



Journal of the National Integrated Medical Association

Second Largest Medical Journal in India

ISSN 0377-0621

Vol. 53 - NO. 1

JANUARY 2011

Estd. : 1959

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Editorial ...**AN ECHO OF LIFE**

This is a story I have heard—

A man and his son were walking in the forest. Suddenly the boy tripped and feeling a sharp pain he screamed, 'Ahhhhh.'

Surprised, he heard a voice coming from the mountain 'Ahhhhh.'

Filled with curiosity, he screamed, "Who are you?", but the only answer he received was, "Who are you?"

This made him angry, so he screamed, "You are a coward!" and the voice answered, "You are a coward!"

He looked at his father, asking, "Dad, what is going on?"

"Son," the man replied, "Pay attention!"

Then he screamed, "I admire you!"

The voice answered, "I admire you!"

The father shouted again, "You are wonderful," and the voice answered, "You are wonderful!"

Now the boy was surprised, but still couldn't understand what was going on.

Then the father explained, "People call this 'ECHO,' but truly it is 'LIFE.'"

Friends, life always gives us back what we give out. Life is a mirror of our own actions. If we want love, let us give more love! If we want understanding and respect, let us give more understanding and respect to others. If we want people to be patient and respectful to us, let us be more patient and respectful to them. Let us avoid the dispute and arguments. Let us maintain the relationship with our colleagues. A beautiful relationship does not depend on how well we understand someone. But, it depends on how well we avoid the misunderstanding.

"An Echo of Life." This rule of nature applies to every aspect of our lives. What we give, we receive back. When we bring out best in others, we bring the best in ourselves. This we have learned from our own seniors working dedicatedly for our association. Our association is runned by both seniors and junior members. The seniors are for direction and the juniors are for action.

Let us always remain, hand in hand; and united.

January, is a month of Makarsankraman, we celebrate it by offering sneha from Til (Sesame) and sweetness from Guda (Jaggary), to bring the sweetness on the tongue and reduce the bitterness.

So friends, let us always remains united unitedly we work, increase our strength and prestige of our Association.

Wish you all healthy, happy and peaceful new year.

— Dr. D. G. Kadam

Guest - Editor, Sr. Vice-President, NIMA-CC

Please note that our Journal being National it is printed in English & Hindi Only.

LEECH THERAPY - A MINIMAL INVASIVE PROCEDURE

— *Dr. Amar P. Dwivedi, ** Dr. Vishnu C. Bawane

Definition of Raktamokshana (Blood Letting Therapy)

Expulsion or removal of vitiated blood from the body is known as 'Raktamokshana'. This can be done either through the prominent superficial veins with the help of simple scalp-vein canula (*Sira-vedha*), with the help of Leech (*Jalokavacharan*), by taking multiple incisions on a particular site (*Prachhan karma*), by sucking blood with the help of animal horn (*Shring*) from the site where prior incision is taken or removing blood with the help of empty dried bottle gourd (*Alabu*).

Importance of Raktmoxshana

शीतोष्णस्निग्ध रूक्षाद्यैरूपक्रान्ताश्च ये गदाः।

सम्यक् साध्या न सिध्यन्ति रक्ताजांस्तान् विभावयेत् ॥

च.सु. 24/17

Raktamokshan or Blood letting has given prime importance in Panchakarma or Shodhan chikitsa. It is said that a number of diseases which are otherwise incurable can easily & effectively be cured only by Raktamokshan.

सिराव्यधिक्षिकित्सार्थं शल्यतन्त्रे प्रकीर्तितः।

यथा प्रणिहतः सम्यक् बस्तिः काय चिकित्सते ॥

सु.शा. 8/22

As the advocates of 'Kayachikitsa' believe 'Basti or Medicated enema' to be a 'Sarva-roga nivarini' & thus 100% of the treatment is occupied by 'Basti karma'. Similarly, Raktamokshan occupies the same place in 'Shalya tantra'.

It can be said that half or rather entire *Shalya Tantra* is equivalent to '*Sira-vyadh*' alone i.e. a number of diseases are likely

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to be cured only through this simplest technique.

Effects of Raktamokshan

- Rakta, the blood being the vehicle to carry & transport absorbed nutrients, oxygen, metabolites etc. from organ to organ. So, correction of any abnormality in the blood by taking it out solves a number of problems.
- Also, those who gets 'Raktamokshan' done regularly as a routine, never suffers from *Twaka dosha* (various skin problems), *Granthi* (cyst, tumours), *Shoph* (inflammation) and *Raktaj roga* (Kushtha, Nilika) etc. such is the miraculous effect of *Raktamokshan*.
- Acharya Sushrut further says that, this is the only therapy which helps in eliminating all the three vitiated doshas (Vata, Pitta & Kapha) at a time. He further advocate that if all the five-fold purificatory procedure can not be performed due to lack of time then, even 'Raktamokshan' can serve the purpose.

