

# Effect of Pramehamihira taila in the management of Madhumehaja paadadaaha w.s.r to Diabetic sensory neuropathy

## Research article

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### Abstract

Diabetes Mellitus is a metabolic disorder of multiple etiologies. Diabetic neuropathies occur in approximately 50% of individuals with long standing Diabetes. Diabetic foot is one of the commonest chronic complications of Diabetes. In *Ayurveda Samhitha*, *paadadaaha* is explained as *samanya purvaroopo of Prameha & Daaha* is also mentioned as *samanya upadrava of Prameha*. *Paadadaaha* is said to be caused due to vitiated *Vata & Pitta*. *Pramehamihira taila* has properties such as *Vatahara, Pittahara & daaha prashamana*. Hence the present clinical study was carried out to assess the effect of *Pramehamihira tail* in the management of *Madhumehaja paadadaaha* w.s.r. to Diabetic sensory neuropathy.

In this study 30 patients with confirmed diagnosis of *paadadaaha* were subjected to *Paadaabhyanga* with *Pramehamihira taila* for 14 days & assessment of result was done for subjective signs. From statistical analysis, it was evident that, 20 patients (66%) showed good response, 10 patients (44%) showed moderate response & none of the patients showed poor or no response. From the present study it can be concluded that the condition *paadadaaha* can be managed by *Paadaabhyanga* with *Pramehamihira taila*.

**Keywords:** *Madhumehaja paadadaaha, Pramehamihira taila, Paadaabhyanga, Diabetic sensory neuropathy.*

### Introduction:

Diabetic foot care is as important as the care of Diabetes. It is the most common metabolic disease which is prevalent in every part of the world and is a major public health challenge of 21st century. It may be accompanied with the presence of progressive Diabetic tissue damage with micro & macro vascular complications. The distal sensory peripheral neuropathy affects the extremities & mostly seen in lower limbs in socks & glove fashion (1 & 2)

In *Madhumehaja paadadaaha* there is *avarana of Vata by the Pitta* (3). There is involvement of *Vata* along with *Pitta* in producing *daaha*. So, the *Vata & Pittahara chikitsa* has to be adopted. In the *samanya upakramas of Vata, snehana* is one of the line of treatment and *abhyanga* is one of the *bahya sneha* (4). So *Pramehamihira* which does both *Vata & Pitta shamana* & which is also indicated in *daaha* was selected (5).

### Objectives:

To evaluate Effect of *Pramehamihira taila Paadaabhyanga* in the management of *Madhumehaja paadadaaha* w.s.r to Diabetic sensory neuropathy.

### Materials & Methods

Materials taken for the study was *Pramehamihira taila*. It was prepared in JSS Ayurveda Pharmacy, Mysuru.

### Methods

#### Sampling:

30 patients with confirmed diagnosis of *Madhumehaja paadadaaha* were selected from OPD & IPD of JSSAMC & Hospital, Mysuru.

#### Inclusion criteria:

- Both male & female patients were taken for the study.
- Patients between the age group of 30-70 yrs suffering with diabetic mellitus & presenting with *paadadaaha* were selected.
- Patients fit to undergo *Paadaabhyanga*.
- Burning sensation feature of sensory neuropathy with or without the presence of other altered sensation were taken.

#### Exclusion Criteria:

- Patients with any other systemic disorders which may interfere in the Course of the treatment of *Paadaabhyanga* were excluded
- Patients with Trauma, infectious wounds, gangrene and non healing ulcer of foot were excluded
- Mono neuropathies were excluded.
- Neuropathies, secondary to, other than Diabetes were excluded.

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**Laboratory investigations**

Blood – Fasting Blood sugar

Post Prandial Blood sugar Glycosylated Hemoglobin (HbA1C)

Urine - Fasting urine sugar

Post Prandial urine sugar

**Diagnostic Criteria**

Diabetic mellitus, presenting with burning sensation of the feet is the criteria.

**Research design**

It was a single blind clinical study.

**Intervention**

All 30 patients were taken for *Paadaabhyanga* by *Pramehamihira taila*.

The procedure of *Paadaabhyanga* was followed in 3 steps.

**Purvakarma:**

Cleaning of the *paada* with *sukoshna Jala*

**Pradhana karma:**

*Abhyanga* of *paada* with *Pramehamihira Taila* for 48 min

**Pashchatkarma:**

Rest for 10 min, washing the *paada* with *Sukoshna Jala*, Wiping the *paada* with soft cotton towel.

*Pathya – apathya* was advised

This procedure was carried out for 14 days and assessment was done after the treatment i.e. for 1st day, 7th day, 14th day, & for 21st day, 30th day & 60th day of the follow ups.

