

## Leeching in Traditional Practice of Kashmir

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### ABSTRACT

Leeches had been in therapeutic use from times immemorial in Kashmir Valley. The concept has been described in Unani classics as "Taleeq". The traditional healers in the practice claim its therapeutic use in variety of ailments. The present communication is an attempt to the traditional practice of leech vendors. In this study the traditional leech vendors across the valley were contacted, the patients interviewed before and after the leeching. The ways and methods of leech vendors and the manifestations, for which this treatment was given, were successfully recorded. The patients were thereafter followed up periodically. It was observed that there was significant relief in certain ailments. The details are given in the paper.

**Keywords:** Leeches, traditional healers, leech vendors, ailments.

### INTRODUCTION

Despite tremendous advances in medical sciences in the recent years, the traditional system of medicine remains an important factor in the health care delivery system around the world. It is deep rooted within the culture and the traditions of the nations, particularly in developing countries. In Asian countries, particularly, India, traditional medicine is widely used in rural as well as urban areas. The traditional healers make use of herbs, minerals, animals and other methods, which were in use in the past.

Kashmir valley, having varied cultural and geographical diversities, is rich in traditions. The traditional system of medicine is being adopted by the local populace and most of the diseases are being treated by the traditional healers who make the use of locally available herbs and other regimental therapies like cupping, venesection, branding, bone setting, leaching etc.

Although medicinal leeches (*Hirudinaria medicinalis*) are not found in Kashmir, yet the leeching is practised throughout the valley (Lawrence, 1967). Almost every

village is having one or more leech vendors for the purpose. Leeches are being applied at different sites and their number varies depending on the severity of the disease and age of the patient. Since encouraging results were obtained during study of "Leeching in Prophylactic and Curative Treatment of Frostbite", (Munshi *et al*,1995), for ascertaining the claims and counter claims made by the people, camps were organized by RRIUM, Srinagar to study the role of leeching in various ailments.

## MATERIAL AND METHODS

120 patients with different ailments formed the subjects of present pilot study. The patients were selected at random during the special mobile camps held from time to time. The patients were of varying ages and were from both the sexes. The patients were from rural as well as urban areas of the valley. Different villages were visited during the camps (Table 1), in which local populace, leech vendors, and traditional healers were contacted and role of leeching monitored in various ailments. The subjects were thoroughly examined and assessed clinically for final diagnosis, then the sites for leeching were fixed by the vendors as per their traditions, varying from one ailment to another (Table 2). The period of sucking varied from 10 to 20 minutes so was the number of leeches to be applied depending on the age and body stature of the patient. The patients were advised to attend the OPD of Regional Research Institute of Unani Medicine, Srinagar, after every 15 days so to as ascertain the effects of the leech therapy.

**Table 1. Area identified for the study**

| S.No | Areas visited        | No. of pts. Selected for leeching | Male | Female |
|------|----------------------|-----------------------------------|------|--------|
| 1.   | Ganderbal (Srinagar) | 27                                | 11   | 16     |
| 2.   | Sumbal (Baramulla)   | 9                                 | 3    | 6      |
| 3.   | Khanda (Budgam)      | 8                                 | 7    | 1      |
| 4.   | Chatergam (Budgam)   | 13                                | 10   | 3      |
| 5.   | Hazratbal (Srinagar) | 63                                | 21   | 42     |
|      | Total                | 120                               | 52   | 68     |

**Table 2. Various ailments, number of patients and site of Leeching**

| S.No. | Ailments       | No. of patients | Site of leeching                                       |
|-------|----------------|-----------------|--|
| 1.    | Arthritis      | 25              | Affected joint   |
| 2.    | Sinusitis      | 13              | At maxillary sinuses                                   |
| 3.    | Frost bite     | 62              | Webs of fingers, feet and hands                        |
| 4.    | Hypertension   | 15              | Beneath the ears and intra-scapular region of the body |
| 5.    | Conjunctivitis | 3               | Lower eyelids  |
| 6.    | Migraine       | 5               | Beneath the ears on temporal side of the skull.        |
| 7.    | Heamatoma      | 2               | At the site of haematoma                               |
| 8.    | Gingivitis     | 2               | On the gums  |
| 9.    | Kelloids       | 1               | At the site  |

### RESULTS AND DISCUSSION

The male / female ratio was 1:1.3 and the age of the patients ranged from 3 years to 70 years, with mean age  $29.3 \pm 15.2$

**Table 3. Sex and Age wise distribution of patients**

| S.No. | Age group      | Male | Female | Total |
|-------|----------------|------|--------|-------|
| 1.    | Up to 5 yrs    | 7    | 13     | 20    |
| 2.    | 6 to 10 yrs    | 20   | 19     | 39    |
| 3.    | 11 to 20 yrs   | 9    | 10     | 19    |
| 4.    | 21 to 30 yrs   | 8    | 19     | 27    |
| 5.    | 31 to 50 yrs   | 5    | 7      | 12    |
| 6.    | 51 yrs & above | 3    | ---    | 3     |
|       | Total          | 52   | 68     | 120   |

Among the 120 patients observed 43 were from urban and 77 cases from rural areas of the valley. The patients were from different socio-economic groups with 23 (19.16%) cases from high-income group, 60 (56.66%) cases from middle-income group and 29 (24.16%) cases from low-income group.

