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A Clinical Study on *Jalaukavcharana* Follow with *Karanjadi Ghrita* Dressing for the Management of *Dushta Vrana* w.s.r. to Non-Healing Ulcer.

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ABSTRACT:

Vrana or ulcer is a very common problem encountered by medical practitioners. *Sushruta Samhita*, the available basic classics of *Salya Tantra* has given prime importance to *Vrana* and many chapters of the treatise are exclusively dedicated for *Vrana* and its management. *Acharya Sushruta* mentioned sixty treatment modalities for *Vrana*. *Dushta Vrana* are exhibiting less tendency or delayed tendency towards healing. It not only affects the patient physically but also the mental wellbeing of an individual. *Dushta Vrana* is such a long-standing ulcer with profuse discharge and slough, where removing the debris and enabling drug to reach the healthy tissue is more important. These wounds cause patients severe emotional and physical stress and create a significant financial burden on patients and the whole healthcare system. Thus, to achieve good approximation, early healing, and acceptable scar, without complications. *Karanjadi Gharita* was used for local application in the management of *Dushta Vrana*. *Raktamokshan* or Bloodletting tools have been dated to the Stone Age. Among the Para-surgical measures described in *Ayurveda*, *Raktamokshan* is prime important as it can provide complete remedy to many ailments. *Raktamokshan* using *Jalauka* was performed.

Keywords: *Dushta Vrana*, *Jalaukaavcharna*, *Karanjadi Ghrita*,

INTRODUCTION

Vrana or ulcer is a very common problem encountered by medical practitioners. *SushrutaSamhita*, the available basic classics of *Salya Tantra* has given prime importance to *Vrana* and many chapters of the treatise are exclusively dedicated for *Vrana* and its management. The

ChikitsaSthana of *SushrutaSamhita* starts with treatment of *Vrana* and sixty treatment modalities are mentioned for it. No other disease has such large number of *Upakramas* and this itself shows the importance of *Vrana*.

DushtaVrana are exhibiting less tendency or delayed



tendency towards healing. It not only affects the patient physically but also the mental wellbeing of an individual. *DushtaVrana* is such a long-standing ulcer with profuse discharge and slough, where removing the debris and enabling drug to reach the healthy tissue is more important. These wounds cause patients severe emotional and physical stress and create a significant financial burden on patients and the whole healthcare system. Thus, to achieve good approximation, early healing, and acceptable scar, without complications *Acharya Sushruta* has elaborately explained *Shashti Upakrama* and among the he has specifically indicated *Raktamokshan* in *DushtaVrana* treatment and *Acharya Chakradatta* explained *KaranjadiGharita* application in the management of *DushtaVrana*.

AIMS AND OBJECTIVE

1. To study the etiopathogenesis of this challenging condition of *Vrana*.
2. To evaluate the efficacy of *KaranjadiGhrita* & *Jalaukavcharna* in the management of *DushtaVrana* or non-healing ulcer.
3. Contemporary and comprehensive study of the selected problem.

MATERIAL AND METHODS

60 patients with classical sign and symptoms were randomly selected and registered from OPD & IPD of University College of Ayurveda Hospital, Jodhpur, after CTRI registration (CTRI/2020/11/028890) & IEC approval (DSRRAU/UCA/IEC/19-20/225) with informed consent of each patient. All general and routine examinations and investigations were done.

Drug contents

1. *Karanja leaves (Pongamia pinnata)*
2. *Chameli leaves (Jasminum officinale)*
3. *Patola leaves (Trichosanthes dioica)*
4. *Haridra (Curcuma longa)*
5. *Daru haridra (Berberis aristata)*
6. *Madhuyashti (Glycyrrhiza glabra)*
7. *Kutaki (Picrorhizacurroa)*
8. *Manjistha (Rubia cordifolia)*
9. *Chandana (Santalum album)*
10. *Ushira (Vetiveria zizanioides)*
11. *Neel kamal (Nymphaea cynea)*
12. *Shweta Sariva (Hemidesmus indicus)*
13. *Krishna Sariva (Ichnocarpus frutescens)*

14. *Nishoth (Operculinaturpethum)*

15. *Mome (Wax)*

Drug preparation

Raw material was collected and *Karanjadi Ghrita* was prepared from the University College of Ayurveda pharmacy.

Chemical constituents of *Karanjadi Ghrita*

Pongaglabrone, diketonepongamol, glabrin, karanjin, pongapin, kanjone. Linalyl acetate, benzyl benzoate, benzyl alcohol, geraniol, nerol, eugenol, creosol, lactones, methyl anthranilate and indole.

