

AYURVEDIC MANAGEMENT OF INFECTED DIABETIC WOUND – A CASE REPORT

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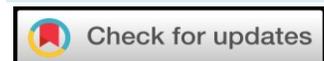
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ABSTRACT

Background: Generally, infected diabetic wounds are associated with presence of slough, pus, swelling, increased local temperature, foul smell and fever. Wound care is difficult to manage when it becomes systematic. In *Ayurveda*, wound care is based on involvement of *Doshas* and *Dushyas*, which can further be managed with *Shigru twaka lepa* and oral administration of suitable *Ayurvedic* medicines. **Brief Case History:** A 71 years old diabetic female patient presented with an infected wound on Left gluteal region, associated with pain, yellowish puss discharge and raised local temperature since 1 week. This case was managed on *Ayurveda* wound-care principles along with local application of *Shigru twaka lepa* and oral *Ayurveda* medications. **Conclusion:** This case report revealed usefulness of *Shigru twaka lepa* and *Ayurveda* oral medicines in the management of infected diabetic wound.

Keywords: *Vrana*, Diabetic wound, *Shigru twaka lepa*.

INTRODUCTION

Healing of *Vrana* (~wound) is a natural phenomenon but it should be protected from various micro-organism which may vitiate the *Dosha*. This may affect the normal healing process of *Vrana*. Surgical interventions

are usually followed in infected wound management that helps in eliminating debris and purulent material. *Acharya Sushruta* described vitiation of *Dosha* in

Dushta vrana (~infected wound) with specific symptoms like *Daha* (~burning sensation), *Paka* (~inflammation), *Vedana* (~pain), *Srava* (~discharge), *Kandu* (~itching), *Puti puya srava* (~foul smelling pus discharge), *Atyartha gandhi* (~intense foul smell). Most of these symptoms appear in *Dushta vrana*. Among these symptoms, secretions that are *Peeta* (~yellowish), *Neela* (~bluish), *Ghana* (~thick), *Rakta* (~sanguineous), *Puya* (~purulent) and resembling *Dadhi mastu* (~curd water) surmises involvement of *Tridosha* in *Dushta vrana*.¹ Judicious administration of formulations that help in *Vrana shodhana* (~cleansing of wounds) and *Vrana ropana* (~wound healing) is necessary in the treatment. *Shigru twaka lepa*, pharmacologically it possesses anti-bacterial, antioxidant, analgesic, hypoglycemic, anti-ulcer. Considering this, the drug is being used to manage wounds.

It is a need of the time to use *Ayurvedic* treatment in the management of infected diabetic wound, here we are submitting the case report of a successful case of *Ayurvedic* treatment of infected diabetic wound. The purpose of presenting the case report is to share the experience of a successful evidence based *Ayurvedic* treatment in infected diabetic wound. So that the other *Ayurvedic* practitioners should be benefitted to develop their skills.

Case Report:

A 71 years old female diabetic patient of age, Religion- *Hindu*, Marital Status- Married, Socio-economic status- Middle class, Education status- 4th standard, Occupation- Housewife, Date of admission- 26-02-2020, Date of discharge - 20-03-2020

Was presented with following symptoms at the time of admission-

Fever (since 7-8 days)

Backache

Body ache

Generalized weakness

Abscess with yellowish puss formation at Left gluteal region (since 10- 12 days)

Due to fever, patient had taken intra-muscular injection from his local doctor, intra-muscular post- side effect seen at left gluteal region since 10-12 days back. A week back, an abscess was developed in the vicinity of

the wound that was drained by a surgeon. Wound dressing was being continued for 1 week including removing of debris, slough.

On local examination a wound, exposing measured about 15cm x 7 cm in size associated with necrotized tissue, swelling, slough, and purulent discharge was observed. [Figure 1] On palpation, raised local temperature with tenderness observed.

