

**EFFECTIVENESS OF *JALOUKAVACHARANA* IN EXTERNAL AURICULAR LACERATIONS – A CASE STUDY****Bhagyashri Patil<sup>1</sup>, Gopikrishna B J<sup>2</sup>, Sahanasheela K R<sup>3</sup> Adivishwanatha Gupta C B<sup>4</sup>**

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Appearance of edema after suturing is a common symptom noticed in patients, this may be due to poor hygiene conditions, infection of the wound or any underlying pathology. It becomes important for a doctor to prevent and treat these symptoms whenever they appear in order to prevent any further infection and to promote healthy healing of the wound. When the injury occurs on the external ear it requires extreme care as it involves aesthetic aspects and exact reconstruction is necessary in such conditions. The following case study explains the results achieved from *Jaloukavcharna* in case of external auricular oedema developed post suturing.

**Keywords:** *Jalaukaavcharana*, Post Auricular edema, *Karnapali Sandhana*, *Sadyovrana***INTRODUCTION**

Ear is one among the sense organs of our body which plays a vital role of hearing and maintaining equilibrium, the ear can be divided into three parts; external, middle and inner, each part has its own function and

has specialized anatomy.<sup>1</sup> The exposed position of the auricle predisposes it to a large number of different injuries. Early treatment prevents defective healing and time-consuming secondary plastic reconstruction. As

a brady trophic structure, the cartilage is dependent upon nutrition from its surrounding tissue. According to *Ayurveda*, *Karna* is the site of *Shrotrendriya* and *Vidhura Marma* which makes it a crucial part of the body. The ear has both aesthetic value and has its role in sound interpretation, hence it becomes of vital importance to protect it from injuries, infections.

*Sadyovrana* are those which occur suddenly due to trauma or injury. *Chinna Vrana* is wound caused due to any sharp instrument which may be oblique or straight affecting a larger body surface which may also results in total excision of body part.<sup>2</sup> *Acharya Sushruta* has advised *Seevana Karma* followed by dressing with *Taila* to reduce the *Srotovarodha*.<sup>3</sup>

According to modern medical science, in this non-invasive treatment modality medicinal leeches (*Hirudo medicinalis*) are used. Hence this is also called “Hirudotherapy” which takes advantage of several biological properties of medicinal leeches. Among these, the earliest known fact was that leeches feed on the blood of their host and during the course, release anesthetic, anti-inflammatory and anticoagulant enzymes with their saliva.<sup>2</sup>

### Case Details

The following is a case report of a patient aged 68 years, who presented with a cut lacerated wound on right ear to *Shalya Tantra* OPD of SDM College of Ayurveda and Hospital, Hassan

Chief Complaints- C/o lacerated wound over right ear along with pain for 1 day

History of present illness: Patient had alleged history of self-fall on the day of admission with above mentioned complaints and patient took primary treatment in government hospital (details/documents were not found) and visited department of *Shalya Tantra*, SDM college of ayurveda and hospital Hassan for further management.

History of past illness: No H/O DM, HTN or any other medical / surgical illness in the past

### Personal History

- Diet : Non-vegetarian
- Appetite : Regular
- Bowel : Once a day, normal
- Micturition : 7-8 times

- Sleep : Disturbed

### Examination of the patient

#### General examination

- GC : Fair
- Pallor : Absent
- Icterus : Absent
- Lymphadenopathy : Absent
- Cyanosis : Absent
- Clubbing : Absent
- Edema : Right pre, post auricular region and tragus

#### Vitals

- Pulse : 80 bpm, Regular
- BP : 130/80 mm of Hg
- Temperature : Afebrile, 97.4°F
- Respiratory rate : 18/min

#### Systemic examination

- CVS : S1S2 heard.
- CNS : Intact, Conscious, oriented to time, place and person.
- P/A : Soft, non-tender, No Organomegaly
- RS : Bilateral equal air entry, Normal vesicular breath sounds, no added sounds present

### Wound Examination

Site: Right external auricle

Number of wounds: Single wound.

Size of wound: 6×0.5 cm (length×width).

Edge and margin: Irregular.

Floor: Blood clots

Surrounding skin: reddish discoloration.

Tenderness: Present.

