

Efficacy of Leech Therapy in Hip Joint- Pain

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Introduction:

Irsale Alaq (Leech therapy) is one of the important regimen of Ilaj Bit Tadbeer. It is a way of blood –letting which involves the removal of blood in a significant amount from the body with the help of Leeches. It is a blood sucking process with the help of medicinal leeches for prevention and treatment of various diseases. The therapeutic application of this therapy is recognized from the ancient times and is still alive in present scenario. The important benefit of leech therapy is that it may be applied on those areas of the body where other processes of blood-letting like venesection and wet cupping are not possible.

Ilaj bit Tadbeer is the method of treatment in which modulation or modification in *Asbaabe Sitta Zarooriya* (six essential factors for life). Mostly it is non medicinal techniques/procedures by which we modulate the life style, dietary habits and habitat of the patient and practice some other therapeutic regimens for the treatment of various diseases. Almost all the regimens of Ilaj bit Tadbeer worked on the basis of theory of Istefragh (evacuation) of *fasid madda* (morbid material) from the body. These *fasid madda* are true culprits for the beginning of disease. As soon as these *fasid madda* are removed from the body, normal health gets restored. Blood-letting in the form of leech therapy, wet cupping and venesection is an essential part of Ilaj bit Tadbeer and it has been utilized for preventive as well as therapeutic measures for thousands of years by ancient Unani physicians.

Classification of Leeches

For the purpose of therapeutic application, Unani Scholars have classified leeches into poisonous leeches and non poisonous (useful) leeches on the basis of specific characteristics. The features of therapeutically useful leeches are leeches with thin tiny head, emerald green colour, tiny and rounded like rat's tail and leeches found in moist rich places where frogs are in abundance. Leeches with long head, black, grey or green colour are described as poisonous.

Procedure of Leech therapy:

The legendary Unani Scholar, *Ibne Sina* in his famous treatise “Canon of Medicine”, an encyclopedia of medicine which served as a standard text book of medicine in Europe till 17th century A.D, has described the procedure of Leech therapy in a very comprehensive manner and narrated the following steps of the whole procedure:

1. **Pre-leeching procedure** involving collection of leeches; preservation of leeches and selection of suitable patient.
2. **Leeching Procedure Proper**
3. **Post-leeching Procedure** involving separation of leech; vomiting of leech and control of bleeding.

Ibne Sina narrated that leeches should be collected just one day prior to their use. Patient is advised to take light semi-solid diet prior to the procedure. The affected part to be treated is thoroughly washed with distilled water or with a solution of borax and rubbed until redness appears. If the leech is reluctant to attach, a tiny droplet of blood may be smeared on the part to be treated and the leech is applied. Usually, one or more leeches are applied to the affected area and left for half an hour. Once the leech is attached, it will likely remain safely in place until fully distended but it is essential to check the site continuously to insure that the leech hasn't separated. Thereafter, the leeches are detached with a very careful manner by pulling them off or by loosening their grip with table salt, borax or heat but sometimes leeches detach automatically. The used leeches are then killed and disposed off.

Mechanism of action

According to the Unani doctrine, leech therapy works on the principles of *Tanqiyae Mawad* (Evacuation of morbid humours) and *Imalae Mawad* (Diversion of humours). *Tanqiyae Mawad* means the resolution and excretion of morbid humors and excess fluids from the body, thereby maintaining the homeostasis in the quality and quantity of four body humors, which is actually responsible for the maintenance of normal health. *Imalae Mawad* refers to the diversion of the morbid fluids from the site of affected organ to the site where from it is easily expelled from the body tissues. Based on this holistic approach, Unani physicians have been widely using this therapeutic regimen for a number of diseases. The effectiveness of this therapy may also be attributed to the *Mussakin* (sedative) and *Muhallil* (anti-inflammatory) actions of saliva of leeches.

However, *from modern perspective*, as proved by various research studies, the efficacy of leech therapy lies not in the amount of blood that leeches ingested, but also in the anticoagulant enzymes of the saliva that allow blood to flow from the bite after the leech is detached. Moreover, the saliva of leech contains about 100 pharmacologically active biological substances which contribute to the special property of leech. These include anticoagulants like hirudin, calin, inhibitors of kallikrein, hyaluronidase, histamine-like

vasodilators, collagenase, and poorly characterized anaesthetic and analgesic compounds. Hirudin is responsible for inhibiting blood coagulation and is employed as an anticoagulant in surgical operations and has been recommended for the prevention of phlebitis and postoperative inflammation. Calin also inhibits blood coagulation but it is responsible for slow cleansing of wound by maintaining secondary bleeding for approximately another 12 hours. Histamine-like substances have dilating effect on the blood vessels and thereby cause the blood to stream to the bite site. In the mean time, the spreading factor, hayaluronidase acts to clear the path for the active and healing substances to penetrate. These substances allow continued bleeding for up to 24 hrs after the leech has been detached. Besides, a regional analgesic and antiphlogistic effect by these substances enforced by hayaluronidase as well as counter irritation might be possible. Furthermore, some of these substances have anti-inflammatory and other additional effects like lipotropic activity that can be used at atherosclerotic defects of vessels in ischemic heart disease and diabetes mellitus. The existence of skin visceral connections with the definite organ is well known. Through veins, the biologically active substances act on organ during sucking by leech. It promotes the improvement of blood circulation in the organ, renders thrombolytic, anti-inflammatory and immune-stimulant action. Leech therapy reduces pain, stiffness, and joint dysfunction in people with osteoarthritis of the knee as reported by a new study in the Annals of Internal Medicine.

