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Research Article

A CLINICAL STUDY TO EVALUATE THE EFFICACY OF VIPAREETA MALLA TAILA IN DUSTA VRANA

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ABSTRACT

Dusta vrana management is a common problem, encountered by medical practitioners all over the globe, that is, non-healing chronic ulcer. Without early and optimal intervention, the wound can rapidly deteriorate and leading to amputation of the affected limb. Studies reveal that it is difficult to achieve the complete aim of wound management with a single drug. In the present study, *Vipareeta Malla Taila* is selected from *Bhaishajaya Ratnavali* and *Yogaratnakar*. It consists of *Sindoor, Kushta, Hingu, Rason, Chitrka Root, Langali, Hartal, Sharpunka, Shudh Tutha, Shudh Samundrafena,* etc. These drugs having properties of *Vrana Shodhana* (cleansing), *Ropana* (healing), *Vedanashamana* (analgesic), *Shothaharana* (anti-inflammatory and reducing swelling) and bactericidal. It is a single-blind clinically study where 20 patients were selected. The patient would were treated with *Vipareeta Malla Taila. Vipareeta Malla Taila* mentioned by *Acharya Yogratnakar* in the context of *Vrana* chapter is found efficacious in wound healing. The drug initially acts as a debriding agent removing slough and necrotic tissues and subsequently paves way for smooth and uninterrupted healing of the ulcer. Topical application of *Vipareeta Malla Taila* reduces pain, burning sensation, and itching. It also decreases discharge, edema, and also helps in gradual improvement in floor and granulation tissue. The semi-occlusive dressing of *Vipareeta Malla Taila* provides moist environment which enhances epithelialization, prevents scab formation, and can be easily removed from wound surface without causing pain or damage to the new growing epithelium. Hence, from the present clinical study, it can be speculated that *Vipareeta Malla Taila* possesses sufficient efficacy in *Vrana Shodana* and *Vrana Ropana* without producing any adverse effects.

Keywords: *Dusta vrana, Ropana, Shodhana, Vipareeta Malla Taila*, Wound healing.

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INTRODUCTION

The most commonly occurring condition in shalyatantra is *vrana.* While explaining the scope of shalyatantra, it has mentioned *vrana vinishchayartham* as a major part of shalya-tantra. Infected wound *(dustavrana*) is a long-standing ulcer with profuse discharge and slough when clearing slough and enabling drug to reach the healthy tissue is more important. A variety of drugs and formulation have been tested for the clinical efficacy in *dustavrana* and yielded good results. Healing of ulcer is a natural complex process but healing gets affected by infection amount of tissue injury, contamination, etc. In spite of the advances that have been made. The process of wound healing is almost same at the terminal stages, whereas at initial stages, it shows some differences and includes a number of cellular and molecular phases till the process of healing is completed [1].

The management of chronic wounds is still a challenge for the clinician. *Sushruta,* the father of surgery, has described. The management of wound in his treatise. It is the best description ever in the history of medical sciences in case of wound management. The work has been summarized in *shasti upakrama* [2] (sixty different aspects for wound management by him). Rasakriya is explained as to as to be used for Shodhana and Ropana of Vrana [3]. The principle of management is valid even today. Application is one of the *upakaramas. Yogaratnakar* mentioned application of *Vipareeta Malla Taila* for *vrana shodana* and *ropana.*

There is no doubt that the art of surgery revolves around the vrana and essence is uncomplicated healing. A follower of *shalya tantra* needs to establish the effective *Ayurvedic* management of the *dusta vrana*. Hence, this is effort to find a simple and effective treatment for the *dusta vrana*.

Photographs during vipareeta malla taila preparation

Fig. 1:

Fig. 2:

Fig. 3:

METHODS

Source of data

This clinical study is planned to evaluate the effect of *Vipareeta Malla Taila* in the management of *dusta vrana*. In this clinical study, 20 patients have been selected from o.p.d and i.p.d of shalya tantra department of Jammu Institute of Ayurveda and research an allied hospital in the vicinity of Jammu. Data were collected based on detailed pro forma designed for the study.

Fig. 4:

Fig. 5:

Methods

Ulcer is cleaned with distilled water and a sterilized gauze dipped in *Vipareeta Malla Taila* was used and bandaging was done. Along with daily dressing of Vipareeta Malla Taila, the patients were treated with *triphala guggulu* and *gandhaka rasayan*. Results are assessed with comparative study of features before and after treatment with pro forma designed for study.

Duration of treatment – Treatment was carried out till ulcer healed.

Follow-up – After completion of the treatment, patients were followed up at every week for a period of 2 months.

