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Effect of Leech Therapy in Chronic Ulcer - A Case Study

Prakash Jai	Ayurvedic Physician, Shri Ashutosh Maharaj Ayurvedic Treatment Centre, Nurmahal, Jalandhar (Punjab).
Singh Manoj	Junior Resident, Kaya Chikitsa (Panchkarma), SDM College of Ayurveda and Hospital, Hassan, (Karnataka).
Kumar Mahesh	Assistant Professor, Department of ShalyaTantra, C.B.P.A.C.S., Khera Dabar, Najafgharh, New Delhi.
Kumar Sandeep	Lecturer, University College of Physiotherapy, Baba Farid University of Health Sciences, Faridkot, Punjab
Sambyal Smati	Lecturer, University College of Physiotherapy, Baba Farid University of Health Sciences, Faridkot, Punjab

ABSTRACT

Leeches were linked with healing because of the etymology of the words.1 Later, in the middle ages, medics depended more on leech therapy, which was prescribed for a wide range of disorders including nervous system diseases (epilepsy, brain congestion), urinary, and reproductive organs diseases (nephritis, Sub acute ovaritis, sexually-transmitted diseases), inflammatory diseases (acute gastritis, laryngitis) and eye illnesses.2,3 Keeping this in mind, the purpose of our study was to find out the effect of leech therapy in the management of Chronic Ulcer. The patient included in the study was, 26 year old male patient, of chronic ulcer since last 6 months. The patient was assessed for pain, colour of wound, discharge burning sensation and size of ulcer. After the initial assessment, Leech therapy was given to the patient for three sitting with the gap of one week. The significant improvement was found in above mentioned parameters.

KEYWORDS Chronic Ulcer; Pain; Leech Therapy

Introduction

Leech therapy is one of the most important and widely practiced methods of regimental therapy used for local evacuation of morbid humours.[4] Leeches are given the name *Jalauka* because the very basis of their life, the site of their dwelling, and the source of their nutrition is *Jala* i.e. water.[5] Hirudotherapy has been mentioned in Ayurveda under the name of Jalaukavacharan.[6] The use of leeches reached a peak in the nineteenth century for various indications: laryngitis, ophthalmic problems, cerebral apoplexy, obesity, and mental disorders. In 1884, Haycraft discovered hirudin which is the main anti-coagulative substance in leech's saliva.[7] Raktmokshan is one of the best therapies mentioned in Ayurvedic classics for the skin disorders.[8] Jalaukavachaean is the best major for the Raktmokshan. During Raktmokshan, Doshas (especially Pitta and Rakta) are eliminated because Rakta and Pitta are integrally associated to each other.[9]

The modern medicines which are available to treat the ulcer are not very effective and cannot be used for long time, because of their local and systemic side effects as well as toxicity, but leeches which are used in Ayurveda are safe and practiced since thousands of years. The saliva of leeches contains antibiotic, anti-inflammatory and analgesic property. As leech therapy is not in common used in the OPD setup of Punjab and other northern states, so this study was first of its own kind, especially in Punjab, which was focused to evaluate the effect of leech therapy in the management of chronic ulcer.

Methodology

A 26 year old male patient, diagnosed with chronic ulcer, since last 6 months, was referred to Shri Ashutosh Maharaj Ayurvedic Treatment Centre, Nurmahal, Jalandhar (Punjab). History of the patient did not show any indication of diabetes, hypertension, asthma, tuberculosis, heart disease and any other major illness whereas there was no history of previous surgery in the past. Baseline assessment for pain, colour of wound, discharge, burning sensation and diameter of ulcer inflammation was done. After that the patient underwent the treatment protocol as mentioned below:

Purvkarma:-

1. Snehan:-

i. Ghritpan (Internal snehan)

ii. Abhyang (External Snehan)

2. Purification of leech in turmeric water was done
3. Cleaning of the treatment site was done with turmeric water

Pradhaan Karma:-

1. Application of needle prick at the site of leech application
2. Steer the leech head to the area to be treated. The head of the leech suck blood while tail end is used as a sucker for attachment
3. The leech was covered with wet cotton swab during blood sucking
4. After 30 minutes the leech was removed by applying turmeric powder on its head

Paschatkarma:-

1. Emesis was done by turmeric powder on leech's mouth
2. The leech was then immersed in turmeric water for purification
3. After that the leech was put in fresh water and used it after seven days and we ensured that the same leech was applied next time to the patient.
4. Minor wound enclosed, cleaned and wash with turmeric water and proper bandaging was done

The leech therapy was given to the patient once a week for 30 minutes, for three weeks. After the interval of one week post assessment was done.

Results:
Leech therapy provided a better advantage in the primary outcome measures as there was a significant improvement in pain after leech therapy. The colour of the wound changes from blackish to near normal whereas there was no discharge and burning sensation after receiving leech therapy by the patient. The diameter of the ulcer was reduced to 1.3X0.8X0.3 cm from 3.8X2.5X1.2 cm. The images during and after the treatment supports the result.

Fig. No. 1 shows the patient receiving Leech Therapy on chronic Ulcer

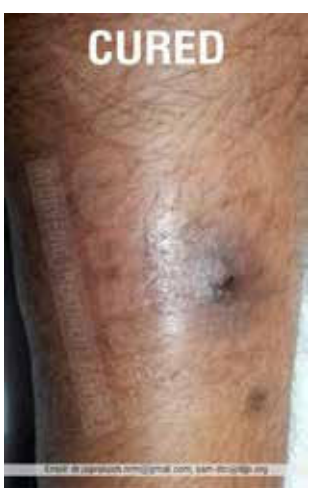

Fig. No. 2 shows the patient after completing the session of Leech Therapy

Table 1 : Represents the pre and post assessment of patient after Leech Therapy

Criteria	Before leech therapy	After Leech therapy
Pain	Continues	Pain on strong pressing
Colour of wound	Blackish	Near to normal skin colour
Discharge	Thick and foul discharge	No discharge
Burning sensation	Yes	No
Size of ulcer	3.8X2.5X1.2cm	1.3X0.8X0.3 cm

Discussion:-
After the Leech Therapy, the expulsion of impure blood takes place, due to which, toxins and other unwanted metabolise are remove from the body it improves the blood circulation and thus enhances the process of wound healing which in turn normalises the skin colouration.

From modern perspective, the saliva of leech contains about hundred biological active substances. The saliva of the leech consist of Hirudine and Calin, Histamine, Bedellins and Eglins and Hyluronidage, which act as anticoagulant, vasodilator, anti-inflammatory and antibiotic respectively. These properties of leech's saliva help in treducing pain and size of ulcer and thus make the life of the patient much more self-determining.

Conclusion:-
This study may not have been long or large enough to exactly assess the clinical value and the long term effect of leech therapy on chronic ulcer, but we can conclude that Leech therapy is an effective method for the management of chronic ulcer as there was no complication like bleeding wound infection or hypersensitivity were observed.

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