Material & Methods:-

This study was performed on 30 cases of Hip joint pain in the OPD & IPD section of “Shamim Ahmed Saeedi Unani Speciality Hospital for Waja-ul-Mafasil (Joints Pain)” funded by Department of AYUSH Ministry of Health & Family Welfare Govt. of India, New Delhi from the period extending from 05/09/2015 to 05/10/2015. The duration of study was 04 weeks. The patients were advised not to take any other treatment and follow up was done on once weekly basis.

Criteria for the selection of the patient:-

Inclusion Criteria:-

- Morning stiffness in the Hip Joint.
- Pain and tenderness in the Hip Joint.
- Limitation of movement.

Exclusion Criteria:-

- Patient having other concomitant diseases with hip joint pain.
- Patient with bony deformities.
- Patient who did not complete the trial.

Observation:-

SHAMIM AHMAD SAEDI UNANI SPECIALITY HOSPITAL FOR WAJAU MAFASIL FUNDED BY:-DEPTT.OF AYUSH MINISTRY OF HEALTH FAMILY WELFARE GOVT.OF INDIA-NEW DELHI						
Table of the patients treated in SHAMIM AHMAD SAEDI UNANI SPECIALITY HOSPITAL FOR WAJAU MAFASIL to show the response of TALEEQ (LEECHING)in HIP JOINT PAIN						
MAXIMUM WOMAC SCORE=96						
NO. OF PATIENT SELECTED FOR STUDY	WOMAC SCORE BEFORE TREATMENT	WOMAC SCORE AFTER 1st. WEEK OF LEECH THERAPY	WOMAC SCORE AFTER IIInd. WEEK OF LEECH THERAPY	WOMAC SCORE AFTER IIIrd. WEEK OF LEECH THERAPY	WOMAC SCORE AFTER IVth. WEEK OF LEECH THERAPY	RESULT
1.	80	72	70	56	30	GOOD
2.	68	59	46	32	20	GOOD
3.	48	32	20	0	0	EXCELLENT
4.	84	84	84	84	84	NO RESPONCE
5.	64	58	46	32	26	GOOD
6.	72	64	50	50	46	LOW RESPONCE
7.	64	48	32	22	12	GOOD
8.	70	65	40	34	22	GOOD
9.	64	46	34	20	4	EXCELLENT
10.	66	58	46	32	22	GOOD
11.	71	50	36	30	22	GOOD
12.	58	52	49	46	32	LOW RESPONCE
13.	69	48	32	25	12	GOOD

14.	69	48	28	22	0	EXCELLENT
15.	57	46	35	23	18	GOOD
16.	48	32	22	0	0	EXCELLENT
17.	70	70	70	70	70	NO RESPONCE
18.	57	32	32	26	18	GOOD
19.	62	48	40	32	18	GOOD
20.	62	47	32	16	10	GOOD
21.	55	50	32	24	13	GOOD
22.	59	38	26	22	16	GOOD
23.	70	58	34	28	12	GOOD
24.	58	47	47	35	33	LOW RESPONCE
25.	58	46	40	30	18	GOOD
26.	59	32	32	26	10	GOOD
27.	70	40	32	26	26	GOOD
28.	72	72	70	72	72	NO RESPONCE
29.	64	58	54	42	42	LOW RESPONCE
30.	54	48	30	18	10	GOOD

RESULT: - In a 4 weeks study in which the LEECH THERAPY was given to the patient weekly the results were as follows.

EXCELLENT: - 04

GOOD :-19

LOW RESPONSE:-04

NO RESPONSE: - 03

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DEOBAND**

Funded by :-Deptt. of Ayush, Ministry of Health and Family Welfare Govt. of India-New Delhi

The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) Score

NAME OF PATIENT.....CR.NO.....

AGE.....SEX..... DATE OF ASSESSMENT.....

SCALE OF DIFFICULTY: None=0, Slight=1, Moderate=2, Very Much=3, Extreme=4

PAIN		None	Slight	Moderate	V. much	Extreme
1	WALKING	0	1	2	3	4
2	STAIR CLIMBING	0	1	2	3	4
3	NOCTURNAL	0	1	2	3	4
4	REST	0	1	2	3	4
5	WEIGHT BEARING	0	1	2	3	4
STIFFNESS						
1	MORNING STIFFNESS	0	1	2	3	4
2	STIFFNESS OCCURRING LATER IN THE DAY	0	1	2	3	4
PHYSICAL FUNCTIONS						
1	DESCENDING STAIRS	0	1	2	3	4
2	ASCENDING STAIRS	0	1	2	3	4
3	RISING FROM SITTING	0	1	2	3	4
4	STANDING	0	1	2	3	4
5	BENDING TO FLOOR	0	1	2	3	4
6	WALKING ON FLAT SURFACE	0	1	2	3	4
7	GETTING IN / OUT OF CAR	0	1	2	3	4
8	GOING SHOPPING	0	1	2	3	4
9	PUTTING ON SOCKS	0	1	2	3	4
10	LYING IN BED	0	1	2	3	4
11	TAKING OFF SOCKS	0	1	2	3	4
12	RISING FROM BED	0	1	2	3	4
13	GETTING IN/OUT OF BATH	0	1	2	3	4
14	GETTING ON/OFF TOILET	0	1	2	3	4
15	SITTING	0	1	2	3	4
16	HEAVY DOMESTIC DUTIES	0	1	2	3	4
17	LIGHT DOMESTIC DUTIES	0	1	2	3	4
TOTAL SCORE=96	ACHIEVED SCORE					

Conclusion:-

It is concluded that Leech therapy is more effective in Hip Joint pain.

This study proves that leech therapy possesses patient Anti-inflammatory, analgesics properties. It is effective in Hip Joint pain and is devoid of side effects.