The component of *Jalauka* saliva like Hirudin, Calin, Hyaluronidase, Eglin, Bedllin, Piavit, Histamine and more, which are having Antibiotic, Anti-microbial activity, Vasodilator, Anti-thrombin activity, Anti-coagulation, and Anti-inflammatory properties. *Jalauka* contains also having an Anaesthetic property, it reduces pain sensitivity at the affected site of *Dushta Vrana*.

Drug administration and dose (Table 2)

Informed consent

Written informed consent will be taken from each patient before starting the study. Dose-According to size (L*W), Depth etc of *Dushta Vrana*.

Follow up period

Patient is advised to come for follow up on every 7th day for next 4 week and a four week follow up.

CLINICAL STUDY

Sample size

60 Patients will be randomly selected for the study.

Study design

- Randomized
- Control
- Open clinical trial.

Selection of patient

Inclusion criteria

- Patient who given written consent.
- Patient suffering from *Dushta Vrana* or patient who had clinical features of *Dushta Vrana*.
- Any post-operative non healing ulcer, irrespective to

any specific as well as nonspecific procedure.

Exclusion criteria

- Patient suffering from any malignancy.
- Patient suffering from HIV, & Hepatitis B.
- Patient suffering from any major systemic disorder.

Withdrawal criteria

The entire patient found hypersensitive with the selected management discarded from the study even after registration. At the same time the patient showing any allergic reaction with *Karanjadi Ghrita* and *Jalaukavcharan* and non-cooperative patient was withdrawn from the course of treatment.

Dietic advice

The diet will be strictly advised to the entire patient as mentioned in the *Shushruta Samahita Sutrasthan*, *Adhyaya 19 Vranitopasniya*.

Criteria for assessment

The effect of the trial drug will be assessed in term of

- Subjective Assessment
- Objective Assessment

Subjective Assessment

The following signs and symptoms of *Dushta Vrana* were assessed for any improvement before and after the course of therapy

1. *Vedana* (Pain):
 - No pain -0
 - Localized feeling of pain during movement only but no feeling during rest - 1
 - Localized feeling of pain during movement only but no feeling during rest - 2
 - Localized continuous feeling of pain, radiating & not relieved by rest - 3
2. *Kandu* (Itching sensation):
 - No itching - 0
 - Slight, localized itching sensation which is relieved by rest - 1
 - More localized & often itching but not disturbs sleep - 2
 - Continuous burning sensation with disturbed sleep - 3
3. *Shotha* (Swelling):
 - Absent - 0
 - Slight red, tender & hot with painful movement & without induration - 1
 - Redder, having painful movement, with more local

temperature & with Induration - 2 Angry look, hot, resist to touch & with more induration -3

4. *Daha* (Burning sensation):
 - No burning - 0
 - Little, localized & some time feeling of burning sensation - 1
 - More, localized & often burning sensation which does not disturb sleep - 2
 - Continuous itching with disturbed sleep - 3
 5. *Akriti* (Size): Less than $< 1 \text{ cm}^2$ - 1
 - $1 \text{ to } 5 \text{ cm}^2$ - 2
 - $6 \text{ to } 10 \text{ cm}^2$ -3
 - More than $> 10 \text{ cm}^2$
 6. *Vrana varna* (Discoloration):
 - Normal pigmentation of skin - 0
 - Slight red - 1
 - Reddish black - 2
 - Pale yellow / Blackish / Bluish -3
 7. Base/floor:
 - Smooth, regular & with healthy granulation tissue - 0
 - Smooth, irregular, slight discharge, less granulation tissue, needs dressing & soft scar - 1
 - Rough, regular wet with more discharge, needs dressing & having firm scar - 2
 - Rough, irregular with profuse discharge, needs frequent dressing & having hard scars - 3
 8. Margin:
 - Adheres margin and surface - 0
 - Smooth, even & regular - 1
 - Rough, regular & inflamed - 2
 - Rough, irregular & angry look - 3
 9. *Srava* (Discharge):
 - No discharge / dry dressing - 0
 - Scanty occasional discharge & little wet dressing - 1
 - Often discharge & with blood on dressing - 2
 - Profuse, continuous discharge which needs frequent dressing - 3
 10. Granulation:
 - Healthy - 0
 - Moderate - 1
 - Unhealthy - 2
 - Absent - 3
 11. *Vranagandha* (Smell):
 - No smell - 0
 - Bad smell - 1
 - Tolerable unpleasant - 2
 - Foul smell which is intolerable - 3
- For Nonparametric Data Wilcoxon matched pairs signed rank test while paired “t” was used for parametric Data

and results were calculated (Table 3)

