

Jaluka Avacharan (Leech Therapy) in Diabetic Foot Ulcer: A Case Study Report

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Abstract: Ayurveda has introduced several therapeutic measures like *sodhana*, *shaman*, *kharakarma*, *agni karma* and *shastra karma* etc. for eliminating the diseases & prevention of health. Now a days *Jalukaavacharan*¹ (Leech therapy) is a popular *shastra karma* of ayurveda where bloodletting like special surgical intervention usually done. There are some special diseases like *vrana* (ulceration), *vidradhi* (abscess) *Vranasotha* (inflammation), *twakaroga* (skin diseases), *arbud* (tumor) *granthi* (lymph adenoma) are taken into consideration for *Jalukaavacharan* (leechtherapy). As in present study a 50 years old diabetic patient having the allopathic anti diabetic drug history presented with severe foot ulcer. the patient treated here with *Jalukaavacharan* through four sittings in weekly interval. In every sitting 3 *jaluka* were introduced at a time in different periulcerative area. During the *jalukaavacharan* therapy his allopathic anti diabetic medicines have not been withdrawn, no other oral ayurvedic medicines has been introduced. So that incidence of clinical success is needed to be published here to encourage the ayurvedic practitioner towards managements of such noxious problem. It could be stated as an effort for establishing a safe therapy in curing of the foot ulcer.

Keywords: *Jalukaavacharan*, Diabetic foot ulcer², *Mehajanyavrana*

1. Introduction

In Ayurveda *madhumeha* is carrying the similar sense of **Diabetes mellitus**³ of modern medicine. As *Madhumeha*⁴ (*diabetes mellitus*) is a type of **pramehaso** the **pidaka** (abcess, ulcer, abrasion, boils etc) like complication when appear along with the *Madhumeha* then those complication could be stated as *pramehapidaka*⁵. **Diabetic foot ulcer** is such a problem which may be included as **pramehapidika** and should be treated in the line of *pramehapidika* chikitsa of ayurveda. Ayurveda has contributed a lot of therapuatic measures like *sodhanasaman*, *khara karma*, *agni karma*, *raktamokshana* for the treatment of wound ulcers tumors etc. *Raktamokshana*⁶ is a therapy where letting of blood from the injured and infected areas of the organ done through several equipments & when **Jaluka** used as an instrument for letting out blood then the therapy is called *Jalukaavacharan*.

This *Jalukaavacharan* has been introduced in ayurveda from samhita era where **Shusruta** (500bc) has mentioned this therapy for betterment of suffering humanity of those ailments. Now a days the **blood letting therapy (leech)** is a popular and effective measures for curing of several incurables troublesome problems like *vrana*, *nadivrana*, *khata*, *arbud*, *granthitwakroga* etc. The foot ulcer of *madhumehi* may be called as **mehajanyapadagatavaranasotha**. The fate of diabetic foot ulcer in modern medicine is amputation which leads to permanent disability. As 15% of diabetes patient have the possibilities of forming foot ulcer in their life time so proper foot care is needed as well as safe & effective measures against treatment of foot ulcer should be arranged. Though in modern medicine the preventive aspect of **diabetic foot ulcer** have been duly discussed, yet neither safe and nor effective internal and external medicines are available for

healing or making healthy tissue in affected part. Ayurveda has dealt with several external & internal *vranaropaka*, *vranasodhak* medicines, yet it not sufficient for curing such noxious element, for this reason this **Jalukaavacharan** therapy has been taken into consideration by shusruta in ancient era and later by his followers. In pathogenesis of **diabetic foot ulcer (madhumeha janyapadagatavaranasotha) tridosh (vata - pitta - kapha)**⁷ usually become de - arranged, *medo* and *raktadhatu* mainly affected, along with other structure of the organ like *twak*, *mamsa*, *sandhi*, *snayu*, *andkandara* etc. involved as because it becomes *kastasadhya* or hardly curable. In this regard *shastra* therapy or surgical majors for **raktamokshana (blood letting)** by **Jaluka** has been introduced by our classics to cure the noxious *vrana* or ulcer. The **Jaluka** are mainly of two type - *svisha*⁸ and *nirvisha*⁹. For bloodletting purpose *nirvishajaluka* are usually taken. After proper identification of *nirvisajaluka*, necessary pre - operative, operative, and post operative majors are taken as per our ayurvedic conventional method.

2. Materials & Methods

Materials are

- 1) Patient
- 2) *Jaluka* & accessories

Present study has been carried out in I.P.G.A.E. & R at S.V.S.P.

Case Report - A 50 year old male patient presented with a foot ulcer on the right leg since 1 year.

History of present illness - patient was apparently healthy before 1 year, gradually a wound formed in the right leg and it becomes an ulcer.

Psychological history - patient feel more depressed 5 months ago due to this ulceration condition of leg.