**Assessment criteria**

The cardinal clinical manifestations, symptoms were scored according to the severity and considered as the assessment criteria for the study.

**Subjective parameters:**

Short-form McGill Pain Questionnaire

**Grading of the parameters:**

The grading was done in the following manner

0. No burning sensation of the feet-Absent
1. Mild burning sensation-Occasional
2. Moderate burning sensation-Discomforting
3. Severe burning sensation-Hot as on fire

To assess the overall effect of *Pramehamihira taila Paadaabhyanga* following criteria were taken.

1. Good response - > 50% of improvement
2. Moderate response - 30% to 49% of improvement
3. Poor response - 1% to 29% of improvement
4. No response - No improvement

**Observations and Results**

It was observed that out of 30 patients 16 (53.33%) were male patients & 14 (46.66%). *Paada daaha* was seen more in the age group of 56-65yrs (56.66%). Maximum number i.e. 17 Patients (56.66%) were vegetarians and 13 patients (43.33%) were non vegetarians (mixed). Maximum number i.e. 66.66% of patients had family history, 10% of the patients had no family history of *Madhumeha* & rest 23.33% did not know whether they had it or not. Most of them i.e. 27 (90%) were with *Teeksnagni*, *Samaagni* 3.33% and *Vishamaagni* 6.66%. The Chronicity of *paada daaha* was- 18 patients (60%) suffered *daaha* for about 1m-6m, 9 patients (30%) for 6m- 1 & 3 patients (10%) more than 1 yr.

**Table 1: Showing the Statistical Results for - during days of treatment.**

SL NO	DAYS	MEAN	SD	SE	t-VALUE	p-VALUE	REMARKS
1	1 <sup>st</sup>	2.37	0.556	0.102	17.696	<0.001	HS
	7 <sup>th</sup>	1.33	0.479	0.088			
2.	1 <sup>st</sup>	2.37	0.556	0.102	22.722	<0.001	HS
	14 <sup>th</sup>	0.33	0.479	0.088			
3.	7 <sup>th</sup>	1.33	0.479	0.088	20.857	<0.001	HS
	14 <sup>th</sup>	0.33	0.479	0.088			

HS - Highly Significant

**Table 2: Showing the Statistical Results for last day of treatment & successive follow ups.**

SL NO	DAYS	MEAN	SD	SE	t-VALUE	p-VALUE	REMARKS
1	14 <sup>th</sup>	0.33	0.479	0.088	5.14	<0.001	HS
	21 <sup>st</sup>	0.43	0.504	0.092			
2	14 <sup>th</sup>	0.33	0.479	0.088	6.14	<0.001	HS
	30 <sup>th</sup>	0.43	0.504	0.092			
3	14 <sup>th</sup>	0.33	0.479	0.088	1.14	<0.264	NS
	60 <sup>th</sup>	0.87	0.434	0.079			

HS - Highly Significant

**Table 3: Showing the Statistical Results for first day of treatment and successive follow-up days.**

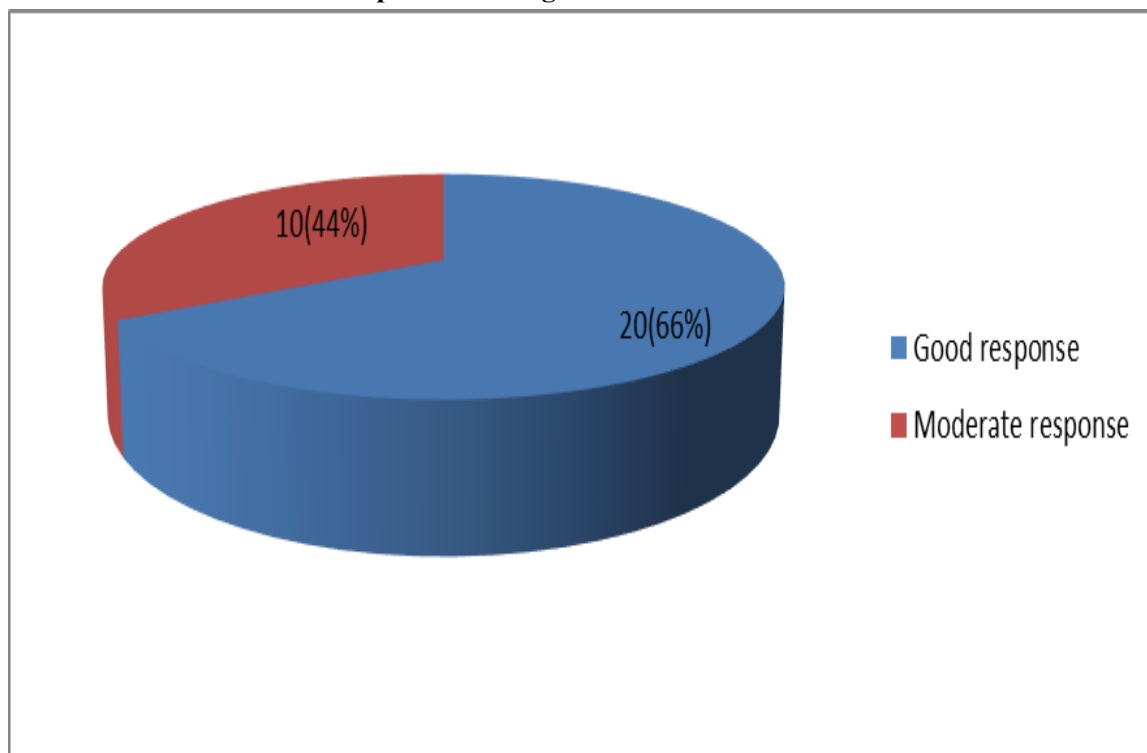
SL NO	DAYS	MEAN	± SD	SE	t-VALUE	p-VALUE	REMARKS
1	1st 21st	2.37 0.43	0.556 0.506	0.102 0.092	16.554	<0.001	HS
2	1st 30th	2.37 0.43	0.556 0.504	0.102 0.092	16.554	<0.001	HS
3	1st 60th	2.37 0.87	0.556 0.434	0.102 0.079	13.047	<0.001	HS