### Investigations

- Hb : 12.2 gm%
- TC : 5,900 cells/cumm
- DC : N-66, L-27, M-4, E-3
- ESR : 10mm 1<sup>st</sup> hour
- RBS : 100.9 mg/dl
- Sr. Creatinine : 0.9 mg/dl
- Lipid Profile : WNL

**Final Diagnosis:** Chinnavrana- cut lacerated wound of right external auricle (6cm) tragus (1.5cms) with fracture of hyaline cartilage (1cm)

**Procedure**

Seevana Karma with Ethilon 5.0 under local anesthesia over external auricle, dressing with *Jatyadi Taila*. Followed by 3 sittings of *Jaloukavacharana* for pre and post auricular edema.

**METHODOLOGY**

- Written consent was taken.
- Patient was made to lie down in left lateral position.
- Wound cleaned with betadine and H2O2 solution.
- Local anesthesia was administered with lignocaine 2% at either border of lacerated wound.
- Simple interrupted suturing done with ethilon 5.0.
- Sterile dressing done with *Jatyadi Taila*
- *Jaloukavacharana* was done on post auricular edema on 2<sup>nd</sup>, 4<sup>th</sup> and 6<sup>th</sup> day from the day of suturing.

**Images of the procedure**



Figure 1- Before suturing



Figure 2 - After suturing with ethilon 5.0.



Figure 3 - first sitting of *Jaloukavacharana*



Figure 4 - Second sitting of *Jaloukavacharana*.

**Jaloukavacharan procedure:**

An unused leech of medium size was taken and activated using turmeric water. Activated leech is made to bite over post auricular edema. After 45 minutes leeches were removed using turmeric powder. The bite site was applied with turmeric and dressing done.

**OBSERVATIONS**

- Pain - 30% reduction after 1<sup>st</sup> sitting of *Jaloukavacharana*.  
70% reduction after 2<sup>nd</sup> sitting of *Jaloukavacharana*.  
90% reduction after 3<sup>rd</sup> sitting of *Jaloukavacharana*.  
100% reduction 2 days after 3<sup>rd</sup> sitting of *Jaloukavacharana*.
- Edema - 30% reduction after 1<sup>st</sup> sitting of *Jaloukavacharana*.  
70% reduction after 2<sup>nd</sup> sitting of *Jaloukavacharana*.  
90% reduction after 3<sup>rd</sup> sitting of *Jaloukavacharana*.  
100% reduction 2 days after 3<sup>rd</sup> sitting of *Jaloukavacharana*.



**Figure 5 -Third sitting of Jaloukavacharana.**



**Figure 6 – After three sittings of Jaloukavacharana**



**Figure -7 Observation on the day of suture removal**



Figure -8 Follow up after 15 days of suture removal.

## RESULT

- Complete reduction in the pre, post auricular, tragus and antihelix oedema.
- All previous signs and symptoms are relieved.
- No post treatment complications.

## DISCUSSION

- *Jalaukaavcharana* is a method of *Ashastrakrita Raktamokshana* through which the *Dushita Rakta* can be taken out of the locally affected area and hence there is relief in *Shopha, Ruja* factors caused at the particular place.
- Through their sucking effect, leeches stimulate circulation of cells at risk of necrosis and maintain oxygenation of the tissue.<sup>4</sup> They therefore promote restoration of capillary anastomosis.<sup>5</sup>
- *Jalouka* is having Analgesic Activity<sup>6,7</sup> Anti-Bacterial Activity (lysozyme-like activity)
- Biologically active substances containing in saliva glands of *Jalouka* can restore blood circulation in the nidus of inflammation, removes ischemia of organs and provide capillary tissue exchange and due to it, can carry out the transport of chemical drugs into the nidus of inflammation, improve protection and regeneration of tissues.<sup>8</sup>

## CONCLUSION

It can be concluded that in post suturing edema tissue permeability, restored with the help of hyaluronidase, promotes the elimination of tissue and circulatory hypoxia as well as local swelling. The persistent bleeding

largely potentiates tissue decongestion and also relieve capillary network which decrease venous congestion. Positive changes of local hemodynamic status will increase oxygen supply, improve the tissue metabolism, and eliminates the tissue ischemia by enhancing neovascularization which in turn helps in wound healing with minimal scar formation.

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