY**	**AT**
Mann-Whitney U	197.000	188.000	190.000	180.000	170.000	170.000
Wilcoxon W	407.000	398.000	400.000	390.000	380.000	380.000
Z	-.092	-.371	-.322	-.628	-.947	-.947
P value (2-tailed)	.927	.711	.747	.530	.343	.343
a. Grouping Variable: Groups						
b. Not corrected for ties.						

Area of the Ulcer – Within Group A & Group B.

DAY	**Mean Rank (Group A)**	**Mean Rank (Group B)**
BT	4.85	4.38
7th Day	4.68	4.25
14th Day	4.35	4.13
21st Day	2.90	3.00
28th Day	2.15	2.70
AT	2.08	2.55
Chi-Square	71.081	47.131
df	5	5
P value	0.000	0.000

Calculation Table of area of ulcer: Between Group A and Group B.

Ranks				
Groups		**N**	**Mean Rank**	**Sum of Ranks**
BT	Group A	20	20.50	410.00
	Group B	20	20.50	410.00
	Total	40		
7TH DAY	Group A	20	20.00	400.00
	Group B	20	21.00	420.00
	Total	40		
14TH DAY	Group A	20	19.00	380.00
	Group B	20	22.00	440.00
	Total	40		
21ST DAY	Group A	20	18.03	360.50
	Group B	20	22.98	459.50
	Total	40		
28TH DAY	Group A	20	17.03	340.50
	Group B	20	23.98	479.50
	Total	40		
AT	Group A	20	17.20	344.00
	Group B	20	23.80	476.00
	Total	40		

Test Statistics[a]						
	BT	**7TH DAY**	**14TH DAY**	**21ST DAY**	**28TH DAY**	**AT**
Mann-Whitney U	200.000	190.000	170.000	150.500	130.500	134.000
Wilcoxon W	410.000	400.000	380.000	360.500	340.500	344.000
Z	0.000	-.472	-1.114	-1.429	-1.967	-1.871
P value (2-tailed)	1.000	.637	.265	.153	.049	.061
a. Grouping Variable: Groups						
b. Not corrected for ties.						

Granulation Tissue – Within Group A & Group B.

DAY	Mean Rank (Group A)	Mean Rank (Group B)
BT	4.75	4.35
7th Day	4.30	4.10
14th Day	3.78	3.58
21st Day	2.78	3.13
28th Day	2.70	3.03
AT	2.70	2.83
Chi-Square	50.888	29.272
df	5	5
P value	0.000	0.000

Calculation Table of area of the ulcer: Between Group A and Group B.

Ranks				
Groups		**N**	**Mean Rank**	**Sum of Ranks**
BT	Group A	20	22.73	454.50
	Group B	20	18.28	365.50
	Total	40		
7TH DAY	Group A	20	22.25	445.00
	Group B	20	18.75	375.00
	Total	40		
14TH DAY	Group A	20	21.85	437.00
	Group B	20	19.15	383.00
	Total	40		
21ST DAY	Group A	20	19.13	382.50
	Group B	20	21.88	437.50
	Total	40		
28TH DAY	Group A	20	19.10	382.00
	Group B	20	21.90	438.00
	Total	40		
AT	Group A	20	20.05	401.00
	Group B	20	20.95	419.00
	Total	40		

Test Statistics[a]						
	BT	**7TH DAY**	**14TH DAY**	**21ST DAY**	**28TH DAY**	**AT**
Mann-Whitney U	155.500	165.000	173.000	172.500	172.000	191.000
Wilcoxon W	365.500	375.000	383.000	382.500	382.000	401.000
Z	-1.282	-1.030	-.830	-1.127	-1.320	-.533
P value (2 tailed)	.200	.303	.407	.260	.187	.594
a. Grouping Variable: Groups						
b. Not corrected for ties.						

Discharge – Within Group A & Group B

DAY	Mean Rank (Group A)	Mean Rank (Group B)
BT	4.60	4.50
7th Day	4.38	4.28
14th Day	3.65	3.83
21st Day	3.03	2.80
28th Day	2.75	2.80
AT	2.60	2.80
Chi-Square	41.575	44.579
df	5	5
P value	0.000	0.000

Calculation Table of discharge :Between Group A and Group B

Ranks				
Groups		**N**	**Mean Rank**	**Sum of Ranks**
BT	Group A	20	19.78	395.50
	Group B	20	21.23	424.50
	Total	40		
7TH DAY	Group A	20	19.95	399.00
	Group B	20	21.05	421.00
	Total	40		
14TH DAY	Group A	20	19.50	390.00
	Group B	20	21.50	430.00
	Total	40		
21ST DAY	Group A	20	19.40	388.00
	Group B	20	21.60	432.00
	Total	40		
28TH DAY	Group A	20	17.98	359.50
	Group B	20	23.03	460.50
	Total	40		
AT	Group A	20	17.50	350.00
	Group B	20	23.50	470.00
	Total	40		

Test Statistics[a]						
	BT	**7TH DAY**	**14TH DAY**	**21ST DAY**	**28TH DAY**	**AT**
Mann-Whitney U	185.500	189.000	180.000	178.000	149.500	140.000
Wilcoxon W	395.500	399.000	390.000	388.000	359.500	350.000
Z	-.417	-.320	-.617	-.790	-2.070	-2.619
P value (2-tailed)	.677	.749	.537	.429	.038	.009
a. Grouping Variable: Groups						
b. Not corrected for ties.						

