

A REVIEW ON AYURVEDIC MANAGEMENT OF MADHUMEHAJANYA DUSTA
VRANA (W R T) DIABETIC FOOT ULCER

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ABSTRACT

Diabetes mellitus is disease known from the dawn of civilization. Sedentary lifestyle, lack of exercise, faulty dietary habits and urbanization precipitate the disease. Diabetic foot ulcers are the major health care problem. Approximately 5-10% of all diabetes develop foot ulcer at least once in their lifetime and more than 50% of non-traumatic amputations of lower limits are foot complication in diabetic complications in diabetic patient. A classical triad of neuropathy, ischemia and infection characterizes the diabetic foot. Mainstay of treatment includes antibiotics, debridement, local wound care and foot wear improvisation. In *Sushruta Samhitha* we get the most scientific description of features of *dusta vrana* and in classics we get number of treatment modalities in management of *dusta vrana*. Whereas here importance of *jalaaukavacharana* and *taila* application has explained.

KEYWORDS: Diabetes mellitus, Diabetic foot ulcer, *Dusta vrana*, *Jalaaukavacharana*, *taila* application.

INTRODUCTION

Global prevalence of diabetes is high and still on the rise. An increase in the prevalence of diabetes accompanied by an increase in its complications such as foot ulcers and lower extremity amputation, in that, the lifetime risk of a person with diabetes developing a foot ulcer is 50%. The risk for lower extremity amputation is 15 to 40 times higher in people with diabetes than people without diabetes.

The triad of peripheral neuropathy, peripheral arterial disease and infection is responsible for foot problem. This triad leads to the final event of gangrene and amputation. In *Sushruta samhitha* we get reference of *Madhumeha* under classification of *vataja prameha* and *madhumeha vrana*.^[1] Where he says person who suffers from *madhumeha* and develop *vrana* is *krcchra sadhya* in nature.^[2] Both *Sushruta* and *Charakacharya* has explained 60 and 36 *upakarmas* respectively for treatment of *vrana*.^[3,4] Those are applicable for treating all type of *vrana* and are more scientific too. Among those *jalaaukavacharana* and *taila* application which is having more effect in treating *dusta vrana*.^[5,6]

Aetiology^[7]

Increased glucose in tissue.
Slight injury to glucose laden tissue.
Diabetic polyneuropathy or peripheral neuritis.
Diabetic microangiopathy.
Increased glycosylated hemoglobin and tissue protein.
Diabetic atherosclerosis.

Samprapti Ghataka

DOSA: Tridoshaja

DUSHYA: Tvacha, mamsa, sira, snayu, sandhi, koshta and marma.

SROTAS: Annavaha, rasavaha, raktavaha, mamsavaha and svedavaha.

AGNI: Maandya, visama.

MARGA: Sakha.

ADHISTANA: As dushya.

UDBHAVASTHANA: Anywhere in body.

PRATAMYA LAKSHANA: Gatravicurnane.

Clinical Prerentation^[8]

Clinical features of diabetic foot ulcer

Less sensation to surrounding skin

Erythema

Edema

Heat

Pain

Purulent exudate

Delayed healing

Friable granulation tissue

Discolored granulation tissue

Foul smell

Pocketing of wound base

As per above mentioned features, we can consider diabetic foot ulcer under the heading of *dusta vrana*. And *dusta vrana* features as mentioned in *Sushruta samhitha* is like.^[9]

- *Atisamruta/ativivruta.*
- *Atikatina/atimrudu.*

- *Utsanna/avasanna.*
- *Atiseeta/ atiushna.*
- Having one of colours of *krushna, rakta, peeta, sukla* etc.
- Filled with *pootipooya mamsa, sira, snaayu* etc.
- Moving in oblique track (*unmargi*).
- Having *amanoghna darshana.*
- *Atigandha.*
- *Vedanayukta.*
- Associated with *daaha, paaka, raaga, kandu, soph, pidaka* etc.
- Discharging excessively *dushta shonita.*
- *Deergha kaalanubandi.*

Investigation^[10]

Blood sugar level

Urine ketone bodies

Discharge for culture and sensitivity

X-ray

Arterial Doppler

Glycosylated hemoglobin estimation

Ayurvedic Management

- Acharya Sushruta and Acharya Charaka has mentioned 60 and 36 upakarmas respectively for treatment of vrana.
- Among that Raktamokshana and Taila application to vrana which occupies important role.
- Clinical observation reveals that raktamokshana among shodhana may provide better relief than other shodhana karma.
- Amongraktamokshana Acharya Sushruta recommended Jalaukavacharana for treating vrana.
- Using of taila in vrana which helps in wound healing faster than any other treatment.

Importance of Jalaukavacharana

As vrana is tridoshajanya vyadhi, Acharya sushruta has mentioned among rakta mokshana, Jalaukavacharana is best treatment for treating this.

Chakrapanidatta opines that Shastra karma is not advisable to expel out blood as it may damage sparshanendriya.

Among Anushastras, Acharya Vagbhata considers Jalauka as best one that provide comfortable bloodletting.

Mode of Action of Jalaukavacharana^[11]

As saliva of Jalauka contains several bioactive substances, including anticoagulants, vaso dilators and anesthetics. Hirudin, a potent anticoagulant in leech saliva, inhibits the conversion of fibrinogen to fibrin, preventing blood from clotting. Indeed, a ulcer may continue to bleed for many hours after the leech has already detached. so this leads to regeneration of new vessels with pure blood circulation.

This helps in

- Normalisation and improvement of capillary circulation.
- Anti-inflammation.
- Anti-stress
- Blood purification.
- Immune stimulation and immune modulating effect.
- Improvement of end cellular exchange.
- Early wound healing.
- Positive hemopoetic effect.
- Anesthesia.
- Anti-coagulation and anti-bacterial effect.

Importance of Taila Application

- Acharya Sushruta has mentioned application of taila to vrana in 60 Upakarmas.
- Clinical also it shows significant results in treating the vrana.
- Taila which are effective in treating dusta vrana are like durvadi taila,^[12] jatyadi taila,^[13] yastimadhu taila,^[14] somaraji taila,^[15] kasisadi taila,^[16] kshara taila,^[17] etc.

Mode of Action of Taila

Application of taila helps in removal of slough and necrotic tissues, does lekhana, acts as ropana of ulcer, gives analgesic effect, reduces pain, burning sensation and itching those helps healing of an ulcers.

DISCUSSION

Current therapies have a limited success rate in treating madhumehajanya vrana. When all other system fails in treating dusta vrana, an abundant treatments are available in Ayurveda. Most importantly application of Jalauka for once in 7 days followed by taila application in treating dusta vrana which gives significance result clinically.

CONCLUSION

In diabetic patients, microcirculatory damage is apparent in the skin and subcutaneous tissue, leading to impaired wound healing. An intact microcirculation is required for tissue nutrition, removal of waste products, inflammatory responses and temperature regulation therefore, logically any defect in micro vascular function adversely affects tissue repair. Tissue oxygenation is a prerequisite for successful wound healing due to increased demand for reparative processes. This scenario makes Acharya Sushruta's concept of vrana chikista for madhumehajanya vrana, the most brilliant. Jalaukavacharana and taila application takes pride of place in the list of 60 upakarmas.

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