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Ayurvedic management of *Dusta Vrana* w.s.r. Decubitus Ulcer : A Case Study

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ABSTRACT

The wound heals by natural process but if the wound gets infected it delays the healing, converts it into *Dusta Vrana* (chronic ulcer). Bed sore or pressure sore are commonly seen in Non ambulatory patients like Paraplegia (*Pakshagatha*), Quadriplegia. Most common sites are Sacrococcygeal, Shoulder, Occipital regions due to continuous Pressure, immobilization and Malnutrition. Wound healing will be delayed and turns in to *Dustavrana* (chronic wound); If decubitus ulcer is not treated it may lead to Sepsis and even Osteomyelitis which may end in fatal complication. In such condition *Vrana Shodana* (Purification) and *Vranaropana* (Healing) *Chikitsa* is better choice of treatment. In present study a case of non healing decubitus ulcer with sinus at Right hip joint was treated with mixture of *Kapardika Bhasma*, *Yashada Bhasma* along with *Jathyadi Gritha* plugging into the sinus showed effective in treating pressure sores as it possess the properties of *Vrana Shodhana* and *Ropana*. Hence this treatment is effective in the management of decubitus ulcer.

Key words: *Dustavrana*, *Vranashodana*, *Vranaropana*, *Kapardika Bhasma*, *Yashada Bhasma*, *Jatyadi Gritham*.

INTRODUCTION

A bed sore/pressure ulcer is tissue necrosis and ulceration due to prolonged pressure. Blood flow to the skin stops once external pressure becomes more than 30mmHg (more than capillary occlusive pressure) and this causes tissue hypoxia, necrosis and ulceration. It is more prominent between bony prominence and an external surface. It is due to impaired nutrition, defective blood supply, neurological deficit. Usually neurological causes like paraplegia, spinal injury, peripheral nerve injury

peripheral neuritis, Leprosy, etc. Initially it begins as callosity due to repeated pressure, under which suppuration occurs and gives way through a central hole which extends down into the deeper plane up to the underlying bone as perforating ulcer (penetrating ulcer).^[4] Pressure ulcer increase mortality rates more than two folds and are the cause of death in 8% of paraplegics.^[5]

Pressure ulcers are described by stages.^[5]

National Pressure Ulcer Advisory Panel Classification

Grade	Classification of ulcer
1	Non-bleachable erythema of intact skin; wounds generally reversible at this stage with intervention
2	Partial-thickness skin loss involving epidermis or dermis ; may present as an abrasion, blister or shallow crater
3	Full-thickness skin loss involving damage or necrosis of subcutaneous tissue but not extending through underlying structure or fascia

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4	Full-thickness skin loss with damage to underlying support structure (i.e., fascia, tendon or joint capsule)
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An ulcer is a break in the continuity of the covering epithelium, either skin or mucous membrane due to molecular death.^[4]

Wound healing is divided into 4 Phases;

1. Haemostatis
2. Inflammation
3. Tissue growth (Proliferation)
4. Tissue remodeling (Maturation).^[1]

Acharya Susrutha has used the term *Vrana* (wound) twice in the definition of *Shalya Tantra* thus highlighting its importance.^[2] *Sushruta* has mentioned two types of *Vrana* according to its origin i.e. *Nija* (ulcer) and *Agantuja Vrana* (traumatic wound). Depending on symptomatic, *Suddavrana* and *Dusta Vrana* has been said, and its management has been mentioned in *Shalya Tantra*. He has explained *Shasti Upakramas* (60 therapeutic measures)^[3] for wound management, among 60 *Upakramas* local application of medicated *Gritha*, *Bhasma* in the form of *Lepa*, *Pichu* are also explained.

CASE REPORT

A 14yr old female child presented with H/O Non healing ulcer over the Right hip joint with pain, discharge, slough and sinus about 2cms depth vertically downwards. since 2yrs and was admitted in SJIIM and Hospital Bangalore.

EXAMINATION

Inspection

Local Examination

- Location : Right lateral aricular area of hip joint
- Size : 5cms x 2.5cms x 4cms
- Shape : Oval
- Edge : sloping
- Discharge : Serous

- Odour : No odour
- Induration : 1.5cms widtharound the wound

Palpation

- Tenderness : Absent
- Depth : 3cms depth, 2cms sinus
- Bleeding : Absent

Investigations

1. CBC : Hb-11.7g/dL, PLT-397x10.3/uL
2. ESR : 15mm/hr
3. CT,BT : NAD
4. RBS : 76mg/dl
5. HIV : Non-reactive
6. HBSAg : Negative
7. X-ray of Right pelvic joint : ?? old fracture of greater trochanter - Right

Irregular hyperdensities seen along the lateral aspect of right greater trochanter in soft tissue planes - ?Callus/Periosteal reaction.