Inclusion criteria

Patient having features of *dusta vrana* having chronicity more than 21 days are selected for the study.

Patient suffered from *dusta vrana* of all types.

Exclusion criteria

The following criteria were excluded from the study:

Patient suffering from gangrene.

Patient with systemic features of sepsis.

Table 1 : Description of ingredients of Vipareeta Malla Taila [4]

Dravya	Synonyms	Latin name	Family	Rasa	Guna	Veerya	Vipaaka	Doshakarma
Sindoor [5]	*Girisindoora, nagabhushana, manglaya.*	Eng-red oxide of mercury	–	–	*Ushna*	–	–	*Tridoshashamaka, malabhedaka. vrana shodana and ropana*
Kustha [6]	*Kutha, kuth, Indian costus root*	Saussurea lappa	Asterace ae	*Tikta*	*Laghu, rooksh a, teeksh na*	*Ushna*	*Katu*	*Kaphavaatahara, vedanasthaapana*
Hingu [7]	*Hinguka, atugra, Hing, asfoetida, eng*	Ferulafoetida Regel., Ferula narthex Bioss	Fam. Umbellif erm	*Katu,*	*Tikshn a*	*Ushna*	*Katu*	*Vedanasthaapana, shoolaprashama na, vatahara.*
Lahshuna [8]	*Garlic lahasun, lasan, rasona, vellulli*	Allium sativum Linn.	Liliaceae	*Madhu ra, katu, tikta, kashav a.*	*Snigdh a, tikshna, pichchi la, guru, scara*	*Ushna*	*Katu*	*Shotha, kushta, ajeernashoola, vra na*
Chitraka [9]	*Chita, chitrak, chitro*	Plumbago zeylanica Linn.	Colchiea ceae	*Katu*	*Laghu, ruksha, teeksh na*	*Uahna*	*Katu*	*Lekhana, shothahara, swedajanana, dee pana, pachana.*
Kalihari [10]	*Kalihari, langali, agnishikha, kaanthal*	Gloriosa superba Linn.	Liliaceae	*Katu*	*Tikta, t eekshn a*	*Ushna*	*Katu*	*Krimighna, deepana, raktashodhaka, rasayana*
Hartala [11]	*Haratala, talaka, hartala*	Eng. Orpiment	–	*Katu*	*Snigdh a, ushana*	*ushana*	–	*Sleshmarogahara, raktadoshara, vatahara, vishahara*
Sharpunka	*Sarphoka, empali, bansa, paavali*	Tephrosia purpurea	Fabacea e	*Tikta, kashay a*	*Laghu, ruksha, tikshan a*	*Ushana*	*Katu*	*Shothaghna, jantughna, vranro paka, kushthaghna, raktashodhanax*
Shudh tuth	*Sasyaka, tuttha, mayuratutha, sikhigrivan, tamragarbha.*	Cupri sulphas	–	*Katu, kashav a, tikta*	*Laghu, vishad a*	–	–	*Vishaghna, vamaka rasayana, balya, lekhana, bhedana.*
Sudh samundraph ena	*Samundraphen, phenaka, dindira, abdhija, samundraja*	Eng-cuttlefish	–	–	–	*Sheeta*		*Lekhana, deepana, pachana*
Vatsanabha [12]	*Aconite, balnag, nagpuri, mitha visha.*	Aconitum chasmanthum	Ranuncul a-ceae	*Madhu ra*	*Laghu*	*Ushna*	*Madhura*	*Kapha-vata hara jwaragna*
Tila Taila		–	–	*Ushna, teeksh ana, Vikasi, suksha ma*	*Madhu r, Tikta and Kshaya anuras a*	*Usna*	*Madhur*	*Vata-Kapha Shamaka, lekhaya, krimighana*

Table 2: Statistical analysis of clinical recovery in the signs and symptoms after treatment

S. No.	Sign and symptom	Mean score		Differences in mean	Paired t-test			
		B.T	A.T		S.D	S.E.M	T value	p-value
1	Pain	3.07	0.4	2.3	0.617	0.159	16.750	<0.001
2	Burning sensation	2.4	0.0	2.400	0.639	0.165	14.929	<0.001
3	Itching sensation	1.9	0.0	1.9	1.279	0.330	5.850	<0.001
4	Tenderness	2.5	0.1	2.4	0.507	0.130	18.330	<0.001
5	Discharge	2.2	0.0	2.2	0.593	0.153	14.789	<0.001
6	Smell	1.0	0.0	1.0	1.222	0.315	3.378	<0.001
7	Swelling	1.8	0.0	1.8	0.676	0.174	10.31	<0.001
8	Granulation tissue	1.4	0.0	1.4	0.632	0.163	8.57	<0.001

Patient suffering from specific ulcer such as malignant ulcers, tubercular ulcers, and leprotic ulcers. Patient with multiple systemic disorder.