What is the Leech therapy?

This method is most unique & most effective technique of Blood letting where Raktamokshan is done with the help of 'Leeches' i.e. Leeches are applied on the desired site for blood letting. Here, the vitiated 'Doshas' are removed from the body without using any cutting instruments; hence, Raktamokshan by means of 'Leech' comes under '*Ashastra*' category.

As the very basis of life for 'Leeches' is water, since their site of dwelling is 'Jal' i.e. water, the 'Leeches' are known as '*Jaloka*'.

Types of Jaloka : Six different types of

Leeches are found in poisonous & non-poisonous category. Basically, these Jalokas are named according to their external look or colour.

- A) **Poisonous** (*Savish Jaloka*): Krishna, Karbura, Alagarda, Saamudrika, Indrayudha, Gochandana.
- B) **Non-poisonous** (*Nirvish Jaloka*): Kapila, Pingala, Shankh- mukhi , Mushika, Pundarik- mukhi, Saavarika

Identification of Non- poisonous Leech

The Non-poisonous or '*Nirvish Jalokas*' can be safely identified by their Yellowish-*Manhshila*-like colour, swift activity, Glitter like or copper like colour, Wide lotus-bud like mouth & glistening appearance. Generally, these Leeches are grown in pure flowing water, ponds with clean water & the lakes with lotus flowers & greenery.

Note : The poisonous Leeches are found in Muddy water, Gutters or in water which is contaminated by urine, stool, fish, frog & other water animals. They are comparatively bigger in size & dark in colour. After the application they produce severe pain, itching or allergic reaction at the site, giddiness, fever, burning sensation, vomiting. Also few patients may develop signs of intoxication & sinking.

Facts About Leeches

Scientific name: *Hirudo medicinalis*

Country : Armenia, Austria, Belgium, Czech Republic, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Russia, Spain, Sweden, Switzerland, United Kingdom.

Continent : Europe, Asia

Diet : Blood of birds, fish, frogs, mammals

Food & feeding : Carnivore

Habitats : Freshwater

Conservation Status : Near Threatened

Relatives : Earthworm, lugworm

Description : Leeches have segmented bodies like an earthworm, but unlike

earthworms they are slightly flattened rather than round. They have a sucker at the head and the tail end and the one at the head surrounds the mouth. The mouth contains three jaws that can break the skin of their hosts to suck their blood. Medicinal leeches are greenish brown on their backs with thin red stripes running along the body and paler below. They grow up to 20 cm in length.

Lifestyle : Leeches live in shallow muddy pools and ponds with plenty of waterweeds. They can consume 15 grams of blood - ten times their own body weight, before they are full, but they only need to feed every six months.

Family & friends : Like slugs, leeches are hermaphrodite, having both male and female parts, but they still need to come together to mate with each other.

Growing up : After mating, 15-50 eggs are laid in a spongy case or cocoon, above the waterline often under stones. The eggs hatch in 3-5 weeks and the young leeches need two seasons of feeding before they are ready to breed themselves.

A Leech has got an anti-coagulant chemical called Hirudin. While sucking the blood this Hirudin prevent clotting of blood.

Ayurveda believes that Leeches suck only the impure part of blood. *We can assume the sucking of blood from superficial veins which is deoxygenated or impure one.*

Components of Medicinal Leech Saliva & there effects in the Host's Body

<i>Hirudin</i>	Inhibits blood coagulation by binding to thrombin
<i>Cain</i>	Inhibits blood coagulation by blocking the binding of von Willebrand factor to collagen. Inhibits collagen-mediated platelet aggregation
<i>Destabilase</i>	Monomerizing activity. Dissolves fibrin. Thrombolytic effects
<i>Hirustasin</i>	Inhibits kallikrein, trypsin, chymotrypsin, neutrophilic cathepsin G

<i>Bdellins</i>	Anti-inflammatory. Inhibits trypsin, plasmin, acrosin
<i>Hyaluronidase</i>	Increases interstitial viscosity. Antibiotic
<i>Tryptase inhibitor</i>	Inhibits proteolytic enzymes of host mast cells
<i>Eglins</i>	Anti-inflammatory. Inhibit the activity of alpha-chymotrypsin, chymase, substilisin, elastase, cathepsin G
<i>Factor Xa inhibitor</i>	Inhibits the activity of coagulation factor xa by forming equimolar complexes
<i>Complement inhibitors</i>	May possibly replace natural complement inhibitors if they are deficient
<i>Carboxypeptidase A inhibitors</i>	Increases the inflow of blood at the bite site
<i>Histamine like substances</i>	Vasodilator. Increases the inflow of blood at the bite site
<i>Acetylcholine</i>	Vasodilator
<i>Anesthetics substance</i>	Anesthetic

