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## Role of *Shastiupakramas* in the Management of *Dust Vrana* (Diabetic Foot Ulcer) - A Case Report

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### ABSTRACT

Diabetes is considered as a disease of developed countries, it leads to metabolic deregulation associated with secondary pathophysiologic changes in multiple organ systems that impose a tremendous burden on the individual and whilst also having significant socioeconomic impact. Diabetic foot is one among significant and devastating complications of diabetes; here the foot affected by ulceration is due to neuropathy and/or peripheral arterial disease of the lower limb. About 5% of all the patients with diabetes present with a history of foot ulceration, while the lifetime risk of diabetic patients developing this complication is 15%. Though there are many advances in modern surgery, management of diabetic wounds is still posing a problem with less promising results. In sushrutasamhitathere is explanation about 60 measures for the management of Vrana (wounds), which shows unique therapeutic approach for management of wounds. So here is a case report of a diabetic patient with irregular medications presented with complaint of non- healing wounds over left foot (plantar aspect) along with gangrenous condition of all the toes of foot since eight weeks. Patient was a diagnosed case of chronic diabetes mellitus and was on treated by few of *shastiupakramas* like *apatarpana*, *dhupanand* within week the wound started healing with marked improvement.

### KEYWORDS

*Dustavrana, Ayurvedic management, Sastiupakrama*



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## INTRODUCTION

Diabetes<sup>1</sup> is considered as a disease of developed countries, it leads to metabolic deregulation associated with secondary pathophysiologic changes in multiple organ systems that impose a tremendous burden on the individual and whilst also having significant socioeconomic impact. Diabetic foot<sup>2</sup> is one of the most significant and devastating complications of diabetes, and is defined as a foot affected by ulceration that is associated with neuropathy and/or peripheral arterial disease of the lower limb in a patient with diabetes. The prevalence of diabetic foot ulceration in the diabetic population is 4–10%<sup>3</sup>. The condition is more frequent in older patients. It is estimated that about 5% of all patients with diabetes present with a history of foot ulceration, while the lifetime risk of diabetic patients developing this complication is 15%. The majority (60–80%) of foot ulcers will heal, while 10–15% of them will remain active and 5–24% of them will finally lead to limb amputation within a period of 6–18 months after the first evaluation<sup>4</sup>. Once the ulcer appears other factors usually influence the outcome of the disease and the additional contributing factors are, gangrene, necrosis, infection, PAD. Although, there are many advances in modern surgery, management of

diabetic wounds is still posing a problem to the surgeons. Patients usually need to take long-term medications or are hospitalized for an extended period of time, which is expensive but still there is no worth promising results. The diabetic foot ulcer can be considered as *Dushta Vrana*<sup>5</sup> in Ayurvedic classics and there is a need to look for the management through Ayurveda. *Acharya Susrutahas* explained *sashtiupakrama* for the management of *Dushta vrana*<sup>6</sup>, shodhana by both systemic and local methods like *apatarpana*, *dhawana Pariseka*, *kashaya*, *krimi*, *dhoopana* showed good improvement and faster healing of wounds.

## A CASE REPORT

A male patient of 40 years attended the OPD of *Sushruta Ayurveda Hospital* with the complaints of non healing wounds over left foot (plantar aspect) with all the gangrenous toes over a period of one month. On enquiry, it was found to be a case of controlled diabetes since four years, he was on anti diabetic treatment and his blood glucose levels were within normal limits. But since last one month he developed non-healing wounds over plantar aspect of left foot for which, he took treatment but did not get any relief. Finally, he came to our hospital for



further management. After careful examination of wound it was found that they were irregular in shape with rough edges and unhealthy granulation tissue .On further inspection the surrounding areas of wound show inflammatory changes with unpleasant watery discharges. After admitting the patient investigations were done and treatment was planned.

#### **Personal History:**

Bowel: Regular

Appetite: Reduced

Micturation: Normal

Sleep: Disturbed due to pain.

Habits: H/o. Smoking.

#### **Family History:**

Father also had h/o DM.

**Physical Examination:** B.P: 150/88 mm of Hg.

P.R: 68/min.

#### **Lab Investigations:**

T.C -34,600/Cu.mm

D.C: Polymorph: 66%

Lymphocytes: 30%

Eosinophil: 4%

ESR: 110mm/Hr.

