EFFICACY OF BHUNIMBADI KASHAYA AND NAVANEETA LEPA IN THE MANAGEMENT OF MADUMEHA UPADRAVA W. S. R. TO DIABETIC NEUROPATHY

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ABSTRACT

Diabetes mellitus is characterized by a syndrome of chronic Hyperglycaemia. The WHO estimated that there were 31.7 million persons with diabetes in India in 2000 and that this number is likely to be 71.4 million in 2030. India has the distinction of having the largest number of diabetics in the world. In Ayurveda "Madhumeha" is one among the four varieties of "Vataja Prameha" which is compared to the 'Diabetes Mellitus' of the Allied science. The direct comparison as upadrava of Madhumeha in Ayurvedic texts is not available. In Ayurvedic classics Karapadayoho Suptata daho is explained as Samanya Poorvaroopa of Prameha. Daha is also mentioned as Samanya Upadrava of Prameha. So the study was intended to evaluate the combined effect of Bhunimbadi Kashaya internally Navaneeta Lepa externally followed by Mrudu Swedana in the management of Madhumeha upadrava (Diabetic Neuropathy).

Assessment criteria - Assessment was done according to the following subjective criteria where they were assigned with scores (absent/mild/moderate/severe) and assessed for the improvement with appropriate statistical methods. Subjective criteria - Pain – Shoola, Burning sensation – Daha, Numbness – Supti, Weakness – Dourbalya. It is observed that the reduction of FBS and PPBS from before treatment to after treatment is highly significant. The

Bhunimbadi kashaya is good in Reduction of FBS and PPBS, because the treatment is highly significant.

AIMS AND OBJECTIVES

The objective of present study is to evaluate and observe the combined effect of

1. Bhunimbadi Kashaya internally and Navaneeta lepa externally followed by Mrudu Swedana in the management of Madhumeha Upadrava that is diabetic neuropathy.
2. To explore the disease Madhumeha, Madhumeha Upadrava and Diabetic neuropathy according to Ayurveda and modern medicine.

INTRODUCTION

Diabetes mellitus is characterized by a syndrome of chronic Hyperglycaemia. The WHO estimated that there were 31.7 million persons with diabetes in India in 2000 and that this number is likely to be 71.4 million in 2030.India has the distinction of having the largest number of diabetics in the world. Diabetic Neuropathy is one of the most common troublesome complications of diabetes mellitus. In Ayurveda "Madhumeha" is one among the four varieties of "Vataja Prameha" which is compared to the 'Diabetes Mellitus' of the Allied science. The direct comparison as upadrava of Madhumeha in Ayurvedic texts is not available. In Ayurvedic classics Karapadayoho Suptata daho is explained as Samanya Poorvaroopa of Prameha. Daha is also mentioned as Samanya Upadrava of Prameha[4]. In Samhita explained as, if the Updrava is stronger than the disease then Updrava should be treated first, later the disease.

This clinical study has been taken under single blind study containing 30 subjects, patients were treated by Bhunimbadi kashaya internally, and Navaneeta lepa followed by Mrudu Swedana oral anti diabetic drugs given as advised by the physician.

MATERIALS AND METHODS

a) Patients of either sex diagnosed to be suffering from Madhumeha Upadrava with special reference to diabetic neuropathy coming under the inclusion criteria approaching the OPD, IPD, by conducting special camps and other referrals at Shri J. G. C. H. Ayurvedic Medical college and Hospital, Ghataprabha have been taken in the study.

b) Bhunimbadi Kashaya was prepared freshly after collecting the authenticated drugs.

Method of collection of data

The data have been collected pre and post design (i e before and after the completion of treatment).

a) **Inclusion Criteria**

- Patients of either sex were selected incidentally on the basis of investigations & signs and symptoms of diabetic neuropathy.

- Diagnosed cases of Diabetic Neuropathy.

- Patients of either sex were selected for the study.

- Age group: 25 – 75 years.

- Patient already in antidiabetic treatment with neuropathy also included in this study.

- NIDDM patients with signs and symptoms of peripheral and proximal neuropathy.

b) **Exclusion criteria**

- Multisystem involved diabetic patients with severe other complications were excluded.

- Autonomic & focal neuropathic patients were excluded.

- Diabetic Neuropathy patients suffering from Trauma, infectious wounds, gangrene and non-healing ulcers of foot were excluded.

- Patients having DM with HIV/AIDS.

c) **Treatment Group**

A single group single blind study was conducted on 30 patients, diagnosed to be suffering from Diabetic neuropathy.