HS - Highly Significant

**Table 4: Showing the Overall assessment**

Sl.No	Assessment	No of Patients	Percentage
1	Good response	20	66%
2	Moderate Response	10	44%
3	Poor Response	0	0
4	No Response	0	0

**Graph 1: Showing the overall assessment**



## Discussion

### Discussion on Paadaabhyanga

The effect of *abhyanga* can be assumed in two ways i.e. effect of physical manipulations and the effect of the drug in the medicated oil (6)

There are 3 factors which govern the permeability of the skin-

The skin itself -The vehicle which affects the transfer. The substance which penetrate, permeate or is absorbed. Anything hot or warm applied to the skin will

immediately cause capillary dilatation. Same phenomenon applies when *abhyanga* is carried out. Fat enter through the dilated capillaries can easily be absorbed into the system.

The lack of blood circulation is one of the reasons for impaired sensation as nerves will be deprived of oxygen & nutrition .The procedure, heat is produced which causes vasodilatation & circulation to the part ,the local vasodilatation occurs relaxation of the nerves takes place.

### Discussion on procedure

Vayu dominates in the sparshanendriya i.e. tactile sensory organ Vata is the main dosha causing daaha. Abhyanga is one of the best upakarma for Vata-ja roga (7). Oil used in abhyanga reaches different dhatus, if applied for the speculated time. The veerya of the drugs in abhyanga, parisheka, avagaha and lepa are absorbed into the skin and then digested by Agni (Bhrajaka Pitta)(8). So this taila has given moderate improvement. This could have given major improvement if, Paadaabhyanga was undertaken as foot care measure, as a routine every day.

### Discussion on Formulation

The drugs used in this taila are Dahaprashamana, Pittahara, Vatahara. A combined action of tila taila which is Vatahara & dravyas which are Pittahara can be ascertained. So action is on Vata & Pitta involved in samprapti of madhumehaja daaha.(9).

### Discussion on results

In the study all of them had severe - moderate paada daaha on the day one, which came to mild after seventh day & nil on the 14th day. Although 80% of them had reoccurrence of daaha on the 60th day of follow up, but the severity was very less compared to the first day. Along with the good results in reduction of Paadadaaha, the additional benefits such as kharatvahara, rukshatva nasha, nidrakara in 80% of the patients was achieved.

### Conclusion

Prevalence of Madhumehaja paadadaaha was more in the age group 46-55 years. Madhumehaja paadadaaha can be effectively paralleled with 'diabetic sensory neuropathy.' Involvement of avarana of Vata by Pitta is invariable in the samprapthi of madumehaja paadadaaha. The taila which is processed with vatahara & pitta hara drugs are helpful in the samprapthi vighatana of Madhumehaja paadadaaha. So this formulation is helpful in relieving the symptoms of daaha through Paadaabhyanga, as it is one of the best upakarma indicated for Vata dosha.

'If you protect your feet they will stand up for you' The Diabetic foot care is as important as the care of Diabetes. If diagnosed & treated earlier further foot complication & amputation can be avoided.

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