Materials and equipments for Leech therapy

- Ideally a separate leech therapy room should be well equipped with
 - Patient bed, Separate tanks for storage of leech, the dressing trolley having gloves, gauze pieces, Normal saline, blood pressure instrument, emergency medicines like Atropine, Hydrocortisone, Adrenaline, Ethamsylate, Avil, IV Fluids etc. to combat reactions if any. Also adequate number of sterile tray for cleansing of leech, cleansing material like turmeric powder etc. dressing materials

Purva Karma / Preparation of Patient

- Selection of suitable patient
- Laghu Aahar (Light semi-solid diet) like Yavagu etc is advocated before the procedure
- Snehan shouldn't be allowed. However, Mild Swedan to the site of blood letting ½ an hour before can be given.

- The desired site is properly washed with cold water.

- Coagulatory disorder like haemophilia should be ruled out. Similarly, precautionary measures should be taken while handling the Anaemia, Diabetes, Hepatitis, HIV patients. (**One should not apply Spirit gauze or turmeric to clean the area in any condition.**)

b) Preparation of Jaloka

- Fresh Leech from the tank/jar is chosen & dropped in a tray or bowl filled with clean water.

- Fine turmeric & trifala powder is mixed in it. One can observe that an inactive Leech becomes highly active & runs all around the tray immediately after sprinkling of the powder which indicates its craving for food.

- After this, the active Leeches are selected & transferred in another tray having clean water.

Pradhan karma / Main Procedure

- The desired site is cleaned with wet gauze.

- Now, the Leech is held at its neck with fingers & applied directly to the desired site, 5- 10 Leeches can be applied at a time depending upon the requirement.

- Once Leeches start sucking the blood, they are covered with wet gauze & cold water is poured on them from above time to time, so as to make Leech comfortable during sucking.

****If Leech do not catch the site by its own, in such condition a small prick induced bleeding may be required so as to facilitate the sucking procedure.***

- The Leech once starts sucking the blood, elevates its neck, and fixes its head to the supporting point of skin. One can observe wave like movements indicating sucking of blood.

- When Leech becomes fully satisfied with its food, it leaves off the skin of the patient & drops itself down.

- If not-then the patient may feel itching sensation which indicates impure blood from that spot is no more available for the Leech.

● In such a case, a little turmeric powder is placed on the sucking point of the Leech & immediately the Leech takes away its mouth from that point.

Precautions

● One should not apply Leeches to major veins like Femoral or Jugular veins and to the delicate parts like Breast, Penis or Eye lids.

● Used Leeches should be kept in separate jars.

Amount of blood loss

Each Leech sucks around 6 to 10 ml of impure blood at one application.

Pashchat karma / (Post procedure Patient's care)

● Leech is removed from the site

● The site is cleaned with savlon or normal saline

● Turmeric powder is placed to the bleeding site

● Bandaging is done to arrest the bleeding.

● Sips of Lime water, Soup or Glucose water can be offered to the patient.

Patient is allowed to sit for some time before leaving the place. (*sometimes the oozing from the site does not stop, in such cases wound can be sealed with the help of tincture benzoine*)

Post procedure Jaloka care

● Leech after the use is kept in an empty tray.

● Turmeric powder is placed on its mouth so as to induce vomiting.

****Immediately after this one may find jets of black coloured blood being emitted by the Leeches.***

● Some of the practitioners advocate to gently squeeze out the blood with fingers from anus to mouth.

● After this the Leech is again washed in clean water.

● In the end Leech is transferred in the

jar starving for seven days.

Indication & Utility of Leech Therapy

● It is used effectively in the management of non-healing ulcerative lesions like Diabetic ulcer, Leprotic wound etc.

● It relieves vascular congestion. So, can be effectively used in conditions like long standing Varicose ulcers, Filariasis, post-op. skin grafting lesions.

(Now a day's most of the plastic surgeons are using Leeches after grafting for the better acceptability of graft)

● It is used in Arthritis, Sprain or spasm to relieve the pain, inflammation & discomfort symptomatically.

● Used in Abscess, Cellulitis, Thrombophlebitis and Varicose Veins

● Useful in third degree thrombosed prolapsed Piles.

● Useful in Atherosclerosis of the limb as it improves circulation.

● Jaloka siddha oil is used locally to treat hyper pigmentation.

● Useful in Goitre, various skin disorders like Eczema, Pimples, and Psoriasis etc.

Research is going on to study the efficacy of Leech in the management of MI (where it is used around the Cardiac area on the chest) & stroke as it has got an anti-coagulant chemical called Hirudin which resembles drugs like Heparin & Streptokinase.

Corrigendum

The Editorial of December 2010 was written by

Dr. Mandar Ranade (Pune)
Hon. Gen. Secretary,
NIMA-CC, as a
Guest Editor

The inadvertent mistake is deeply regretted.

— Mg. Editor