Patients were selected incidentally considering inclusive and exclusive criteria. Patients were treated with

d) **Duration of treatment**

Duration- for 30 days.

1. **Medicine:** Bhunimbadi Kashaya

Dose–Kashaya - 30 ml BID before food

Anupana – 60 ml warm water

2. **Procedure:** Externally – Navaneeta lepa on affected parts followed by Mrudu swedana

Clinical features are recorded before the treatment i.e. on zero day. changes with the treatment will be observed on the first week and second week, as per the Proforma of the case sheet prepared for the study**:** Data was collected on the 0th, 15th and 30th day, assessed for the improvement in signs and symptoms. Assessment was done according to scores given for the signs and symptoms and applied with appropriate statistical methods.

e) **Follow up:** After completion of the treatment follow up was done after one month. The treatment was administered along with Pathya - ahara, vihara as per classics.

f) **Assessment criteria**

Assessment was done according to the following subjective criteria where they were assigned with scores (absent/mild/moderate/severe) and assessed for the improvement with appropriate statistical methods.

Subjective criteria

Pain – Shoola

Burning sensation – Daha

Numbness – Supti

Weakness – Dourbalya

The assessment done before and after the treatment, improvement in the symptoms. The data was collected and was be analysed by appropriate statistical method.

a. **Statistical analysis**

The data will be collected and statistically analysed by using appropriate tests, by consulting a statistician.

b. **Diagnostic criteria**

Five years' history of diabetes with any of the following signs and symptoms

- Pain & Burning sensation (Daha) in Toes, Feet, Legs, Thighs, Buttocks, Fingers, Hands, Forearms, arms, shoulder

- Altered sensation (Supti) in Toes, Feet, Legs, Thighs, Buttocks, Fingers, Hands, Forearms, arms, shoulder

- Muscle weakness in Toes, Feet, Legs, Thighs, Buttocks, Fingers, Hands, Forearms, arms, shoulder

- Sensory loss (Supti) in Toes, Feet, Legs, Thighs, Buttocks, Fingers, Hands, Forearms, arms, shoulder

- Physical examination - Examination of Muscle Strength and Reflexes Sensitivity for Touch, Light, Temp, Vibration, Position change, Pain.

1) Patients will be assessed before and after treatment as per assessment criteria.
2) The nature of study will be explained to patients in detail and pre-treatment consent will be taken.
3) Patients have full rights to withdraw from the study at any time.
4) The data will be maintained confidentially and subjected to statistical analysis.

c. Investigations

- Blood glucose test – Fasting Blood Sugar & Post Prandial Blood Sugar

- Urine sugar – Fasting Sugar and Post Prandial Sugar.

- HbA1c

OBSERVATION AND RESULTS

Cardinal symptoms	Mean score		Mean decrease	% of relief	SD	SE	"t"	p
	BT	AT						
Pain	1.53	0.80	0.73	47.71%	0.52	0.0950	7.71	<0.0001
Burning sensation	2.13	1.06	1.066	49.76%	0.3651	0.0666	16.000	<0.0001
Altered sensation	1.76	0.86	0.90	51.13%	0.4806	0.0877	10.25	<0.0001
Weakness	0.73	0.43	0.30	41.09%	0.4660	0.0850	3.525	<0.0001

DISCUSSION

Discussion on Result

Burning sensation: The mean score of Burning sensation were BT 2.13 and AT 1.06 before treatment which reduced to 1.066 respectively after treatment. The statistical analysis of this symptom showed highly significant result.49.76% burning sensation reduced and p value is < 0.0001.

Pain: The mean score of Pain were BT 1.53 and AT 0.80 before treatment which reduced to 0.73respectively after treatment. The statistical analysis of this symptom showed highly significant result. 47.71% pain reduced and p value is < 0.0001.

Altered sensation: The mean score of altered sensation were BT 1.76 and AT 0.86 before treatment which reduced to 0.90 respectively after treatment. The statistical analysis of this

symptom showed highly significant result. 51.13% altered sensation reduced and p value is < 0.0001.

Muscle weakness: The mean score of Muscle weakness were BT 0.73 and AT 0.43 before treatment which reduced to 0.30 respectively after treatment. The statistical analysis of this symptom showed highly significant result. 41.09% weakness reduced and p value is < 0.0001.

FBS: The mean score of FBS were BT 182.20 and AT 162.00 before treatment which reduced to 20.20 respectively after treatment. The statistical analysis of this investigation showed highly significant result.11.08% reduced percentage of FBS. p value is < 0.0001.