DISCUSSION

Jalauka reduces increased *Pitta & Rakta Dosha* in *Dushta Vrana*, relieving *Daha*. *Karanjadi Ghrita* thus used contains *Chandan, Ushir, Kutaki, Sariva, Neelkamal* and *Ghrita*. All these drugs are of *Sheet virya, Soumya guna* and *Madhura vipaka* which helps in reducing *Daha*. Other contents of *Karanjadi Ghrita* as *Karanj, Jati, Haridra, Daruharidra, Chandana, Ushir* having *Kandughana, Karmighana* and *Kushthagana* properties which reduces *Kandu* in *Dushta Vrana*. *Katutikta rasa* of *Karanjadi Ghrita* have *Shothaghana* property.

The saliva of *Jalauka* contains *hirudine, histamine, calin, bedellins, hitamine* and *hyluronidage* which act as *vasodilator, anti-coagulant, antibiotic, and anti-inflammatory* properties, these qualities of *Jalauka* helps in wound healing and reduce in wound *Aakriti*. *Karanjadi Ghrita* was a significant decrease in the Size of *Vrana* due to *VranaRopan* and *VranaShodhak* effect and *Kandughana, Karmighana, Kusthagana Karma* of medication such as *Karanj, Jati, Haridra, Daruharidra, Chandan, Ushira* helps in shrinkage of the *Dushta Vranaaakriti*.

Karanjadi Ghrita are also containing *Madhur Rasa*, which provides nourishment to the wound and helps in increasing healthy tissue. Hence this study confirms that *Jalaukavchrana* followed by *Karanjadi Ghrita* is promote granulation in *Dushta Vrana*.

CONCLUSION

Standardization should be done of *Vranashodhan* and *ropan* effect of *Jalaukavcharan* followed by *Karanjadi Ghrita*. Trial should be on a broad scale for good results. The treatment protocol should be extended to get better results and track the rate of recurrence.

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Conflict of Interest: Nil

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Table 1 Pharmacodynamic properties of *Karanjadi Ghrita*

| MEDICINE | RASA | GUNA | VIRYA | VIPAKA | KARMA |
|-------------------------|--------------|---------------------|--------------|----------------|---|
| <i>Karanjadi Ghrita</i> | <i>Tikta</i> | <i>Laghu Ruksha</i> | <i>Ushna</i> | <i>Madhura</i> | <i>Vrana Rpoan Vishaghna Dhatu Poshan</i> |

Table 2 Drug administration and dose

| Treatment | A | B |
|-------------------------|-------------------------|----------------|
| Drug used | <i>Karanjadi Ghrita</i> | <i>Jalauka</i> |
| Form | <i>Ghrita</i> | |
| Dose | As per need | |
| Route of administration | Local application | LOCAL |
| Duration | everyday | 7 days |

Table 3 For Nonparametric Data Wilcoxon matched pairs signed rank test while paired “t” was used for parametric Data and results were calculated

| S. No. | VARIABLES | MEAN | | MEAN DIFF. | RELIEF % |
|--------|---------------|-------|--------|------------|----------|
| | | B. T. | A. T. | | |
| 1. | <i>Vedana</i> | 2 | 0.8667 | 1.133 | 56.65 |
| 2. | <i>Daha</i> | 1.983 | 1.083 | 0.9 | 45.38578 |
| 3. | <i>Kandu</i> | 2.033 | 1.15 | 0.883 | 43.43335 |
| 4. | <i>Shotha</i> | 1.883 | 1.033 | 0.85 | 45.14073 |

| S. No. | VARIABLES | MEAN | | MEAN DIFF. | RELIEF % |
|--------|--------------------|-------|--------|------------|----------|
| | | B. T. | A. T. | | |
| 1. | <i>Akariti</i> | 7.539 | 3.928 | 3.666 | 48.62714 |
| 2. | <i>Vranavra</i> | 1.733 | 0.9833 | 0.7497 | 43.26024 |
| 3. | Floor | 1.833 | 0.833 | 1 | 54.55537 |
| 4. | Margin | 1.783 | 0.8667 | 0.9163 | 51.39091 |
| 5. | <i>Vranastrava</i> | 1.817 | 0.8667 | 0.9503 | 52.70 |
| 6. | Granulation | 1.783 | 0.8666 | 0.9167 | 51.41335 |
| 7. | <i>VranaGandha</i> | 1.483 | 0.733 | 0.75 | 50.57316 |