

## EFFICACY OF HIRUDO-THERAPY IN GRIDHRASI (SCIATICA): A REVIEW

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### ABSTRACT

*Gridhrasi* is such a disease that carries little threat to life but huge interference in living. The person who suffers with the disease barely can walk on his feet properly. It is the most frequent radicular pain syndrome of spinal origin, due to the irritation of spinal nerve root associated with herniation at L<sub>4</sub>.L<sub>5</sub> or L<sub>5</sub> –S<sub>1</sub>. Acharya Caraka described *Vasti*, *Siravyadha* (Venipuncture) and *Agni Karma* as treatment plan in *Gridhrasi*. The management provided by the modern medicine in sciatica involves conservative medicines and lastly surgery but in Ayurveda Leech therapy has proved out to have miraculous effect in the suppression and elimination of *Dushit Doshas*. Hirudo (Leech) therapy comes under the *Raktamokshana* procedure, out of five purificatory procedures. It possess the quality to eliminate the vitiated *Rakta* (blood) from the body that results in treating the root cause of the sufferings. According to the Ayurveda, as swan can only take milk if its mixed with water likewise Leech only sucks impure blood from the skin and only the pure blood is left so, it is a blood purification therapy. Leech (*Hirudo medicinalis*) possesses hirudin, plays anti-inflammatory role in the management of the *Gridhrasi* (sciatica). The Leech Therapy seems to be an effective treatment for sinking pain resulting in improvement of physical function with no major adverse effects.

**Keywords:** *Gridhrasi* (sciatica), Hirudo Therapy (Leech Therapy).

**INTRODUCTION:** As Nervous system is the complex system of the body, in which any dysfunction results in the pain which is troublesome to treat or manage. The nature of pain of sciatica is typically a radiating pain <sup>[1]</sup>. Sciatica is a more common disease affecting lower limbs <sup>[2]</sup>. In other words, it not a disease but it is a symptom causing pain and discomfort <sup>[3]</sup>. In Ayurvedic Texts, it clinical features resemble with *Gridhrasi*. *Gridhrasi* is mentioned under 80 *Vata Nanatmaja Vyadhi* as told by Acharya Caraka. <sup>[4]</sup> As per Classics, *Vata Prakopaka Ahara & Vihara* are the main parts<sup>[5]</sup>. Lower back ache (LBA) is the cardinal symptom of Lumbar spine disorders <sup>[7]</sup>. The mechanism tangled in the disease process is distortion;

stretching; and irritation or compression of the spinal root, which origins tingling, paresthesias and numbness or Sensory impairment of the skin, soreness of skin, and tenderness along the nerve. It usually attends radicular pain, diminished reflexes, weakness, atrophy, fascicular twitching, and edema if motor fibers of the anterior root are involved. Ayurveda splits this disease into two categories: *Vataja* and *Vata-Kaphaja*.<sup>[8]</sup> *Vataja* disease is caused by the vitiation of *Vata Dosha* alone and contains a needling sensation.<sup>[9]</sup> *Vata-Kaphaja* disease is caused mainly by *Vata* in company with *Kapha Dosha*.<sup>[10]</sup> Numbness, piercing pain, paresthesias, restrained movement, and repeated muscle spasms are characteristic features of

*Vataja* sciatica. It is characterized by lassitude, heaviness in the body, and anorexia, along with associated symptoms of *Vataja* sciatica.

**AIM AND OBJECTIVE:** To understand the effect of Leech Therapy (Parasurgical procedure) in the management of *Gridhrasi*.

### **RAKTAMOKSHAN VIA HIRUDO THERAPY:**

*Panchakarma* focuses on 3P's i.e Prevention, Promotion and Prophylactic management of Disease. Due to these, it has rejuvenating properties. Among five *Karmas* mentioned in *Panchakarma*, *Rakta-Mokshan* takes special place as it is the modest and least time taking for elimination of toxins from the body. Leech Therapy is said to be the best for *Rakta-Mokshan* in present era as it contains more than 18 enzymes in its saliva and the rate of recurrence of disease is very least.

### **PROCEDURE FOR LEECH THERAPY:**

As mentioned in Ayurveda, the beautiful description of Leeches Cultivation and Applications on the desired site and the indications and contraindications while using Leeches are quoted in the separate chapter named "*Jalaukavcharaniya*"<sup>[11]</sup>. As per the source of data collected, Leeches used for the therapy were collected from the fresh pond. They were collected in pot and food should be given on every third day and the whole water and pot should be changed on seventh day.

**PURVAKARMA (PRE OPERATIVE PROCEDURE):** Before applying leech to the affected site of the disease, they are first kept in bowl filled with antiseptic like *Haridra* (Turmeric) for almost 15 minutes. Later on they should be kept in pure water.

**PRADHAN KARMA:** Milk drop or blood drop or a small incision can be made

on the application site, so that leech can easily ligate the site and suck the toxic blood. The posterior sucker was held in one hand and anterior sucker was placed at the site of application (maximum tenderness i.e. L<sub>4</sub> or L<sub>5</sub>). After that the posterior sucker should be released from the hand & attached to the surrounding skin surface of the affected site. Thereafter, Leech should cover with wetted gauze piece and to keep it moist few drops of water should be dripped on the leech. When the leech starts sucking blood from the site it elevates the shoulders and lift the head like horse shoe. As soon leech sucks the impure blood like the same way swan drinks the milk, it detaches itself when started taking pure blood.

After detachment, *Madhuyashti Churna* and *Ghrita* should be used for ligation of the wound named Mercedes sign. For the emesis of the leech, an indication of *Haridra Churna* is mentioned in the text. So, after leech application, there is strict prohibition of reuse of leech before 7 days.<sup>[12]</sup>

**DISCUSSION:** Line of treatment mentioned in *Charaka Samhita* for *Gridhasi* clearly indicates the use of *Siravyadha* as a treatment modality<sup>[13]</sup>. In the present era people usually prefer Leech Therapy as it contains beneficial enzymes like hirudin, calin and many more that directly acts as analgesic agent in the *Gridhrasi*.

The Saliva of the Leeches contains a variety of substances such as Hirudin, hyaluronidase, histamine like vasodilators, collagenase, and destabilase, inhibitors of kallikrein, superoxide production and analgesic compounds<sup>[14]</sup>. It has been proved through Laser Doppler flowmetry that there is superficial skin perfusion

following leech application especially 16 mm around the biting zone <sup>[15]</sup>. Therefore, local analgesics and antiphlogistic effect by these substances enforced by hyaluronidase. Hyaluronidase, an enzyme in leech saliva further penetrates and facilitates the penetration and diffusion of these pharmacologically active substances into the tissues.

In Summary, traditional leech therapy seems to be an effective in treatment of *Gridhrasi*.

**CONCLUSION:** *Raktamokshan* is best method of treatment among five *Panchakarma* techniques for the management of *Gridhrasi*. *Raktamokshan* VIA Hirudo (Leech) Therapy is said to be the safest and most effective type quoted for *Sukumara* (delicate), *Stri* (ladies), *Nrup* (King), *Adhya Rogi* (rich patients). So, Hirudo Therapy can be considered best in day to day life in managing Sciatica.

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Source of support: Nil

Conflict of interest: None

Declared

**Cite this Article as :** Chaudhary Nidhi et al :Efficacy of Hirudo-Therapy in Gridhrasi (Sciatica): A Review: IJAAR VOLUME III ISSUE III JUL-AUG 2017 Page No:619-622