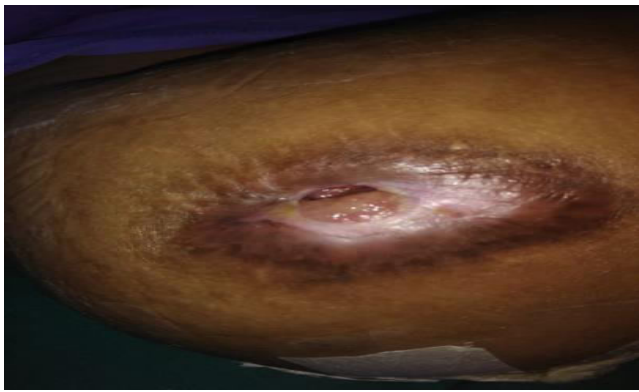
MATERIALS AND METHODS

Jathyadi Gritham, *Kapardika Bhasma*, *Yashada Bhasma*, Normal saline, sterile gauze, Bandage cloth, Micropore, artery forceps, scissor, gloves.

Jathyadi Gritham - 150gms + *Kapardika Bhasma* - 10gms + *Yashada Bhasma* - 10gms are mixed together and kept in air tight container, this was used for *Pichu*, before application the ulcer, area is cleaned by Normal saline and sterile dressing was done daily for 3 months.

RESULT

There is significant result noted in clinical features of Ulcer on 15 days, 30 days and on 45 days of treatment, gradually there was reduction in the size of Ulcer, and at the end of the treatment i.e. after 3 months of the treatment the Ulcer has been completely healed.



Day 1



Day 15



Day 30



Day 45

DISCUSSION

In this case *Jathyadhi Gritham* shows its *Shodana*, *Ropana* and *Raktha Prasadana* (blood purifier) property,^[6] and *Kapardika Bhasma* shows its effect on reducing *Srava*^[10] and it contains calcium, phosphate, magnesium, potassium, manganese, sulphur, zinc minerals,^[8] which helps in granulation tissue formation at the wound site and *Yashada Bhasma* has *Vishesha Guna* i.e. *Vranasamsravarodana*.^[10]

Yashada Bhasma contain Zinc, plays a major role in regulating every phase of wound healing process; ranging from membrane repair, oxidative stress, coagulation, inflammation and immune defence, tissue re-epithelization, angiogenesis, to fibrosis/scar formation.

Contents of *Jatyadi Gritha*

Property	Content
<i>Shodana</i>	<i>Nimba, Patola, Daruharidra, Abhya, Nakthamala (Karanja)</i>
<i>Ropana</i>	<i>Nimba, Sikta, Manjista, Puranagritham, Haridra</i>

Ingredients

Jathi, Nimba, Patola, Nakthamala, Sikta, Maduka, Kusta, Haridra, Daruharidra, Purana Gritha, Manjista, Tutha (CuSo4.7H2o), Puranataila, Katuki, Sariva, Abhaya.^[11]

Haridra, Karanja and *Jaati* are having *Kustaghna* and *Krimighna* property.^[7] Hence it helps to check wound infection. *Vrana Lekhana* (scraping) is done by *Tutha*. *Gritha* acts as a good vehicle in bringing out pharmacological action of other ingredients.

Properties	<i>Jatyadi Gritham</i>	<i>Kapardika Bhasma</i>	<i>Yasada Bhasma</i>
<i>Rasa</i>	<i>Katu, Tiktha, Kashaya</i>	<i>Katu</i>	<i>Kshaya, Katu</i>
<i>Guna</i>	<i>Singda</i>	<i>Ruksha, Tikshna</i>	<i>Singda, Ushna</i>

Veerya	Ushna	Ushna	Sheetha
Vipaka		Katu	Madura
Karma	Kapha, Vata,	Pitta, Kapha, Raktharoga	Kapha, Pitta Roga, Shamaka
Uses	Shodana, Ropana, Shothahara	Sravayukthav rana	Vranasamsra varodana
Reference	A.H.U.25/67	Rasatarangini 19/ 100	Rasatarangini 19/ 122

CONCLUSION

Healing of such chronic ulcers, longer duration of contact period of medicaments and the ulcer bed is required. Hence dressing with gauze dipped with the medicated ghee with 2 *Bashmas* when applied on the wound, provides and maintain an environment in which healing can take place at maximum rate and in minimum duration, the *Bhasmas* helps in fast action in the formation of healthy granulation, in regulating every phase of wound healing process, ranging from membrane repair, oxidative stress, coagulation inflammation^[9] and immune defence, tissue re-epithelization, angiogenesis, to fibrosis/scar formation. This is probably the reason why wounds tend to respond better and heals faster in the above said method of drug delivery.

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