Assessment criteria

The assessment criteria were listed according to details of clinical features found in the Ayurvedic texts and contemporary medical books. The criteria were grouped as subjective and objective.

- All the features were recorded before treatment, during each visit, and after treatment in the pro forma.

Objective and subjective criteria

- Pain
- Sensation
- Itching
- Smell
- Tenderness
- Discharge
- Granulation tissue
- Swelling
- Floor

Scoring pattern pain

0- No pain
1- Localized feeling of pain during movement but tolerable
2- Localized feeling of pain during movement which affects the movement

3- Localized feeling of pain even during rest but not disturbing the sleep
4- Localized continuous feeling of pain disturbing the sleep also.

Burning sensation
0- No burning
1- Little, localized, and sometime feeling of burning sensation
2- Moderate localized and sometime feeling of burning sensation
3- More localized and often burning sensation which does not disturbed sleep
4- Continuous burning sensation which disturbed sleep.

Itching
0- No itching
1- Slight, localized itching sensation
2- Moderate localized itching sensation
3- More, localized, and often itched but not disturbs sleep 4- Continuous itching which disturbed the sleep.

Smell
0- No smell
1- Minimum bad smell
2- Moderate bad smell
3- Unpleasant but tolerable
4- Foul smell which is intolerable

Tenderness
0- No tenderness
1- Mild (tenderness after squeezing)
2- Moderate (tenderness after touching with pressure)
3- Severe (tenderness just touching with soft object).

Discharge
0- No discharge/dry dressing
1- Scanty occasionally discharge and little wet dressing
2- Often discharge and with blood on dressing
3- Profuse continuous discharge which needs frequent dressing.

Granulation tissue
0- Healthy granulation tissue
1- Pale granulation tissue
2- Less granulation tissue
3- No evidence of granulation tissue

Investigation
Hemoglobin percentage, total leukocyte count, erythrocyte sedimentation rate, random and fasting blood sugar, urine routine and microscopic, wound swap culture and sensitivity X-ray of wound site (if necessary).

Photographs of before and after treatments
1. Pain – The statistical analysis revealed that the mean score of pain was 3.07 before the treatment which was reduced to 0.42 after the treatment and this change is statistically highly significant ($p<0.001$).
2. Itching (Kandu) – The statistical analysis revealed that the mean score of itching (Kandu) was 1.9 before the treatment which was reduced to 0.9 after the treatment and this change is statistically highly significant ($p<0.001$).
3. Smell (Gandha) – The statistical analysis revealed that the mean score of smell (gandha) was 1.0 before the treatment which was reduced to 0.0 after the treatment and this change is statistically highly significant ($p<0.001$).
4. Burning Sensation – The statistical analysis revealed that the mean score of burning sensation was 2.4 before the treatment which was reduced to 0.0 after the treatment and this change is statistically highly significant ($p<0.001$).
5. Discharge – The statistical analysis revealed that the mean score of discharge from ulcer was 2.2 before the treatment which was reduced to 0.0 after the treatment and this change is statistically highly significant ($p<0.001$).
6. The statistical analysis revealed that the mean score of swelling was 1.8 before the treatment which was reduced to 0.0 after the treatment and this change is statistically highly significant ($p<0.001$).
7. Tenderness – The statistical analysis revealed that the mean score of tenderness was 2.5 before the treatment which was reduced to 0.1 after the treatment and this change is statistically highly significant ($p<0.001$).
8. Granulation Tissue – The statistical analysis revealed that the mean score of granulation tissue was 1.4 before the treatment which was reduced to 0.0 after the treatment and this change is statistically highly significant ($p<0.001$).

