

## Role of Leech application in Vatarakta: A pilot study

### Research Article

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#### Abstract

Now a day's crystal arthropathies is emerging one of the most painful condition for human being. In all types of Crystal arthropathies gout is most common. Gout is the medical condition usually characterized by Recurrent attack of acute inflammatory arthritis a red, tender, hot, swollen joint. It is caused by elevated level of uric acid in the blood. The uric acid crystallizes and the crystals deposit in the joints, tendons and surrounding tissues. In Ayurveda Vatarakta shows close resemblance with signs of crystal arthropathies.

According to Ayurveda vitiated Vata & Rakta plays important role in development of Vatarakta disease. Leech application is one of the best treatments described for Vatarakta. The reason behind it is it removes impure blood from affected joint and removes avaran of vatadosh. Ten diagnosed patients of Vatarakta are selected for this pilot study. Clinical criteria for assessment of result were Sandhishool, Sandhishoph, Sandhivaivarna & Sandhidaha. Leech application without any medicine was applied to these patients and significant results were obtained in joint pain, erythema and edema.

**Key Words:** Leech therapy, crystal arthropathy, uric acid, Vatarakta

#### Introduction

Vatarakta (1) is disease of locomotor system. It can be compared with gout and other crystal arthropathies. Gout is a disorder in which crystals of monosodium urate monohydrate derived from hyperuricaemic body fluids give rise to inflammatory arthritis, tenosynovitis, bursitis or cellulitis, tophaceous deposits, urolithiasis and renal disease (2). Joints related complaints are big challenge of 21<sup>st</sup> century. Because not only USA like a

developed country but also India like developing countries these complaints are increasing so rapidly.

The reason behind this is faulty dietary habits, lack of physical activities, faulty sitting, sleeping position, obesity, endocrinal and genetic factors. These disorders have been considered as a disorder in which residual disabilities remain for prolong time or lifetime.

This results in loss of many hours in factories, farms, offices, homes etc. It leads to tremendous financial burden to our society & quality of life is affected so badly.

#### Aim and objectives

1. To study the role of leech application in management of vatarakta.
2. To find out possibilities of combined therapy in vatarakta.

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### Material and methods

- 1) A pilot study was carried out on 10 selected and well diagnosed patients of vatarakta from OPD and IPD of M N Agashe hospital (aryangla college) satara.
- 2) Patients of both sexes are selected.
- 3) Leech application is carried out in 3 times at interval of 1 week.

### Inclusion

- 1) Patient showing classical symptoms of vatarakta.
- 2) Patient above the age of 20 & below 65years.

### Exclusion

- 1) Patients having serious manifestation like DM, HTN, HIV infections.
- 2) Patients contraindicated for raktamokshan in classical Ayurvedic texts.

### Clinical criteria

#### A) Subjective

##### 1) Sandhishool (Joint pain):

- 0 no pain.
- 1 occassionally pain
- 2 moderate pain
- 3 severe pain

##### 2) Sandhi shopha (Joint swelling):

- 0 no oedema
- 1 occassionally oedema.
- 2 Pitting oedema relieved by rest.
- 3 oedema pitting in nature & not relieved by rest.

##### 3) Sandhi vaivarna (Joint erythema):

- 0 no erythema
- 1 mild erythema
- 2 modarate erythema
- 3 severe erythema.

##### 4) Sandhi daha (Burning sensation at joints):

- 0 no daha
- 1 mild daha
- 2 modarate daha
- 3 severe daha.

### B) Objective Criteria

- 1) Hb
- 2) ESR
- 3) Serum uric acid

### Treatment schedule:

- 1) Leech application is done 3 times at interval of 1week.
- 2) Leech application is done in day time and after meal.
- 3) After leech application shatdhaut ghrit(3) is used.
- 4) No herbal and allopathy medicine is given during treatment.

### Observation & Results:

All 10 patients completed the trial successfully. All received data were statistically analysed with the help of INSTANT GRAPHPAD 3. Results obtained in subjective criteria are as follows. One sample t test was done.

**Table No. 1: Results in subjective parameters**

Variable	Mean			% of imp	SD ±	SE±	t	p	Significance
	BT	AT	Diff						
Sandhishoola (Jointpain)	2.3	0.9	1.4	60.8%	0.69	0.221	6.12	<0.01	Significant
Sandhishopha (Joint edema)	2.6	1	1.6	61.5%	0.519	0.16	6.00	<0.01	Significant
Sandhivaivarnya (erythema)	2.6	0.9	1.7	65.38%	0.82	0.26	7.005	<0.001	Highly Significant

Sandhidaha (burning sensation in joint)	2.4	0.8	1.6	66.6%	0.632	0.163	6.197	<0.001	Highly Significant
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**Table No. 2: Results showing improvements in laboratory parameters**

Variable	Mean BT	Mean AT	Mean diff	% of imp	SD ±	SE±	t	p	Significance
Hb %	11.3	10.5	0.8	6.15%	0.94	0.30	1.863	<0.005	N.S
ESR	34	15.1	18.9	55%	11.5	3.6	4.975	<0.01	S
Serum uric acid	13.6	13	0.6	4.4%	5.42	1.71	0.25	<0.05	N.S

### Discussion

Vatarakta is vyadhi caused by vitiated vata & rakta dosha & raktamokshane is main chikitsa of raktapradosha vyadhi (4). As per charakacharya vatarakta is found mainly in sukumara people (5) & jalauka vacharan is mainly indicated for sukumara ragnas. As jalauka lives in cold water & madhura rasatmak, so it is used in pitta vyadhi (6). The properties of pitta & rakta are very similar and also ashraya and ashrayi sambandh is there. So it can also be used in raktadusti & raktapradoshaj vikara. Raktamokshana by jalauka removes obstruction of vata i.e. leech application is useful in vatarakta. As per modern view Secretion of salivary glands of medical leech contains more than 100 bioactive substances and has anti edematous, bacteriostatic, analgesic, resolving actions, it eliminates microcirculation disorders, restores damaged vascular permeability of tissues and organs, eliminates hypoxia (oxygen starvation), reduces blood pressure, increases immune system activity, detoxifies the organism, releases it from the threatening complications, such as infarct, stroke, improves bioenergetic status of the organism (7).

The way of leech secret injection is very simple: being placed on the skin it bites the skin, then the secret of the leech saliva falls into the blood channel and goes

to the disease focus through vessels .i.e. it is used in vatarakta disease.

### Conclusion

1. As per Ayurvedic text vatarakta is one of the raktapradoshaja vikara & raktamokshana is one of the best treatments.
2. By applying leech in vatarakta significant results were obtain in sandhishool with 60.8% improvement. In sandhishopha significant (61.5%) result were observed.
3. Highly significant results were obtained in Erythema & Sandhidaha. (65.38 & 66.6% respectively. Its show leech application has significant role in treatment of vatarakta.
4. Hb% & serum uric acid level show non significant result.
5. Highly significant results were obtain in ESR which is one of the inflammatory marker. So its prove leech has definite anti-inflammatory property.

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**PHOTOGRAPH OF BEFORE AND DURING APPLICATION OF LEECH  
Jaloukavacharan (Leech Application)**



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