Foul Smell – Within Group A & Group B

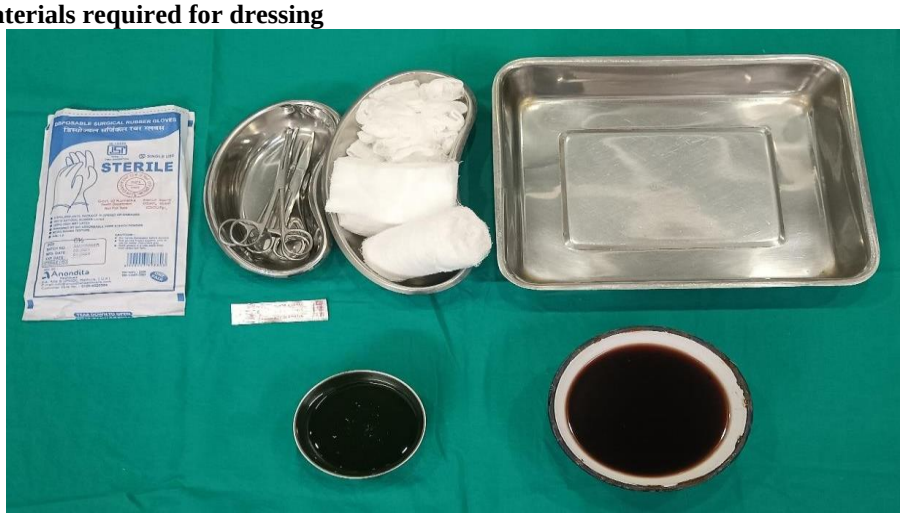
DAY	Mean Rank (Group A)	Mean Rank (Group B)
BT	3.75	3.60
7th Day	3.75	3.60
14th Day	3.50	3.45
21st Day	3.50	3.45
28th Day	3.25	3.45
AT	3.25	3.45
Chi-Square	10.204	5.000
df	5	5
P value	0.070	0.416

Calculation Table of foul smell:Between Group A and Group B

Ranks				
Groups		**N**	**Mean Rank**	**Sum of Ranks**
BT	Group A	20	20.58	411.50
	Group B	20	20.43	408.50
	Total	40		
7TH DAY	Group A	20	20.58	411.50
	Group B	20	20.43	408.50
	Total	40		
14TH DAY	Group A	20	20.50	410.00
	Group B	20	20.50	410.00
	Total	40		
21ST DAY	Group A	20	20.50	410.00
	Group B	20	20.50	410.00
	Total	40		
28TH DAY	Group A	20	19.50	390.00
	Group B	20	21.50	430.00
	Total	40		
AT	Group A	20	19.50	390.00
	Group B	20	21.50	430.00
	Total	40		

Test Statistics[a]						
	BT	**7TH DAY**	**14TH DAY**	**21ST DAY**	**28TH DAY**	**AT**
Mann-Whitney U	198.500	198.500	200.000	200.000	180.000	180.000
Wilcoxon W	408.500	408.500	410.000	410.000	390.000	390.000
Z	-.065	-.065	0.000	0.000	-1.433	-1.433
P value (2-tailed)	.948	.948	1.000	1.000	.152	.152
a. Grouping Variable: Groups						
b. Not corrected for ties.						

Figure shows materials required for dressing



Group A: Kampillakadi taila.



DAY 0 **DAY 7** **DAY 14**


DAY 21 **DAY 28**

Group B: Jatyadi taila.



DAY 0 **DAY 7** **DAY 14**


DAY 21 **DAY 28**

DISCUSSION

DISCUSSION ON DRUGS

The drugs selected for the study are *Kampillakadi taila* which is compared with standard drug *Jatyadi taila*.

Probable mode of action of *Kampillakadi taila*

1a. Pharmacological and Phytochemical Rationale of *Kampillakadi Taila*

Kampillakadi Taila, mentioned in its *Phalashruti* as *Vrana Shodhana* and *Ropana*, is prepared with *Kampillaka*, *Vidanga*, and *Daruharidra* in a *Tila Taila* base.

