Effect of Nimbadi Taila Vrana Basti in the management of Dusta Vrana (Chronic Ulcer) - A Case Study

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INTRODUCTION

An ulcer is a break in the continuity of the covering epithelium - skin or mucous membrane. Causes for wound might be trauma, chemical and microbial agents, or ischemia. The word “healing” means replacement of destroyed or damaged tissue by living tissue of similar type or different. It occurs by means of repair and regeneration. The four basic processes which take place in wound healing are Inflammation, Wound contraction, Epithelialization and Granulation tissue formation. The process of wound healing is influenced by factors like age, nutrition, hormones, comorbid conditions, place and position of wound, blood supply to the area etc.[1] While explaining the scope of Shalya Tantra, Acharya Sushruta has explained Vrana Vinishcayaartham which is a major part of Shalya Tantra.[2] Vrana as explained by Acharya Sushruta, it is a condition in which destruction of tissues occurs and further leads to changes like discolouration of the affected region and increased local temperature.[3] Healing of Vrana is a natural process, but due to interference of vitiated Dosha, Vrana becomes Dushta and normal healing gets delayed. In India the prevalence of chronic ulcer is at 4.5 per 1000 population.[4] According to Acharya Sushruta there are two types of Vrana, as per its origin i.e. Agantuja Vrana and Nija Vrana.[5,6,7] He has explained management of wound through Shashti Upakramas (sixty therapeutic measures) among sixty Upakramas local application of medicated oil (use of Taila) is one of most important Upakrama. Hence this...
treatment modality can be modified into various forms like Pichu (cotton swab), Lepa (ointment) or as a Vrana Basti on Dushta Vrana. Among these Vrana Shodhana and Ropana are the preliminary steps in healing and both can be achieved through Vrana Basti. Vrana Basti is the modified form of Kati Basti or Janu Basti. It is unique procedure wherein retaining of warm medicated oil with in specially form frame over the wound.

Lakshana of Dusta Vrana


CASE REPORT

A male patient aged 51 yrs., not known case of Diabetes mellitus or Hypertension or any systematic ailment, presented with complaints of non-healing ulcer in the right lower limb just below the lateral malleolus, with discharge, foul smell and pain since two years. Two years ago, patient was apparently heathy, as he is a cloth merchant due to his long-standing working nature, he gradually noticed visible veins along with blackish discoloration of lower 1/3rd of right lower limb with itching. After 6 months he noticed water filled boil in that region which opened on its own leading to the formation of small wound which increased in size gradually. He had taken treatment for the same but found no relief. Since the size of wound was increasing, he consulted the Shalya OPD, at SJGAMC hospital, Koppal.

Local examination of wound

Inspection

- **Location** - Right foot, 2 cm below the lateral malleolus
- **Size and Shape** - 4x3cm oval shape
- **Number** - Solitary ulcer
- **Edge** - Sloping edge
- **Margin** - Irregular
- **Discharge** - Serous discharge
- **Floor** - Unhealthy granulation tissue and slough present
- **Base** - Calcaneus bone
- **Odour** - Foul smell
- **Surrounding skin** - Inflamed

Palpation

- **Temperature** - Surrounding wound raised
- **Tenderness** - Present
- **Peripheral pulsations** - Posterior Tibial Artery, Anterior Tibial Artery and Dorsalis Pedis Artery palpable.
- **Inguinal lymph nodes** - Not enlarged

Investigations done

- **TC** - 11,400 cells/Cum
- **ESR** - 30 mm/hr
- **Hb** - 12.8 g/dl
- **RBS** - 105 mg/dl

MATERIALS AND METHODS

Present study was carried out on OPD basis for 7 days. Materials required were Nimabdi Taila, Normal saline, sterile gauze, Masha Pishiti, bowl, sauce pan, 6” roller bandage, gauze pieces and pads. Every day, the wound was cleaned with normal saline. After proper cleansing, Vrana Basti was done with Nimabdi Taila. The wall of Masha Pishiti was erected around the ulcer margins, measuring about 3cm in height & 2 cm in thickness. The Nimabdi Taila was taken Luke warmed on hot water and poured with the help of sterile gauze piece into the pit of dough over the floor of an ulcer. The oil was kept in situ for 20 mins by maintaining the lukewarm temperature of oil throughout the procedure later the oil was discarded and wound dressing was done using Nimabdi Taila.
Later patient was given *Triphala Guggulu* 1 TID after/food, Cap *Gandhaka Rasayana* 1 TID after/food and *Amruttotara Kashaya* 15ml TID after/food internally.

