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IMPORTANCE OF *JALAUKA* VACHARANA IN SURGERY

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ABSTRACT -

Jalauka, a traditional Ayurvedic treatment, is widely recognized for its therapeutic efficacy in managing a variety of surgical diseases like wound healing, reducing inflammation, and preventing infection in post-surgical recovery. Derived from the use of medicinal leeches (*Hirudo medicinalis*). The application of *Jalauka* in surgical diseases primarily focuses on improving blood circulation, detoxifying the body, and enhancing tissue regeneration, all of which are crucial for the healing process following surgical procedures.

In surgical contexts, *Jalauka* is particularly beneficial in managing conditions like venous insufficiency, chronic wounds, abscesses, and other post-surgical complications. The leech's saliva contains bioactive compounds that aid in the prevention of thrombosis, facilitate microcirculation, and promote the clearance of metabolic waste products.

This paper explores the scientific underpinnings of *Jalauka* therapy in the management of surgical diseases, highlighting its historical significance, modern-day applications, and potential benefits. Furthermore, we discuss the integration of *Jalauka* therapy into modern surgical practices, emphasizing its safe and effective use in enhancing surgical recovery.

In conclusion, *Jalauka* therapy holds great promise as an adjunctive treatment in surgical medicine. Its multifaceted therapeutic benefits make it an invaluable tool in the management of surgical diseases.

KEYWORDS – Jalaukavacharana, Hirudotherapy.

Introduction –

As day-to-day life has changed this led to dosha prakopak and different disease condition. Surgical condition like *Arsha*, *Bhagandara*, *Shotha*, *Vidradi*, *Nadivrana*, etc prevalence increased. Sushruta has explained the surgical as well as para surgical treatment modulates like *Kshar karma*, *Raktmokshan*, *Agni Karma*. *Raktavistravan* is one of the surgical procedures; also called as *Raktamokshan*. It is one of the most effective measures as a half treatment in Shalya-Tantra. *Rakta* means blood and *Mokshana* means letting out the blood. *Jalauka*, *Shrung*, *Alabu*, *Siravedh*, *Prachan* are different methods is used for *Raktamokshana*.

Jalaukavacharana is used for *Pittaj Rakt dushti Condition*. *Jalaukavacharana* is a para surgical procedure; *Jalauka* is used for bloodletting. *Jalauka* is the one of the *Anushastra*. *Anushastra* is used as that of *Shastra* and which is not made up of *Lohadi dhatu*¹.

Jaulaka Nirukti –

The one who has water as life; the one who live in water².

जलमासामायुरिति जलायुका, जलमासामोक इति जलौकसः ॥

Jaulaka Importance –

Jalauka lives in cold place (water)hence it has properties like *sheeta* and *madhura*. *Raktamokashan* with *Jalauka* is indicated for *Pittaj Dushit rakt* because it has *sheeta* and *madhura* properties³.

शीताधिवासा मधुरा जलौका वारीसंभवा।
तस्मात् पित्तोपसृष्टे तु हिता सा त्ववसेचने ॥

Classification of Jaulaka ⁴-

There are mainly 2 types of *Jalauka*.

1.Savisha Jalouka.

They are having 6 types, i.e. *Krishna*, *Karbura*, *Algarda*, *Indrayudha*, *Samudrika* and *Gochandana*

2. Nirvisha Jalouka

They having 6 types, i.e. *Kapila*, *Pingala*, *Shankhamukhi*, *Mushika Pundarikmukhi* and *Savarika*

Nirvisha Jaulaka has been used for treatment purpose.

Indication of Jalaukavacharana-

Jalauka is used in *Nrupa* (king), *Aadhya* (rich person), *Balaka* (child), *Durbal* (weak person), *Nari* (female) and *Sukumar* (delight person) for the *Mokshana* of *Rakta*, which is being vitiated by *Pitta*⁵.

नृपाद्बालस्थविरभिरुदुर्बलनारीसुकुमाराणामनुग्रहार्थं परमसुकुमारोऽयं शोणितावसेचनोपायोऽभिहितो जलौकसः ॥

Jalaukavacharana for surgical Condition –

- 1)Vranshoth 2)Dagdhavran 7)Parikartika
- 8)Bhgandar 9)Arshbhransh 2) Medogranthi
- 7) Aagantuj vran 8) Nadivran 9) Slipad
- 10) Dushta vran 11)Medoburda 12) Vishdushta vran
- 13) Vidradi 14)Burger disease 15) Kadar
- 16)Chednottar Utpanna Vran
- 17) Ksharsutra chedan pashchat utpanna vran

Contraindications of Jaulakavcharana⁷

1. Haemophilia
2. Anaemia
3. Hypotension
4. General fatigue
5. Active tuberculosis
6. Mental disorders.

Jalaukavacharana Vidhi

Jalaukavacharana means *Raktavistravan* by means of *Jalauka*.

1. *Purva karma*⁸

- a) collection and preservation of leeches.
- b) examination of patient.
- c) *Shodhana* of leech.
- d) Preparation of patient - Local *Snehana* and *Swedana* are needed before *Jalauka* application
- e) *Jalauka* should be applied in *Pratahakala* (morning hours).
- f) *Ritu- Sharad ritu*.

2. *Pradhana karma*

Position of patient - sitting posture or lying down posture. If effected part is woundless, then should be made *Ruksha* by scrapping with *Mirta*(soil) or *Gomaya Churna*. *Jalauka* is applied after achieving its *mada mukt Avastha*. *Jalauka* is applied over the site. If in the affected part leech doesn't hold or suck, then either milk drop should be applied or a small scratch should be made so as to drain a little drop of blood. If leech doesn't suck by above methods, then another leech should be used.