The case was managed at *Kayachikitsa* Female ward by implementing principles of wound management as explained in *Ayurveda*. Freshly prepared decoction of *Triphala* (fruits of *Emblica officinalis*, *Terminalia chebula*, and *Terminalia bellerica*) was used to clean the wound,² followed by dressing with application of *Shigru twaka lepa* over the wound. Improvement in symptoms was noted on weekly intervals. *Triphala guggulu*, *Varunadi kashaya*, *Punarnavadi kashaya* (20 ml twice a day daily) were given after meal for 4 weeks. During the course of treatment, the patient was using *Tenligliptin* (20mg) and *Metformin* (500mg) for the management of diabetes and was under the consultation of general physician.

Preparation of *Shigru twaka lepa*-

Freshly cut and dried bark of *Shigru*, dried under sunlight, after getting *churna* of *Shigru*, 1tsp of *Shigru twaka churna* boiled in 1 small vessel until fine thick paste is achieved.³

Ashtavidha Pariksha:

- *Nadi* (~pulse) - 80/min (*Kapha pradhana Vata*)
- *Mutra* (~urine) - 5-7 times a day, once at night occasionally
- *Mala* (~stool) - Normal
- *Jivha* (~tongue) – *Sama* (~moist)
- *Shabda* (~voice) - Normal
- *Sparsha* (~touch) – Normal
- *Drika* (~eye) - Normal
- *Aakriti* (~posture) – *Madhyama* (~moderate)

Dashvidha Pariksha:

- *Prakruti* (~constitution) - *Kapha prakruti*
- *Sara* (~essence) - *Madhyama* (~moderate)
- *Samhanana* (~musculature) - *Madhyama* (~moderate)
- *Pramana* (~measurements) - *Madhyama* (~moderate) (Ht.- 180cm, Wt.- 90kg)

- *Satmya* (~habit) - *Madhyama* (~moderate)
- *Satva*- *Madhyama* (~moderate)
- *Ahara Shakti*- *Abhyavaran Shakti* (~food intake capacity) - *Madhyama* (~moderate)
- *Jarana Shakti* (~digestive capacity) - *Madhyama* (~moderate)
- *Vyayama Shakti* (~capacity of exercise)- *Madhyama* (~moderate)
- *Vaya* (~age) – *Madhyama* (~moderate)
- *Hetu* (~etiology)- *Aharaaja* (~foods)- *Ruksha* (~dry), *Sheeta atisevana* (~excess use of cold)
- *Viharaja*- *Sheeta pravata* (~exposure to cold), *Raaga* (~angry)
- *Dosha* - *Vata*- *Prana*, *Udana*, *Vyana*
- *Kapha*- *Bodhaka*, *Tarpaka*
- *Dushya* (~tissue) - *Meda* (~fats), *Rakta* (~bloods), *Sira* (~veins), *Snayu* (~tendons or ligaments), *Mamsa* (~muscle)
- *Desha* (~place) – *Sadharana* (~normal)
- *Bala* (~strength) – *Madhyama* (~moderate)
- *Kala* (~season) - *Sishira*

Physical examination: Wound exposing measured about 15cm x 7 cm in size associated with necrotized tissue, swelling, slough, and purulent discharge was observed. On palpation, raised local temperature with tenderness observed.

Investigation: Routine blood investigations and random blood sugar were done (25-02-2020) WBCs counts was 17,900. Hemoglobin- 8.8. Random blood sugar was 160mg/dl.

The written consent was taken, and treatment was started.

Therapeutic Intervention:

Patient was admitted in the *Kayachikitsa* ward on 26th Feb, 2020. Assessment was done on subjective and objective parameters using suitable assessment scales. The treatment regimen was planned for the patient. It was *Shigru twaka lepa* followed by internal administration of *Varunadi kashaya* [Table 1], *Punarnavadi kashaya* [Table 2].