Possessing *Tikta-Kashaya rasa* and *Sheeta veerya*, it acts as *Krimighna*, *Raktashodhaka*, *Dahaprashamana*, *Kandughna*, and *Vranaropaka*. *Kampillaka* contain rotenoids and flavonoids which provide anti-helminthic, antibacterial, and anti-inflammatory actions. *Vidanga* possess embelin which offers potent antimicrobial and antioxidant effects, while *Daruharidra's* berberine enhances wound healing. *Tila Taila* promotes absorption of actives, imparting nourishment and *snigdhatva* to the skin.

1b.Therapeutic Action of *Kampillakadi Taila* in Venous Ulcer

Venous ulcers

are chronic, non-healing ulcers due to venous insufficiency, presenting with *Puti Srava*, *Kandu*, and *Durgandha*, reflecting *Pitta-Kapha*.

DISCUSSION

predominance. Kampillakadi Taila, with *Vranashodhaka*, *Vranaropaka*, *Krimighna*, and *Pitta-Kapha Shamaka* properties, aids in wound cleansing, infection control, and biofilm inhibition. Its *Shothahara* and *Kandughna* actions reduce inflammation and itching, while *Sheeta Veerya* and *Tikta-Kashaya Rasa* soothe burning and discharge. By improving local circulation and supporting tissue repair, it promotes faster healing and effective wound contraction.

2a. Pharmacological and Phytochemical Rationale of *Jatyadi Taila*

Jatyadi Taila is a classical Ayurvedic oil preparation indicated for *Vrana Shodhana* and *Ropana* . Key ingredients include *Jati*, *Nimba*, *Haridra*, *Daruharidra*, *Manjishta*, and *Katuki*, processed in *Tila Taila* . These herbs possess *Tikta*, *Kashaya rasa*, *Sheeta veerya*, and actions like *Krimighna*, *Shothahara*, *Kandughna*, and *Raktashodhaka*. Phytochemically, the oil contains curcumin, berberine, nimbidin, and manjitone, known for antimicrobial, anti-inflammatory, and antioxidant effects. *Tila Taila* enhances absorption and provides nourishment and moisture to the skin. The formulation is effective in infected wounds, reduces inflammation, controls microbial growth, and promotes healthy tissue regeneration. With its synergistic action, *Jatyadi Taila* is highly effective in treating chronic, non-healing wounds and ulcers.

2b. Therapeutic Action of *Jatyadi Taila* in Venous Ulcer

Venous ulcers, described as Dushta Vrana in Ayurveda, arise from Pitta-Kapha imbalance, infection, and delayed healing. Jatyadi Taila exhibits Vranashodhaka, Vranaropaka, Krimighna, and Shothahara properties. Ingredients like Nimba, Haridra, and Daruharidra reduce microbes and inflammation, while Manjishta purifies blood. Its Tikta-Kashaya rasa and Sheeta veerya soothe burning and itching. The oil improves circulation, promotes granulation and epithelialization, and Tila Taila aids absorption and nourishment. Regular use lessens odour, swelling, and discomfort, enabling faster healing by cleansing, balancing doshas, and supporting tissue repair holistically.

DISCUSSION ON RESULTS

EFFECT OF TREATMENT ON PAIN

In Group A, the treatment had a statistically significant effect on Pain ($p = 0.002$) with an average improvement of 85.3%.

In Group B, the treatment did not show a statistically significant change ($p = 0.059$), although there was an average improvement of 79.6%.

The treatment effect in Group A was comparatively better than in Group B, both statistically and clinically.

The intervention effectively alleviated discomfort associated with chronic ulcers, reflecting the anti-inflammatory and analgesic properties of *Kampillakadi Taila*. Group A demonstrated superior clinical response, indicating enhanced pain relief.

EFFECT ON ITCHING

In Group A, the treatment had a statistically significant effect on Itching ($p = 0.000$), with an average improvement of 84.8%, indicating a marked reduction in itching intensity throughout the treatment period. In Group B, the treatment also produced a statistically significant change ($p = 0.048$), with an average improvement of 79.2%, though the effect was comparatively less pronounced than in Group A.

While both groups showed significant improvements, reduction in itching in Group A was more substantial, suggesting that Group A experienced a comparatively better therapeutic effect because the anti-pruritic effects of *Kampillakadi Taila* contributed to alleviation of pruritus and improved patient comfort.

EFFECT ON SIZE OF ULCER

In Group A, the treatment produced a highly significant effect on the reduction of ulcer area. This corresponds to an average improvement of approximately 85.7%, reflecting a marked reduction in ulcer size following treatment.In Group B, the treatment also demonstrated a statistically significant improvement with an average improvement of about 76.5%, suggesting notable ulcer healing, though comparatively less pronounced than in Group A. While both groups achieved statistically significant improvements, Group A exhibited greater clinical improvement, suggesting a more potent therapeutic effect in reducing the ulcer area.

