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Case Report

Title of Article: Effect of *Dhupan Karma* in Management of Bed Sores: A Case Report

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ABSTRACT

The *Vranaropana* (Wound healing) is a natural process but if infection occurs, the wound does not heal naturally and converts into a *Dushta Vrana*. Bedsore or pressure ulcer is a type of *Dushta Vrana*. Mostly it develops due to the immobilization of patients. It develops in the areas such as hips, ankles, heels, and tailbone. *Acharya Sushruta* has described the *Vrana* in detail in his *Samhita*. For *Vrana*, he has mentioned *ShashtiUpakramas*. *Dhupan Karma* is one among them. *Dhupan* is a process in which medicines are used in the form of smoke. The drugs which have antibacterial, antiseptic properties are used in the process of *Dhupan* for both curative and preventive purposes of *Vrana*. In the present case study, a 73yr old female patient brought in OPD with a history of Left-sided Hemiplegia and Pneumonia for 15days. Due to immobility, she developed bed sores on the buttock region which were treated with Ayurvedic *Dhupan* treatment.

Keywords: *Vrana*, bedsores, *ShashtiUpakramas*, *Dhupan*.

INTRODUCTION

Vrana means scar, even after healing it does not disappear and stays on the body of the person for life. *Vrana* causes discoloration of the site. *Vranas* are of two types *Sharirika* and *Agantuj Vrana*¹. *Acharya Sushruta* is called the father of Surgery. He has given a detailed description of *Vrana*. *Dushta Vrana* is a type of *Vrana* that needs treatment for healing. *Dushta Vrana* is characterized by vitiation of *Mamsa*, *Meda Dhatus*, and *Doshas* with pain, inflammation, redness, itching, and oozing of *durgandha yukta rakta* with no intention to heal.² *Acharya Sushruta* mentioned that apart from surgery *Vrana* can be treated with the help of *ShashtiUpakrama*.³ *Acharya Charaka* described *Shatatrishadusidhta*⁴ *Upakrama* for *Vrana*. *Dhupan* is one of them. Both *Charak* and *Sushruta* have described *Dhupan* procedure for *Vrana*⁵. Medicine used in

the form of smoke is called *Dhupan*. *Dhupan* procedure is recommended for both curative and preventive purposes of *Vrana*.

Vrana can be correlated with Bedsores described in modern science. Bedsores or pressure ulcers are serious and frustrating complications for the paralyzed, debilitated, or comatose patient. This ulcer forms when soft tissue is compressed between a bony prominence such as ischium, sacrum, or trochanter and a supporting structure such as the bed or wheelchair.⁶ (sebaceous cyst). As this is a single case report, it has to be tried in a large sample size for its scientific validation.

Case report: A 73yr old, female patient brought in OPD with the diagnosis of Hemiplegia (Lt. Side 15days before) and Pneumonia (15 days before) for which was admitted to

the hospital. Due to immobility, she developed bed sores (*Shayya Vrana*) on Lt. Thigh region for the last 10days.

Symptoms

1. Pain at site of bedsores
2. Redness at the site of bedsores

PAST HISTORY

K/C/O HTN ↓ Rx from 15 days

Pneumonia(Rt lower lobe) on 26/11/18

Blood transfusion 15 days before

No history of DM/ any surgery

Consent – Informed consent was taken before starting the treatment. On examination, the skin was open and showed signs of tissue death around the wound. The bedsores were shallow with the pink-red wound bed.

Local examination:

Size – 5 × 2 cm

Shape – oval

Edge – punched out

Number – 1

Position – Sacrococcygeal region

Discharge – No

Palpation -

Tenderness – Absent

Depth – 4cm

Bleeding - Absent

Asthavidha parikshan –

Nadi -74/min

Mala – 1times/day

Mutra – 4-5 times a day

Jivha – *Lipta*

Shabda – *Alpa*

Sparsha – *Anushna*

Druka – *Normal*

Akruti – *Krusha*

MATERIALS AND METHODS

Following are the materials used during the study

Table 1: Shows Materials used during the study

Sr no	Dravya	Latin Name	Rasa	Parts Used	Quantity
1.	<i>Nimba</i>	Azadirachta indica	<i>Tikta, Kashaya</i>	<i>Patra</i>	2gm
2.	<i>Bhurjap atra</i>	Betula utilis	<i>Kashaya</i>	<i>Patra</i>	2gm
3.	<i>Rala</i>	Resin of Shorea robusta Gaertn	<i>Kashaya Tikta</i>	<i>Niryas</i>	2gm
4.	<i>Guggulu</i>	Commiphora mukul	<i>Tikta, Katu</i>	<i>Niryas</i>	2gm

5.	<i>Karpura</i>	Cinnamomum camphora	<i>Tikta, Katu</i>	<i>Niryas</i>	2gm
6.	<i>Devadaru</i>	Cedrus deodar	<i>Tikta, Katu</i>	<i>Kaand</i>	2gm
7.	<i>Khushta</i>	Saussurea lappa	<i>Tikta, Katu</i>	<i>Mool</i>	2gm
	<i>Haridra</i>	Curcuma longa	<i>Tikta, Katu</i>	<i>Kanda</i>	2gm

Center of study: S.S.N.J Ayurvedic Hospital, Solapur

Study Design: a single case study

Criteria for assessment: Pain assessment was done with the help of Visual analog scale (VAS Scale)⁷.