H.B:-9.5 gm%

FBS:-142 mg/dl

PPBS:-278 mg/dl

Total Cholesterol: 186 mg%

HDL Cholesterol: 40 mg%

LDL Cholesterol: 110 mg%

VLDL Cholesterol: 30mg%

Triglycerides: 150 mg% **General examination:**

Appearance: Normosthenic

Facies: Normal

Attitude: Conscious.

#### **Systemic Examination:**

CVS: -- H.R:-72/min. P.R:-72/min. B.P: 150/84 mm of Hg.

CNS: -- Normal and well oriented

RS: -- Normal

GIT:--Normal

#### **Specific Examination:**

*VranaType-Nija*

*Vranaashraya- Twak,Raktha, Sira,Mamsa,Medas.*

*Vranitopadrasas: Ruja(pain)*

*Srava (Oozing)*

*Dourganada (Foul)*

#### **VranaPareeksha:**

Site –over left foot

Size: Length: 9cm, Width: 6cm depth 5mm

Number: 1 Position: over left foot Edge and margin –Inflamed with irregular border

Floor: Covered with slough and unhealthy granulation tissue Base: Indurated.

Discharge: Foul smelling blood stained pus discharge.

Surroundings: Blackish in colour

Depth: 8mm



Bleeding (+)

Tenderness:-Present.

Toes- Blackish turned gangrenous.

### Treatment planned

1. *Sadyovamanawithyastiphanta* and *dugdha* for 2 sittings with a gap of 1 month

2. *Virechana* with *GandharvahastadierandAtaila* 30 ml+ *Panchamutrasava* 20 ml with warm water

3. *Vranadhawanwithgomutraarka* and *aragwadhadikashayam* followed by *jatyadi tail* application and dressing

4. *Dhupanwith rala,vacha ,haridra, nimbi, guggulu, moorchitaghrita*

5. Oral medications

a. *Gandakrasayanaguggulu* 2 TID

b. *Kaishorguggulu* 3 TID

c. *Chandraprabhavati* 2 TID

d. *Vasantakusumakara rasa* 1 TID

e. *Aragwadhadiaiyaskriti* 3 tsf TID

f. *Gandharvahastaditaila* 5 ml+ *panchamutrasava* 5 ml+ hot water OD this treatment was carried for 1 month and on second month *sadyovamanaand sadhyavirechana* was repeated.

### OBSERVATIONS

The characteristics of *DushtaVrana* like *Ativivertita* (broad base), *Bhairava*, *Putipuyamansa*

(pus discharge), *Durgandha*, *Vedana*, *Dirghakalanubandhi* were noted in the wound [Figure 1].



There was deep seated blackish slough at the base of the wound which was difficult to remove initially. The wound was cleaned daily

with *Aragwadhadikashayamandgomutraarka* and then *dhupan*. was done followed by application of *jatyaditaila*. Wound was bandaged after covering with sterilized gauze and cotton pads. It was noted that the deep seated slough, which was hard to remove, started to dissolve from the base and wound became clean and healthy on 12<sup>th</sup> day [Figure 2].



The healing was started with the formation of healthy granulation tissue. The margin of wound became reddish showing growing epithelium. The wound started to contract by filling of tissue from the base of wound day



by day. The dressing was continued till 45 and on 21st day, it was observed that wound size was markedly reduced with normal skin coloration at the healed area [Figure 3].



On the 45<sup>th</sup> day, the wound was healing [Figure 4] fast, the patient was still under treatment.



## DISCUSSION

The treatment of diabetic foot with above ayurvedic drugs is found quite satisfactory.

*Shodhana*<sup>7</sup> done helps in thorough systemic cleaning (*Shodhana*) by *vamana* and *virechana*, *Aragwadhadikwatha* decoction has *sodhana* property, daily washing of wounds with well prepared decoction leads to cleansing of wounds. Dhoopana prevents further spread and infection of wound, *Jatyaditaila* dissolves hard fibrous tissue and generates healthy base for healing and also promotes healing of wound thus there is

proper healing process occur by the procedures like *shodhana*, *dhawan*, *dhupana*, *bandanakarma*.

## CONCLUSION

This single case study highlighted the use of few of *shastiupakarmas* in *dustavrana* (diabetic non healing wound). *Aragwadhadiakashayadhawana* and *dhooopana* with *shodhana* and internal medication was found very effective and showed excellent healing effect in non-healing wounds.



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