EFFECT ON GRANULATION TISSUE

In Group A, the treatment had a highly significant effect showing an average improvement of about 81.4%.In Group B, a significant improvement indicating an average improvement of 74.9%.

Group A showed better clinical improvement in granulation tissue formation compared to Group B.

The intervention facilitated rapid tissue regeneration and angiogenesis, contributing to faster wound repair. Between-group comparisons were non-significant ($p > 0.05$), yet clinical improvement was more pronounced in Group A.

EFFECT ON DISCHARGE

In Group A, the treatment had a highly significant effect ($p = 0.000$) showing an average improvement of about 77.4%.In Group B, a significant improvement was also noted ($p = 0.000$), corresponding to an average improvement of 73.3%. Hence, while both groups improved significantly over time, the treatment effect in Group A was comparatively better than in Group B, particularly in the later stages of assessment. This demonstrates the wound debriding and healing effects of Kampillakadi Taila, with faster contraction of ulcer size.

EFFECT ON FOUL SMELL

In Group A, the treatment did not show a statistically significant effect indicating minimal improvement (≈13.3%) in foul smell reduction.

In Group B, a non-significant change ($p = 0.416$) was also observed, showing negligible improvement (≈4.2%). The between-group comparison at all time points showed no statistically significant difference ($p > 0.05$).

Overall, both groups showed mild clinical improvement, but the changes were not statistically significant, suggesting that the 28-day intervention period may have been insufficient for marked reduction in foul smell. Hence, neither treatment had a significant impact on foul smell.

OVERALL EFFECT

Overall, both treatment groups showed improvement across all parameters, including pain, itching, ulcer size, granulation tissue, and discharge. Group A demonstrated superior therapeutic efficacy, with 85% overall improvement compared to 60% in Group B. Statistically significant reductions were observed in pain, itching, and ulcer size, along with enhanced granulation and faster wound healing in Group A. Although both groups showed mild, non-significant improvement in foul smell, the combined therapy in Group A proved more effective clinically, reflecting enhanced *Shodhana* and *Ropana* actions in chronic ulcer management.

PROBABLE MODE OF ACTION

Kampillakadi Taila acts through its Tikta-Kashaya rasa and Sheeta veerya, providing anti-inflammatory, antimicrobial, and antioxidant effects that relieve pain, reduce itching, and control discharge. Its Krimighna, Shothahara, and Raktashodhaka actions cleanse the wound, improve local circulation, and promote granulation, resulting in faster wound contraction and size reduction. Jatyadi Taila, with ingredients like Nimba, Haridra, and Manjishta, exhibits Vranashodhaka, Ropaka, and Kandughna properties. It soothes pain and itching through its cooling and antimicrobial effects, purifies blood, and promotes granulation and epithelialization, thereby aiding wound closure. Both the *tailas* support healthy tissue regeneration, reduce exudation, and improve overall wound healing, though Kampillakadi Taila showed relatively superior efficacy in pain, itching, and ulcer size reduction, while both had mild effects on foul smell.

CONCLUSION

This clinical study titled *"A comparative clinical study to evaluate the effect of Kampillakadi taila and Jatyadi taila in the management of Dushta Vrana vis-a-vis Venous Ulcer"* was conducted on 40 subjects presenting with lakshanas of Dushta Vrana corresponding to venous ulcers. Most participants were males aged 60–70 years, married, on a mixed diet, and engaged in occupations involving prolonged standing. The results showed that Group A (Kampillakadi taila) produced better therapeutic effects compared to Group B (Jatyadi taila), particularly in enhancing granulation tissue formation, reducing itching, and decreasing ulcer area. Although both groups demonstrated significant improvement in all assessment parameters—including discharge, itching, granulation, and ulcer size—Group A consistently showed better outcomes throughout the study period. The overall improvement was 85% in Group A and 60% in Group B, with statistically significant differences observed at all intervals (BT, Day 7, Day 14, Day 21, Day 28). No adverse reactions were reported in either group, supporting the safety of both treatment protocols. Hence, the alternate hypothesis that Kampillakadi taila has a significant therapeutic effect in venous ulcer management is accepted.

The study's strengths include the use of multiple assessment parameters, which enabled a comprehensive evaluation of healing, as well as the absence of adverse effects, indicating good tolerability. However, certain limitations were noted. The duration of taila application was uniform despite variations in ulcer size and chronicity, which may have influenced outcomes. Additionally, Pathya-Apathya adherence could have contributed to variations in healing.

Future research may focus on

1.Tailoring treatment duration based on ulcer characteristics

2.Conducting studies with larger sample sizes, and

3.Performing long-term follow-ups to assess recurrence.

4.Exploring the efficacy of Kampillakadi taila in other conditions such as Vicharchika may also broaden its clinical utility.

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