PPBS: The mean score of PPBS were BT 259.36 and AT 232.33 before treatment which reduced to 27.03 respectively after treatment. The statistical analysis of this investigation showed highly significant result. 10.42% reduced percentage of PPBS p value is < 0.0001.

HbA1c: The mean score of HbA1c were BT 7.416 and AT 7.233 before treatment which reduced to 0.1833 respectively after treatment. The statistical analysis of this investigation showed significant result. 2.47% reduced percentage of HbA1c, p value is < 0.0001.

But we cannot give good conclusion on HbA1c investigation because I have given treatment only for one month, but HbA1c gives result of sugar control of 3 months before reading.

It is observed that the reduction of FBS and PPBS from before treatment to after treatment is highly significant. The Bhunimbadi kashaya is good in Reduction of FBS and PPBS, because the treatment is highly significant.

Probable mode of action of Drugs

Bhunimbadi Kashaya

Madhumeha Upadrava is compared with Diabetic neuropathy because both having sequel symptoms, diabetic neuropathy is a condition similar to pada daha, pada harsha, pada dari and vata vyadhi. The disease madhumeha is manifested with prabhuta avil mutrata and kledahatwa in the body, due to dhatwagni mandya and jathargni mandya, kledatwa present in shakhas which does sroto sang, kleda flurred through mootra from body, The Bhunimbadi Kashaya by virtue of its kaphapitta hara properties it acts on the ambuvaha srotas and help in kleda nirharana. Also the Kashaya being agni sanskrarita it is laghu help in the Amapachana,

Daha shamaka, and Pramehaghna. When the shakashirita augmented kleda is excreted then the sroto shodahana is achieved. There by samprapti vighatana is achieved.

Bhunimbadi Kashaya contains the drugs, Bhunimba, Vasa, Patola, Katuka, Amalaki, Haritaki, Vibhitak, Nimba and Chandana, Triphala is prameghna, Rasayana, Vedanasthapaka and Daha shamaka. Nimba is Kushtaghna, Pramehaghna. Bhunimba is daha shamaka used in jwara and Visarpa chikitsa. These all drugs are Tridosha shamaka, pramehaghna. all are kapha pitta hara, by this Kashaya sugar level becomes low, reduces daha, reduces altered sensation due to hypoglycaemic effect of Kashaya and gives strength to body reduces weakness.

Probable Mode of action of Navaneeta lepa

By Navaneeta lepa, body absorbs it through skin and from pores of hairs, it does Jatharagni dipaka, gives strength to body, it does daha shamaka and it does Tridosha shaman. increases agni, gives strength to muscles, skin and nerves. and reduces muscle weakness, purifies body detoxify the body and stimulates the nerves, blood vessels and increases the circulation. Navaneeta pacifies vata pitta and reduces burning sensation and pain.

Probable Mode of Action Mrudu Swedana

Swedana increases agni, skin becomes clean, increases taste in food, and clears the channels (Srotoavarodha) body becomes light.

By Mrudu Swedana, it increases agni, removes avarodha of mala & mootra, pacifies stiffness, heaviness & cold. It stimulates the blood vessels, nerves, skin and muscles. And removes the srotoavarodha, gives strength to body and muscles, reduces weakness, altered sensation and pain.

CONCLUSION

After the completion of the analysis and observation of the clinical trial and from the entire discussion conclusion can be made as follows:

Madhumeha symptoms and signs are resembles like Diabetes mellitus. Accurate references and detailed explanation of Diabetic neuropathy is not available in the Ayurvedic texts. Karapada daha, and suptata and shoola even though found in poorva roopa of Madhumeha and also present as updrava so these are explained at the end of the chapter, these are similar to the symptoms of the Diabetic neuropathy. Madhumeha updrava can be explained as

Diabetic neuropathy. The diagnosis was made with history of Diabetes mellitus and symptoms of diabetic neuropathy. Maximum numbers of patients were having complaint of burning sensation as than other symptoms like pain, altered sensation and muscle weakness. It was seen that uncontrolled diabetes, chronicity of diabetes and sedentary life style has the major role of manifest of Diabetic neuropathy. The study was conducted to see the efficacy of Bhunimbadi Kashaya internally and Navaneeta lepa externally followed by Mrudu Swedana. The Study shows significant results in the reduction of blood sugar levels both in FBS and PPBS. Neuropathic symptoms were better decreased and cured by Bhunimbadi Kashaya and Navaneeta lepa.

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