DISCUSSION

Sushruta in his book *Sushruta Samhita* narrates a detailed account on ulcer. Its etiology, classification, features, and prognosis have been elaborately explained. While enumerating the treatment aspect, he explains 60 procedures that are to be followed based on different situations which holds good, in various types of wounds or based on different stages of wound healing or for complications that have arisen after improper healing. Wound healing is completed in three phases: Inflammatory, proliferative, and remodeling. Granulation, collagen maturation, and scar formation [13] are some of the other phases of wound healing which run concurrently but are independent of each other. Some patient on admission had no sensation of pain though tactile sensation was not completely deprived. After 2 weeks of daily application of the oil, he began to experience pain at the site of wound as it healed. Incidentally, the oil also had positive effect on the fungal infection in the web space in a duration of 20 days. During the course of study, the patient did not report any kind of inconvenience with respect to odor or sensation. Approximately 2 ml of the oil was employed which was sufficient to moisten the gauze and wound site. There are numerous medicated oils available today, but *Vipareeta Malla Taila* was chosen for this study because of its peculiar indication where it can be used even when the patient is not following the right diet or regimens as prescribed for proper wound healing. An attempt was made to explore the Shodhana and Ropana properties of the trial drug scientifically. Vrana ropan involves Shodhana followed by Ropana, two stages happen practically subsiding local Shotha by removal of local Dhatu dhusti, followed by initiation of Ropana process [15], that is, contraction and covering of wound by epithelial layers.

RESULTS

Vipareeta Malla Taila initially acts as a debriding agent removing slough and necrotic tissues. It reduces pain burning sensation, itching, decreases discharge edema, and helps in gradual improvement in floor and granulation tissue. Probably due to the above properties, it hastens the wound healing process which helps in reduction of wound size.

Scope for further study
This study is carried out on sample size of 20 patients. Patient having different types of ulcer such as arterial and venous was selected in this study. Further study may be conducted with large sample size and particular type of ulcer.

CONCLUSION

In this study, 20 patients of *dusta vrana* were treated with *Vipareeta Malla Taila*. Most of the patients suffering with *dusta vrana* belonging to lower socioeconomic group and common side affected in lower limb. This study had revealed local *shodhana* with oral medication has significant role in healing of *dusta vrana*. The oil does not pose any discomfort to the patient as it did not possess any impleasant odor which could have prevented the patient from continuing with the treatment. The nature of the medicament prevented the gauze to adhere to the wound and hence repeated change of dressing everyday did not pose any disturbances to the wound or to the patient. It is a cheap and cost-effective remedy for *dusta vrana*. *Vipareeta Malla Taila* was found to be an ideal formulation that can be adopted for all *dusta vrana*.

REFERENCES

1. Das S, editor. A Concise Textbook of Surgery. Old Mayor's Court, Calcutta: ???; 1994. p. 2-5.
2. Shastri AD, Sushruta Samhita, Chikitasthana, Vol. 1. New Delhi: Chaukhambha Sanskrit Sansthan; 2013. p. 5.
3. Shastri AD. Sushruta Samhita, Sarira, Chikitsa and Kalpasthana. Vol. 2. New Delhi: Chaukhambha Sanskrit Sansthan; 2010. p. 10.
4. Yogratnakar Edited by Vidhyotni Hindi Commentary by Vaidyashree Laxmipatshastrichukhambha Sanskrit Sansthan Varanasi. 7th ed. Varanasi: Sadyovrana Nadan; 1999. p. 184.
5. Tripathi I. Rasaratna Samuchaya. Varanasi: Chaukhambha Sanskrit Sansthan; ???. p. 40-2.
6. Mishra AB. Bhava Prakasha Niganthu. Varanasi: Chaukhambha Sanskrit Sansthan; ???. p. 91.
7. Mishra SB. Bhava Prakasha Niganthu. Varanasi: Chaukhambha Sanskrit Sansthan; ???. p. 49.
8. Mishra SB. Bhava Prakasha Niganthu. Varanasi: Chaukhambha Sanskrit Sansthan. p. 931.
9. Tripathi RD. Astang Hridaya Uttartantra. Shloka 62-64, Ch. 39. Varanasi: Chaukhambha Sanskrit sansthan; ???.
10. Mishra SB. Bhava Prakasha Niganthu. Varanasi: Chaukhambha Sanskrit Sansthan; ???. p. 392.
11. Shastri PK. Rasatarangni. Shloka No 55. Ch. 11. New Delhi: Motilal Vanarsi Dass Sanasthan.
12. Shastri PK. Rasatarangni. New Delhi: Motilal Vanarsi Dass Sansthan; ???. p. 653-4.
13. Shenoy KR. Manipal Manual of Surgery. 2nd ed. New Delhi: CBS Publishers and Distributors; 2006. p. 2-3.
14. Murthy KR. Bhava Prakasha. Vol. 1. Varanasi: Chaukhamba Krishandas Academy; 2004. p. 189, 191, 188, 342, 210, 194, 159, 181, 176, 321, 224, 253, 207, 318.
15. Shastri AD. Sushruta Samhita. Vol. 2. Sutrasthana, New Delhi; Chaukhambha Sanskrit Sansthan; 2013. p. 96.