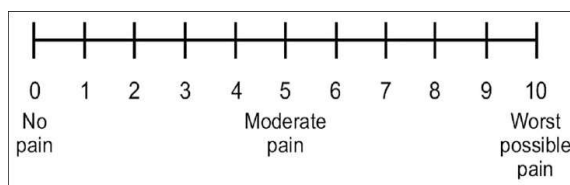


Table 2: Shows assessment criteria for redness⁸

Erythema (Redness)	Score	Description
Very faint erythema	1	The skin has a very light pink color
Faint erythema	2	Skin reaction is more apparent with clear borders but is still pink with more intensity
Bright erythema	3	Erythema is apparent in bright pink and borders are clearly defined
Very bright erythema	4	Skin is bright red, borders are very well defined, capillaries are bruising may be visible

Method of preparation

Dry cow dung cake was burnt with the help of *Goghru*ta mixed with *Dhupan Dravyas*. After the smoke started forming *Dhupan Yantra* was kept near the site of *Vrana* until all smoke diminished. It takes around 15-20 minutes. *Dhupan Karma* was done at morning 10.30 am and evening at 6 pm

OBSERVATION & RESULT

The assessment of the ulcer was done based on relief in symptoms i.e pain, size of wound, and redness. We noticed that within 6 days there was relief in signs and symptoms and a decrease in the size of the wound 2×1cm day by day (figure 1 to 3)

Table 3: Before and after treatment assessment

Symptoms	Before Treatment	After Treatment
Pain	4	0
Redness	3	1

**Figure: 1****Figure: 2****Figure: 3**

DISCUSSION

Bedsore develops in the patients bedridden for a prolonged time in the part where pressure is more. The friction of the body part with the surface leads to the formation of *Shayya Vrana* or bedsore. It is difficult to treat and causes tremendous pain, bleeding, redness, etc.

Role of Dhupan: Acharya Sushruta and Acharya Charak have suggested *Dhupan Karma* with *Rakshoghana Dravyas*. For the Dhupan procedure, we selected drugs having *Vrana Shodhana* and *Vrana Ropana* properties. *Dhupan* should be done by exposing *Vrana* to the smoke coming from *Dhupan Yantra*. This smoke helps reduce pain, maintains surface hygiene, and mitigation of exudation.

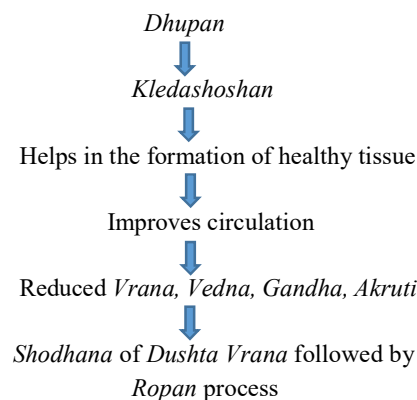
Strength and limitation of Dhupan: Local application of *Churna*, *Lepa*, and *Malhar* can create chances of

deposition of particles in the wound that prevent scab formation, but, in *Dhupan Karma* there are no such chances at the site of *Vrana*. Also, it helps in early scab formation. *Dhupan* drugs possess properties of cleansing and disinfecting wounds thereby reducing symptoms. This process is done till there is dryness at *Vrana site*.

Mode of action of Dravya: The action of *Dravya* used during the study is listed below. Drugs having *Vranashodhan* and *Vranaropan* properties are selected.

Table4: Mode of action of Dravya used in Dhupan

Sr.	Dravya	Mode of Action
1.	<i>Nimba</i> ⁹	<i>Vranapachaka, VranaShodhana, Krumighna</i>
2.	<i>Bhurjapatra</i> ¹⁰	<i>Uttejaka, Vranaropaka</i>
3.	<i>Rala</i> ¹¹	<i>Vranashodhaka, Vranaropaka, Raktastambhaka, Krumighna</i>
4.	<i>Guggul</i> ¹²	<i>Vrana Shodhana, Ropana</i>
5.	<i>Karpura</i> ¹³	<i>Durgadhakar</i>
6.	<i>Devadaru</i> ¹⁴	<i>Vrana Shodhana, Ropana</i>
7.	<i>Khushta</i> ¹⁵	<i>Vranashodhaka, Vranaropaka, Twakadoshahara</i>
8.	<i>Haridra</i> ¹⁶	<i>Vrana Shodhana, Ropana, Varnya, Twakadoshahara</i>



Follow-up: Follow-up was done on the 15th day. During this period it was advised to change patient position or use of pillow, pad, try to move the patient every 2 hours

CONCLUSION

The materials used in the form of *Dhupan* maintain an environment that improves healing time. The above study, reveals that Ayurvedic *Dhupan* Process has a good result in *Dushta Vrana* in the case of bedsore. There was no side effect found during treatment.

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