**OBSERVATION AND RESULTS**[^10,11]

Parameters of observation include discharge, size of ulcer, granulation tissue, and pain. Patient was observed with above parameters on 1\(^{st}\), 7\(^{th}\), 30\(^{th}\), 40\(^{th}\) days.

**Table 1: Parameters of Observations**

<table>
<thead>
<tr>
<th>Item</th>
<th>Assessment</th>
<th>Day</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Size</td>
<td>1= Length x width &lt; 4 sq. cm</td>
<td>1(^{st})</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2= Length x width 4-&lt;16 sq. cm</td>
<td>7(^{th})</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3= Length x width 16.1-&lt;36 sq. cm</td>
<td>30(^{th})</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4= Length x width 36.1-&lt;80 sq cm</td>
<td>40(^{th})</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5= Length x width &gt; 80 sq cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Exudate Type</td>
<td>1= None</td>
<td>1(^{st})</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>2= Bloody</td>
<td>7(^{th})</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3= Serosanguinous: thin, watery, pale red/pink</td>
<td>30(^{th})</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4= Serous: thin, watery, clear</td>
<td>40(^{th})</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5= Purulent: thin or thick, opaque, tan/yellow, with or without odour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Granulation Tissue</td>
<td>1= Skin intact or partial thickness wound</td>
<td>1(^{st})</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2= Bright, beefy red, 75% to 100% of wound filled and/or tissue overgrowth</td>
<td>7(^{th})</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>3= Bright, beefy red; &lt; 75% and 25% of wound filled</td>
<td>30(^{th})</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4= Pink, and/or dull, dusky red and/or fills &lt; 25% of wound</td>
<td>40(^{th})</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5= No granulation tissue present</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[^10,11]: Parameters include discharge, size of ulcer, granulation tissue, and pain. Patient was observed with above parameters on 1\(^{st}\), 7\(^{th}\), 30\(^{th}\), 40\(^{th}\) days.

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<table>
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<tr>
<th>Item</th>
<th>Assessment</th>
<th>Day</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Pain</td>
<td>0 = No pain</td>
<td>1(^{st})</td>
<td>7-8</td>
</tr>
<tr>
<td></td>
<td>1-2 = Can be ignored</td>
<td>7(^{th})</td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>3-4 = Interferes with tasks/sleep</td>
<td>30(^{th})</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5-6 = Interferes with concentration</td>
<td>40(^{th})</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>7-8 = Interferes with basic needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9-10 = Bed rest required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Before treatment during Vrana Basti 1\(^{st}\) day**
DISCUSSION

Effect of Nimbad Taila on Vrana Ropana

At the end of the seven days slough was completely absent and floor was covered with healthy granulation tissue. This may be due to Shodhana property of the Nimbad Taila.

- **Effect on Vrana Srava**: No discharge was present at the end of the treatment.
- **Effect on Vrana Gandha**: The unpleasant smell was present at the beginning of treatment. But after seven days of treatment the smell was totally reduced.
- **Effect on Vrana Akriti**: At the end of the fifty days the Vrana was completely healed with minimal scar.

So, the Nimbad Taila has been very efficacious for Vrana Shodhana and Ropana Karma.

Probable mode of action of drug

Probable mode of action of Nimbad Taila on Dusta Vrana can be hypothetically assumed that its Kashaya Rasa is Pitta Kaphapahaa (reduces inflammation) in earlier phase, does Pidana (squeezes out toxins and necrotic tissue) and does Kleda Puya Shleshma Shoshana (checks excessive exudation) and thus facilitates Ropana (wound healing). Due to Katu Rasa, it reduces the local discharge, irritation, acts as Krimighna (anti-infective). By its Sroto Shodhana property due to Katu Rasa, Ushna Virya, Laghu and Teekshana Guna it penetrates in deep tissues and debride the wound.

CONCLUSION

The present research study was targeted to achieve the Shodhana and Ropana effect of Nimbad Taila. As per the incidence of ulcers, legs are more affected than other parts. To overcome the adverse effects & cost effectiveness of present dressing methods, an attempt was made with an Ayurvedic formulation in the form of Taila which is explained in Dushta Vrana Chikitsa and is one among seven Vrana Shodhana Upakrama. Patient attained Shuddha Vrana Lakshana in terms of reduction in pain, discharge, burning sensation, depth of ulcer during intervention, length, and breadth during follow up period.

REFERENCES


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