**Table 4. Socio-economic distribution of patients**

| S.No | Income group        | No. of patients | % age |
|------|---------------------|-----------------|-------|
| 1.   | High-income group   | 23              | 19.16 |
| 2.   | Middle-income group | 68              | 56.66 |
| 3.   | Low-income group    | 29              | 24.16 |

During the study, and in the follow-ups after the leeching, the results were documented and were found very encouraging in certain ailments, while there was no effect in some diseases. The disease-wise details are given below.

#### Arthritis

20 patients with different types of arthritis got themselves subjected to leeching. Out of 20 cases, 8 were suffering from rheumatoid arthritis and 12 patients were suffering from osteo arthritis.

During the follow up it was observed that there was some improvement in few parameters i.e. subjective as well as objective symptoms. There was regression in morning stiffness, joint swelling and walking time.

#### Regression in Symptoms

| Symptoms                          | Initial value |          | Final value |         |
|-----------------------------------|---------------|----------|-------------|---------|
|                                   | Maximum       | Minimum  | Maximum     | Minimum |
| Morning stiffness                 | 3 hours       | 15 mints | 20 mints    | 5 mints |
| Joint circumference (Knee joints) | 18.3 cms      | 9.5 cms  | 10.2 cms    | 8.3 cms |

## **Sinusitis**

13 cases of chronic sinusitis, were subjected to leeching, some of them having Potts Puffy Tumour. During the follow ups it was revealed that the tenderness over frontal sinuses was relieved to a very good extent which was monitored during the follow ups. The potts puffy tumour was relieved on 1<sup>st</sup> follow up. Among the 13 cases only 2 cases complained of having no relief after three follow ups and were treated with kit medicine supplied by the council in the OPD of the Institute. The relief in the symptoms can be due to vasodilator and anti-inflammatory effect of enzymes and anti-enzymes present in the saliva of the leech (Markwardt. 1970).

## **Frost Bite**

77 patients, who were subjected to leeching, were kept under observation until the following winter. Only 21 cases developed frostbite of the first stage, while 56 cases remained symptom less during the winter. In this ailment the leeching is being used as prophylactic measure so as to prevent the frostbite in habitual frostbite dewelers (Munshi *et al*, 1997).

## **Hypertension**

15 cases of hypertension were subjected to leeching and were followed up after every week. Before leeching the patients had not gone through any kind of investigation, so association of any other disease could not be ascertained. The patients were advised to attend the OPD for follow up during which they were subjected to different types of biochemical and haematological investigations. It was found that 2 cases were having raised serum cholesterol level (above 250 mg/dl) and one patient was having varied KFT. All the three patients were treated symptomatically. The remaining 12 patients, whose blood chemistry was within normal limits, were given placebo. The patients were followed up regularly for three months at weekly intervals. It was found that except one case all the 11 cases remained normal and the patient who didn't show any response to leeching was given antihypertensive drug.

## **Conjunctivitis**

Only 3 cases of chronic conjunctivitis (infective type) were subjected to leeching on the lower eyelids. Out of 3 patients 2 cases reported relief on 1<sup>st</sup> follow up. The relief in the symptoms may be due to vasodilator effect of the hirudin enzyme (Electricwala *et al*, 1993).

## **Migraine**

5 patients having migraine for last couple of years were subjected to leeching on the advice of some traditional healer. After the 1<sup>st</sup> follow up 2 cases had complete relief, whereas minor improvement was observed in 3 cases. On the subsequent follow ups all the cases showed complete symptomatic relief and didn't require any medication. Such significant results can be attributed to the vasodilator effect of the hirudin enzyme (Knapp *et al*, 1992).

## **Haematoma**

2 cases of haematoma were subjected to leeching. It was seen that after 1<sup>st</sup> and 2<sup>nd</sup> follow up the haematoma was clear and there was no need of any other medication. The effect was due to heparin like activity of the enzymes present in the saliva of the leech (Knapp *et al*, 1992; Markwardt, 1970).

## **Gingivitis and Keloids**

2 cases of gingivitis and 1 case of keloid were kept under observation after the leeching and it was found that leeching showed no effect at all except some relief in sensation of teeth, while in case of Keloids it had no effect at all.

The traditional leech vendors claim leeching to be effective in almost all diseases. However, from the present study it was evident that only in certain ailments the leeches have a definite role for the prevention and cure of the disease while in other ailments the leeches have no role to play and the people throng for leeching during Novroz i.e. 21<sup>st</sup> March every year only because of traditions. The blind faith and belief

that leeches have cure for almost all diseases is a wrong notion as was proved by the present study. No doubt, the people go for second and third sittings and even in certain cases go for sixth sitting but without any relief.

Taking into consideration the results of the trial it can be concluded that leeching can be used as prophylactic and curative treatment for ailments like frost bite, Hypertension, conjunctivitis, Haematoma's and migraine.

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