Diagnosis and Assessment: The scoring of ‘Bates-Jensen Wound Assessment Tool (BWAT)’ is adopted for assessment used. The final score of ‘Bates-Jensen

Wound Assessment Tool (BWAT)’ [Table 3] was adopted.⁴

Clinical Intervention: [Table 4]

Outcomes: On 3rd day, surgical debridement of necrotized tissue was done. During initial days, patient was advised to avoid exposure to wind, sunlight, and dust. Discharge, tenderness and swelling were reduced, and healthy granulation tissue were noticed in the affected area within 3 weeks of management. Initial wound contraction was progressed over incised area (made for abscess drainage by the surgeon). Regular aseptic dressings and oral medications (*Triphala guggulu*, *Varunadi kashaya*, *Punarnavadi kashaya*) along with oral hypoglycemic drugs and diabetic diet regimen prescribed were followed to control sugar levels. Wound approximated within two months with normal skin pigmentation [Figure 2]

Follow-up: Patient was advised to follow-up for the routinely debridement and dressing every 3rd alternate day.

DISCUSSION

In diabetic patient, wound healing process delays because of several factors including poor glycemic control, presence of slough, necrotized tissue, poor circulation etc. that hampers healing of tissues. In this case report, healing sequels of infected diabetic wound were observed acceptably. *Triphala kashaya* is useful in *vrana shodhana* because of its *Kapha pitta shamana* properties. Cleaning of wound with *Triphala kashaya* resulted in reduction of discharge and inflammation. *Triphala* also possess anti-microbial, anti-inflammatory and antioxidant properties. *Varunadi kashaya* has *Kapha-medohara*. *Triphala guggulu* reduces *kleda*, *paka*, *putigandha*, *shotha* and *ruja* in wound. *Punarnavadi kashaya* has properties like Anti-inflammatory, anti-microbial, analgesic, immunomodulatory.⁵ Intervention with all these drugs along with topical application of *Shigru twaka lepa* resulted in reducing inflammation and wound healing significantly as, pharmacologically it possess anti-bacterial, anti-oxidant, analgesic, hypoglycemic, anti-ulcer.⁶ According to *Acharya Charaka*, *Shigru twaka lepa* has properties like *Kandughna*, *Kushtaghna*, *Sophaghna*.⁷ Also *Acharya*

Sushruta has mentioned the properties of *Shigru twaka lepa* as in *Vrana, Sopha, Pachana*.⁸ Considering this, the drug is being used to manage diabetic infected wounds.

Table 1: Varunadi Kashaya

Sanskrit name	Latin name
<i>Varuna</i>	<i>Crataeva religiosa</i>
<i>Sairyaka</i>	<i>Strobilanthes ciliates</i>
<i>Shatavari</i>	<i>Asparagus racemosus</i>
<i>Chitraka</i>	<i>Plumbago zeylanica</i>
<i>Moorva</i>	<i>Chenomorpha fragrans</i>
<i>Bilwa</i>	<i>Aegle marmelos</i>
<i>Vishanika</i>	<i>Aristolochia bracteolata</i>
<i>Brihati</i>	<i>Solanum melongena</i>
<i>Bhadara</i>	<i>Aerua lanata</i>
<i>Karanja</i>	<i>Pongamia glabra</i>
<i>Pootikaranja</i>	<i>Holoptelia integrifolia</i>
<i>Jaya</i>	<i>Premna corymbosa</i>
<i>Haritaki</i>	<i>Terminalia chebula</i>
<i>Shigru</i>	<i>Moringa olifera</i>
<i>Darbha</i>	<i>Desmostachya bipinnata</i>
<i>Bhallataka</i>	<i>Semicarpus anacardium</i>

Table 2: Punarnavadi kashaya

Sanskrit Name	Latin Name
<i>Punarnava</i>	<i>Boerhavia diffusa</i>
<i>Nimba</i>	<i>Azadirachta indica</i>
<i>Patola</i>	<i>Trichosanthes dioica</i>
<i>Shunthi</i>	<i>Zingiber officinale</i>
<i>Kalmegha</i>	<i>Andrographis paniculata</i>
<i>Guduchi</i>	<i>Tinospora cordifolia</i>
<i>Devdaru</i>	<i>Cedrus deodara</i>
<i>Haridra</i>	<i>Curcuma longa</i>
<i>Haritaki</i>	<i>Terminalia chebula</i>

Table 3: Bates-Jensen Wound Assessment Tool (BWAT)

