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# INTEGRATIVE APPROACH FOR DIABETIC FOOT MANAGEMENT: A CASE STUDY

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#### INTRODUCTION

Diabetic foot is usually caused by a combination of three factors - Ischaemia, peripheral neuropathy and immunosuppression caused by excess of sugar in the tissues which predisposes to infection. Diabetic foot management in the contemporary science include drainage of Pus, debridement of dead tissues with local amputation of necrotic digits and antibiotics. Similarly, in Ayurveda Shasthi Upakramas [60 interventions] have been mentioned to treat different types of wound based on their presenting symptoms. In the present case, patient was managed with both Ayurveda and Allopathy conveniently along with other techniques which latest biomedical engineering can provide.

#### **Patient Information**

A 62 years old male patient approached the surgical unit of hospital with foul smelling, non-healing, necrotizing ulcer over the dorsal aspect of the right foot for 1 month. He was a known case of diabetes for 10 years which was not under control inspite of using tablet Glyciphage 500 orally all these years.

# Therapeutic Focus and Assessment

For the above clinical presentation, procedures such as Chedana [excision], Bhedana [incision], Vasti [enema], Parisheka [wound wash] are indicated in Ayurveda. Initially the patient was started with Adhoshaka Kashayam and Gandhak rasayan internally. The external treatments were done to enhance the blood circulation to the affected part, vaso dilatation with local steam therapy, wound cleansing, auto debridement to intimate the wound healing. Patients regular medications for Diabetes were allowed to continue. However, as the patient was continously febrile and total leucocyte count being constantly high, to prevent the further progress of the condition and sepsis, wound debridement was

planned. Disarticulation of the gangrenous with 4<sup>th</sup> toe with wide wound debridement was done under spinal anesthesia. To keep the wound site free from excessive discharge and soaking which would otherwise hamper the healing, VAC [vacuum assisted wound closure] dressing was done for 9 days. During this course Vrana Shodana and Vrana Ropana drugs were used along with insulin and oral hypoglycemic drugs.

After vacuum dressing, for about 25 days wound care was done with Triphala quath vrana parishekha [wound wash] and jathyadi taila dressing. Skin grafting was proposed after ensuring proper approximation of the wound with healthy granulation. A skin flap from right thigh was taken and grafted over the wound under spinal anesthesia. Also, K – Wire fixation of the 3<sup>rd</sup> toe was done to support the loosely attached distal phalanx. Subsequent dressing showed the skin graft had taken up well and hence discharge was planned. Patient was advised to continue the same internal medications for a period of 1 month along with daily dressing until the complete healing.

Table 1:

Intervention	Dose	Anupana	Duration		
Amruthotharam	60ml-60ml-60ml	Warm water	3 months		
Kashayam	1 hour before food	waiii watei	5 monus		
Triphala gugglu	1-1-1 hour after food	Warm water	3 months		
Gandhak Rasayan	1-1-1 hour after food	Warm water	3 months		

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#### Table 2:

Panchkarma Procedures	Method of administration	Duration					
Manjisthadi ksharavasti	Given with Vasti Yantra	8 days in Yoga Vasti pattern					

#### External treatment.

Avagaha	and	Prakshalana	with	Triphala	For	immersio	of	the	affected	foot	and	for	washing	the	wound
Kwath.					resp	ectively.									



Fig. 1: Stagewise pictures of the wound during intervention.

A – Wound on first day before treatment; B – Wound after debridement; C – VAC after wound debridement; D – Wound after VAC dressing; E – 15 days after VAC dressing; F – Wound just before skin grafting; G – After 7 days of skin graft; H – At the time of discharge; I – After one month of discharge; J – After 6 months of discharge.

### DISCUSSION

The case was managed according to Ayurveda guidelines on different types of wound management along with the use of conventional medicine. Best of each science has been adopted for the better outcome in an integrative manner. In the present use the patient was administered the spinal anaesthesia to perform the indicated Ayurvedic and Allopathic surgical interventions like incision, excision, wound debridement and skin grafting. This has helped to liberally and adequately handle the tissues without compromising the necessities for a healthy wound healing.

Absence of discharge and maintenance of wound in a dry state consistently is of prime importance in wound healing. Vacuum dressing is one such method to achieve this status. Parisheka [wound wash] helps in removal of the debris from the wound. Triphala kwatha was used for this purpose which helps in removal of the discharge and also cleanses the wound, removes the slough and assists in wound healing [ropana]. Medicated enema is indicated in chronic ulcers of lower limbs and helpful in reducing the pain. Jatyadi Taila cleanses the wound and promotes wound healing. Triphala Guggulu and Gandhak Rasayana helps in the removal of the slough cleansing

and healing of the wound. Amruthotharam kashayam acts as Deepana, Pachana, Lekhana, Shothahara ana Rakta prasadana. Thus, the combination of internal and external management was adequate in helping of the wound to heal well.

#### **CONCLUSION**

The current integrative approach of adopting both Ayurvedic and Allopathic science along with advanced technique for maintaining the dry state of wound was helpful in managing the diabetic foot without undergoing a major amputation. This poses an interest in further evaluating whether this kind of integrative approach could give new ray of managing different type of non-healing ulcers.

# **Patients Perspective**

Patient was satisfied to have improved without necessitating amputation.

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