



## A CASE REPORT ON THE ROLE OF JALUKAVCHARAN (LEECH THERAPY) IN GRAVITATIONAL ECZEMA

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### ABSTRACT

Gravitational eczema is the condition usually present secondary to varicosity of superficial veins or longstanding case of diabetes mellitus. There is no successful surgery as well as medical remedy is available for the complete cure of this condition. However in Ayurveda Jalukavcharan (Leech therapy) as a parasurgical method is very useful

in this condition. In leech therapy the leech is used for the bloodletting at that particular site. Here a case of Gravitational eczema with five years history was treated with the leech therapy and patient felt marked improvement in sign and symptoms of the condition.

**KEYWORDS:** Jalukavcharan, leech therapy, Gravitational eczema, varicose vein.

### INTRODUCTION

Jalukavcharan (Leech therapy) is mentioned as parasurgical procedure in the classical text of Ayurvedic surgery. Leech therapy (Jalukavcharan) is mainly used for the treatment of Rakatj and Tvak roga (blood related disorder and skin disorder) in children, old person, pregnant lady and the patient contraindicated for surgery.<sup>[1]</sup> Leech therapy is also mentioned in various other health systems also. For various therapeutic purposes, the European medicinal leech species, *Hirudo medicinalis* also known as the healing leech was preferred by the majority of physicians compared to the American species, *Hirudo decora*, which can suck less blood due to a smaller and superficial incision on its prey skin.<sup>[2,3,4]</sup> In addition, many other species were also considered as medical tools, such as *Hirudinaria manillensis*<sup>[5]</sup>, *Hirudo nipponia*<sup>[6,7]</sup>, *Hirudo verbena*, *Hirudo orientalis*<sup>[8]</sup>, and *Haementeria depressa*.<sup>[9]</sup>

Gravitational eczema (also known as "Congestion eczema," "Gravitational dermatitis," "stasis dermatitis," "Stasis eczema" and "Varicose eczema"<sup>[10]</sup>) refers to the skin changes that occur in

the leg as result of stasis of/or pooling of blood by gravitational collection of blood from insufficient venous return; the alternative name of varicose eczema comes from a common cause of this being varicose veins.

Insufficient venous return results in increased pressure in the capillaries with the result that both fluid and cells may “leak” out of the capillaries. This results in red cells breaking down, with iron containing hemosiderin possibly contributing to the pathology of this entity<sup>[11]</sup> the condition may present with the sign/symptoms like swelling, redness, scaling, itching, pain, lipodermatosclerosis and lichenification of the skin of that particular limb.

### CASE REPORT

A female of 65 yrs with the 10 yrs history of diabetes mellitus and varicose vein having eczematous lesion in both the legs since last five years. The skin is black in colour and thickened. The lesions are below the knee up to dorsum of foot. Patient also complaints of severe itching on the affected area. On investigation the blood sugar level was found controlled within limits. The diagnosis made as Gravitational eczema on the clinical background due to presence of varicose vein in both the limbs. With following all the protocol the five sitting of leech therapy was performed in the patient and results was found very satisfactory due to the skin colour was reverse to subnormal and the itching was reduced and patient felt very relief from therapy.

### MATERIAL AND METHOD

Patients for leech therapy all routine blood investigation as hemoglobin gram percentage, total count, ESR, HbsAg, HIV, BT, CT and random blood sugar was performed and all investigation were within limits. The area where leech to be applied place in stable position as patient was asked to lying supine. The area cleaned and mild fomentation was done. The appropriate leech (*Hirudo medicinalis*) taken in bowel and small amount of Haridra (*curcuma longa*) powder along with water added. It is supposed that due to this the appetite of leech for blood is increased. After that leech placed at the desirable site of leg and covered with the wet cotton pad. After some time the leech starts sucking blood. After approx 30 min leech suck so much blood and left spontaneously and some time removed manually by pouring Haridra powder near its mouth so that it leave the body.

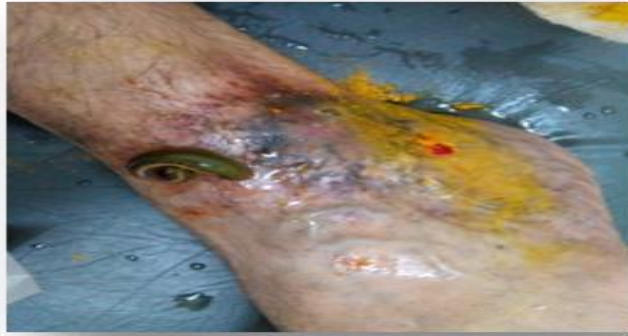
Instantaly the site pressed with gauze pad and tight cotton bandage was applied to assist blood clotting because after sucking blood it leaves some enzyme which inhibits clotting, the procedure repeated in every sitting was same.

## RESULT AND DISCUSSION

Here we discuss in the present case dermatitic lesions on the foot was present bilaterally, having hard hyper keratinized skin featuring severe itching with thin superficial dilated veins. The region behind this may be the long standing case of diabetes mellitus and the varicosity of the superficial veins of leg. Both the factor may contribute in producing dermatitis. After the first sitting of leech therapy the severity of itching was reduced as per patient. After completing the five sitting the itching remains minimal and occasionally while the changes in the skin were also starts reversing to normal skin. The inflammation at the lesion was also start subsiding from first sitting onwards. From Ayurvedic point of view, to understand the mode of action of leech therapy may be, because all the symptoms are Pitta dose domination and because of leech having Sita virya, Madhur guna it suppress the Pitta so that the symptoms resolved after leech therapy.<sup>[12]</sup> Gravitational eczema occurs due to accumulation of blood and it's metabolites in that particular regions due to disturbed venous return because of formation of pericapillary cuff around the capillaries, so that they unable to remove hemosiderin like metabolites from the tissue which later on produces itching and dermatitis.<sup>[13]</sup> As many study reported that leech saliva have some enzymes which affects on blood clotting factor and increase the flow of blood and improve the blood supply of that particular tissue .So on improving blood circulation the accumulation of metabolites reduces and pathology reversed.



**Figure 1 before treatment**



**Figure 2 during treatment**



**Figure 3 After treatment**

## **CONCLUSION**

Conclusion of this case report that, leech therapy is a popular therapeutic practice throughout the ages for a wide range of diseases and it was applied as an unscientific home remedy by traditional therapists. Nowadays, leech came back to the contemporary medicine with fewer applications, which were proven and supported by a huge number of scientific studies and case reports. Leech therapy in the field of plastic and reconstructive surgery is expected to be of paramount importance due to the ease of leech application and reduced side-effects. Hence, more efforts should be undertaken to optimize this utilization.

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