Sr No.	BWAT Criteria	On Admission Score	On Discharge Score
1	Size	60	30
2	Depth	65	35
3	Edges	50	40
4	Undermining	55	30
5	Necrotic tissue type	40	20
6	Necrotic tissue amount	40	20
7	Exudate type	45	35
8	Exudate amount	45	30
9	Skin color surrounding wound	65	10
10	Peripheral tissue edema	60	10
11	Peripheral tissue induration	55	10
12	Granulation tissue	50	10
13	Epithelialization	50	20

Table 4: Clinical Intervention:

Sr No.	Intervention	Medicine	Duration	Time frame
External medications				
1	<i>Shigru twaka Lepa</i>	<i>Shigru twaka churna lepa</i>	Day 1- Day 15	15 days
2	<i>Triphala kashaya</i>	<i>Churna Kashaya</i>	Day 1- Day 15	15 days
Internal medications				
Shamana drug		Tab <i>Triphala guggulu</i> 250 mg Twice a day with Lukewarm water <i>Varunadi kashaya</i> 20ml twice a day with lukewarm water. <i>Punarnavadi kashaya</i> 20ml twice a day with lukewarm water.	Day 1- Day 28	28 days

CONCLUSION

Application of *Shigru Twaka Lepa* along with *Ayurvedic* internal medications is safe and efficacious in management of infected diabetic wound. Indigenously the *Shigru twaka* have wider application in the treatment of *Kustha, Kilasa, Kitibha, Kandu* (Skin disease), *Sopha* (Inflammation), *Sula* (Pain), *Vatavyadhi, Jvara* (Fever) along with it also have Hypoglycemic properties. No irritation was reported, and patient was comfortable with its application.

REFERENCES

- Shastri A, editor, (5th ed.) Commentary Ayurveda Tatva Sandipika of Dridhbala on Sushruta Samhita of Maharshi Sushruta, Chikitsa Sthana; Dwivranichikitsa: chapter 1, Verse 6. Varanasi: Chaukhambha Sanskrit Sansthan, 2015; p4.
- Tripathi B, editor, (9th ed.) Sharangdhara Samhita of Pandit Sharangdharacharya, Madhyama Khanda; Kwatha Kalpana: chapter 2 Verse 98. Varanasi: Chaukhambha Surbharti Prakashan, 2011; p147.
- Tripathi B, editor. (9th ed.) Sharangdhara Samhita of Pandit Sharangdharacharya, Uttar Khanda; Lepa Kalpana: chapter 11 Verse 81. Varanasi: Chaukhambha Surbharti Prakashan, 2011; p403.
- Barbara B et.al. Reliability of the Bates-Jensen Wound Assessment Tool (BWAT) for Pressure Injury Assessment: The Pressure Ulcer Detection Study. Wound Repair Regen 27(4): p386–395, Year; 2019.
- Sreelakshmi S et.al. Chikitsa Sutra Vivechana of Shotha. European Journal of Pharmaceutical and Medical Research 5(2), p247-250, Year; 2018.
- Kumar S, Kumar B. Ayurvedic Medicine: A Review on Medicinal Importance of Shigru (*Moringa oleifera*) in Samhitas. Indian journal of Agriculture and Allied Sciences ISSN 2395-1109; vol 1 No:3, Year;2015.
- Shastri K, Chaturvedi G, editor. (5th ed.) Commentary Ayurveda Dipika of Chakrapanidatta on Charaka Samhita of Agnivesha, Sutra Sthana: Aragvadhieadhyaya: chapter 3, Verse 8-9. Varanasi: Chaukhambha Bharati Academy; 2015; p60.
- Shastri A, editor. (5th ed.) Commentatory Ayurveda Tatva Sandipika of Dridhabala on Sushruta Samhita of Maharshi Sushruta, Sutra sthana: Mishrakaadhyaya: chapter 36, verse 9. Varanasi: Chaukhambha Sanskrit Sansthan; 2015. p. 177.
- Gupta D, Nautiyal U. Ayurvedic remedies for healing of wounds: A Review. Int. J. Pharm. Med. Res. 2016; 4(4):342-349 ISSN: 2347-7008.

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Figure 1 - 0-3 weeks



Figure 2 -6th weeks