Wet Gauze piece kept over *Jalauka* body. *Jalauka* stops sucking blood by itself or after the patient start feeling pricking pain then *Jalauka* should be removed by pouring *Saindhava Lavana* at its mouth.

3. *Paschata Karma*¹⁰

It consists of two main things

- a) *Jalauka Shodhan*
- b) *Atura Upachara*

a) *Jalauka Shodhan-*

As soon as *Jalauka* is removed from patients affected part, *taila* mixed with *Saindhava Lavana* should be poured on it.

Shodhana of *Jalauka* should be done with *Haridra*

With the help of fore finger and thumb of left hand, the tail end of *Jalauka* should be picked up and with right hand forefinger and thumb it should be squeezed towards the head. By this it will vomit the sucked blood. Then put the *Jalauka* in a vessel containing pure water.

If it is lethargic (*Madayukta*) it should be presumed that it has not yet vomited properly. When the *Jalauka* is not made to vomit the blood either partially or completely, then it may get a disease called '*Indramada*'(Su) or '*Raktamatta*'(A.H.). It may die or it may not be able to suck the blood there after.

b) *Atura Upachara* -

Shataadhouta Ghrita should be applied on the wound

Or *Madhu* should be applied or *Pichu* dipped in *Shataadhouta Ghrita* should be kept on it.

Cold application should be made on the wound and bandage should be applied and tied properly or after *Jalauka* detached from the body the wound should be cleaned with *Kashaya* or any one of the *Taila* like *Jatyadi Taila* or *Padmkadi Taila* may be applied.

Advantages of *Jalaukavacharana* ¹⁵

- i. No need of O.T. always.
- ii. No need of General or Spinal Anaesthesia.
- iii. No need of Suturing.
- iv. Pain relieved.
- v. Application of Leeches creates local anaesthetic action
- vi. *Jalauka* has ability to suck up only impure blood and also from deep level.
- vii. Decreases swelling, hastens ripening of swelling
- viii. *Jalauka* has ability for quick transformation of stages and also there is no need of antibiotics.
- ix. Although it is para surgical process it has cosmetically better scar.

Mode of Action¹² –

1. It promotes the improvement of blood circulation in the tissues, renders thrombolytic, anti-inflammatory, immune stimulating action, raises nutrition of tissues, and strengthens tissues immunity.
2. Biologically active substances containing in saliva of medicinal leeches can restore blood circulation in the nidus of inflammation, remove an 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 immune protection and regeneration of tissues.
3. One chemical called, Hirudin, inhibits the conversion of fibrinogen to fibrin by inhibiting thrombin & preventing blood from clotting. Hirudin also inhibits platelet aggregation.
4. Hirudin works in conjunction with a vasodilator, one that increases the diameter of blood vessels by relaxing the smooth muscle of the blood vessels, to widen the diameter of the vessel and increase the flow of blood and by that promotes blood flow.

Therapeutic properties of *Jalaukavacharana* ¹³

1. Bloodletting, Anticoagulant, Protective antithrombotic, Thrombolytic, Correction of micro-circulation disorders, Anti-Ischemic, Anti-inflammatory, Local anti-oedematous, Anti atherosclerotic, immunostimulant, Anti-oxidant.

Complications of *Jalaukavacharana* ¹³

1. The bacteria *Aeromonas hydrophilia*, which is present in a leech's gut can be passed to the patient if we disturb the leech during feeding; it leads to regurgitation of its stomach contents into the bite wound with bacteria and causes pneumonia, septicaemia or gastroenteritis.
2. Excess blood loss - It may occur in rare cases of prolonged bleeding.
3. Loss of leeches in body orifices and spaces.
4. Allergic reactions such as pruritus (itching), wheal formation and blisters.
5. Foreign body reaction against leech jaw that can remain in tissue when leech are forcibly removed.

Discussion –

Nirvisha Jalauka should be used. *Jalaukavacharana* is indicated for *Pittaja dusht rakta vikara* (diseases). *Jalauka* is indicated for surgical conditions *rakta arsha* (thrombosed piles), *dusht vrana* (infected wound/ulcer), *shotha* (swelling), *Vidradhi* (abscess), *Siraj granthi* (varicose vein), *Nadivrana* (sinus). Additionally, *Jalauka* therapy is considered helpful in reducing postoperative oedema and enhancing the overall recovery of patients after surgery. It is also used in plastic surgery to relieve venous congestion after skin graft. bloodletting, anticoagulant, protective anti-thrombotic, thrombolytic, correction of micro- circulatory disorders, anti-ischemic, anti-inflammatory, Immune stimulating, anti-oxidant.

Jalaukavacharana raktmokshan is a Para surgical procedure. *Jalaukaavcharana* has an advantages like less expensive, short time treatment, can be performed O.P.D. basis, no requirement of anaesthesia, no requirement of post procedure management. *Jalaukavacharana* has a limitation because of allergic reaction, risk of infection. Complication like *Daha* (severe burning), *kandu* (itching), *Jwara* (fever), *shool* (pain), *shotha* (swelling), *rakta atisrava* (excessive bleeding).

Conclusion –

1. *Jalauka* is *Anushastra* (Para surgical procedure) predominantly effective for *pitta raktaj* disease.
2. It has great effect for surgical conditions like *Arsha*, *Vidradi*, *Bhagandara*, *Parikartika*, *Shotha*.
3. It has advantages like less time consuming, not an expensive procedure, minimum side effect.

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