Personal history - Dietary habit (ahara) - irregular diet habit and addicted to the junk food.

Behavioural habits (vihara) - sedentary lifestyle

Bowel habit - regular, **sleep** - normal

Family history -no such

General examination - build - moderate, **tongue** - clear, **pulse rate** - 75beats/minute

Blood pressure - 110/80 mm of hg, **respiratory rate** - 18times / minute

Temperature - normal

Physical examination

Dasvidha pariksha: prakriti - pitta - kapha, vikriti - tridosh, satma - madhyam, satwa - madhyam, sara - madhyam, samhanan - madhyam, aharshakti - madhyam, vyayamashakti - avara, pramana - 5'2", vaya - madhyam

Systemic - c.n.s. - normal, c.v.s. - s1 s2 - clear, R.S. - normal

Local examination

- 1) **Site of lesion** - right foot
- 2) **Distribution** - Asymmetrical
- 3) **Character of lesion** - size: 4 - 6 cm

- 4) **Itching** - present
- 5) **Inflammation** - present
- 6) **Pain** - severe pain
- 7) **Discharge** - present

3. Diagnosis

Madhumeha janyapadagatavranasotha

Materials: 1. 3 nirvisajaluka, 2. Turmeric powder, 3. Gauze piece, 4.kidney tray, gloves, pricking needle.

Method: **Three nirvishjaluka** has been taken and purification done by putting into the turmeric water for two minutes **Three Jaluka** applied at a time in different periulcerative area in weekly interval for 4 weeks Four such sitting done in one month in a weekly interval manner.

Method of Jaluka Application

The wound area has been washed with **haridra water** and drying of the area by dry gauze piece. The **prachhana**¹² (mild pin pricking) done with full sterilization and when the pinch of blood found on peri ulcerative area, **Jaluka** has been placed very gently. During sucking a wet gauze piece placed over **Jaluka** as covering and wait for the auto removal of jaluka after being full suck of blood (15 - 20 ml) approx. Post letting measures: emission of blood is needed by **Jaluka** by putting jaluka in turmeric powder and by pressing tenderly. The same **Jaluka** will be reused so, those should be kept in water with a careful manner. The features like **ulcer, odour of ulcer, inflammation, pain, itching, extended oedema** have been graded as per severity (-, +, ++, +++) manner and assessment of therapy has been done through the comparison between before treatment and after treatment observation.

4. Result & Observation

Main features	Before treatment observation just before first sitting 0 days	observation just before second sitting after 7 th days	observation just before third sitting after 14 th days	observation just before four sitting after 21 th days	observation just before 4 th sitting after 28 th days	Final observation 7days after four sitting on 35 th day
Ulceration	+++	++	++	+	+	(nil) healed
Odour	+++	++	+	nil	nil	Nil
Inflammation	+++	++	+	+	+	Nil
Pain	+	+	NIL	nil	Nil	Nil
itching	++	Nil	nil	nil	nil	Nil
Extended oedema	+++	++	++	+	nil	Nil

Main features: observation after 7 days after first sitting





5. Discussion

As it has been stated earlier that **Jalukaavacharan (bloodletting)** through leech is an excellent mode of treatment for healing the *ulcer (vranaropana)* as well as cleansing the channels (*srotosodhaka*). So in a natural course very satisfactory ulcer healing effect as well as anti-inflammatory action have been observed in present study. Shusruta has mentioned that the disease where pitta vitiation takes place in such case, bloodletting through **Jaluka** is necessary. It is also evident that without involvement of pitta, no inflammation would be happen, so in a state of inflammatory condition **Jalukaavacharan** may be introduced. Though in present study the cause of ulceration is *madhumeha*, yet the lacking of foot care followed by trauma & later appearance of inflammatory condition takes place and leads to formation of ulcer are the usual pathway. The sucking of blood by **Jaluka** bringing transformation of blood to the ulcerated area by clearing the micro channels. Ulcer, inflammation, pain itching and extended swelling are the usual features of any type of *vrana* through the successful observation of this study, it has been revealed that **Jalukaavacharan** has a definite role in the healing of ulcer and resolution of inflammatory process. It is necessary to mention here that the saliva of **Jaluka** contains one type of enzyme called "HIRUDIN"¹⁰, when mixed with the blood then help to disintegrate the clotting process which is beneficial for opening the capillaries or arteries passage.

Simultaneously vascularity become enhanced, that enzyme also helpful for the nourishment of tissue. Sucking process of **Jaluka** as well as enzymatic action of saliva would be called here as the key factor for the ulcer healing and anti-inflammatory action.

6. Conclusion

From above discussion it could be concluded that **Jalukaavacharan** (blood letting through leech) with proper precaution is able to heal the ulceration in general, especially IB diabetic foot ulcer. No adverse effect has been observed during the therapy (**Jaluka Avacharan**).

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