

Pharmaceutical and Clinical Evaluation on Vangabhasma in the management of Madhumeha (Diabetes mellitus)

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ABSTRACT : Madhumeha (Diabetes mellitus) is one of the most common, chronic ailment now a day. Many formulations are described in different texts to treat Madhumeha. Among these Vanga Bhasma is one of the most potent drugs. In present study, Vanga Bhasma was prepared strictly by following Rasashastrya procedure and finished product was examined on Ayurvedic as well as modern parameters. In clinical study, Vanga bhasma was administered to 30 diagnosed patients of D.M. and results are discussed in present article.

Key words : Madhumeha, Vanga bhasma.

INTRODUCTION

Diabetes mellitus is a clinical syndrome characterized by hyperglycaemia due to absolute or relative deficiency of insulin. This can arise in many different ways lack of insulin, where absolute or relative, affects the metabolism of carbohydrate, protein, fat, water and electrolytes, which causes polyuria, intense thirst, Hastapadataladaha and presence of sugar in blood and urin. Madhumeha (Diabetes mellitus) is one of the most common chronic and distressful diseases, which affect the people of all groups and sex world wide with increasing prevalence. It is a complex disease in its aetiology and heredity which play role. Environmental factors also interact with genetic susceptibility, broadly it can be described into two types.

- 1) Primary viz : Type I - Insulin Dependent Diabetes Mellitus (IDDM) and Type II - Non Insulin Dependent Diabetes Mellitus (NIDDM).
- 2) Secondary to other pathologies.

Aims and objectives :

1. Pharmaceutical study of Vanga Bhasma.
2. To evaluate the efficacy of Vangabhasma in the management of Madhumeha (Diabetes Mellitus).
3. To find adverse effects of the drug if any.

Methodology :

This study was prospective, single blind, uncontrolled clinical trial.

Total 30 patients with the complaints of polyuria, intense thirst, Hastapadataladaha and blood sugar level

(P.P.) were selected for investigation and treatment from the OPD and IPD of Govt. Ayurveda College, Nanded (Maharashtra).

Inclusion criteria :

- 1) Patients of either sex, who have been diagnosed and objectively proved as a patient of diabetes mellitus who require long term maintenance therapy.
- 2) Age more than 20 years.
- 3) Known cases of NIDDM.

Exclusion criteria :

- 1) Known cases of IDDM.
- 2) Patients who are in acute phase and hypertension.
- 3) The patients having severe complications.

Criteria for diagnosis :

For diagnosis, detail medical history was taken physical examination was done according to both modern and Ayurvedic clinical methods. All the patients were subjected to certain laboratory tests like total urine exam, blood sugar level.

Preparation and Administration of Drug :

It consists of three steps i.e. Shodhana, Jarana and Marana process.

The Vanga Shodhan :

Vanga Jarana and bhasamikaran were procured after proper identification of metal and herbal drug, preparation of each steps done separately by authentic method in the dept. of Rasashastra, Govt. Ayurveda College, Nanded.

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Preparation of medicine :**Ingredients :**

1. Jarit vanga 1000 gm
2. Shuddha Hartal 1000 gm
3. Nimbu swarsa 1000 ml

Procedure of preparation of medicine² :

Jaarit vanga 1000 g and Hartala 1000 g were mixed together and triturated with 100 ml lemon juice till it becomes Shlakshna (soft & tiny). Chakrikas were made and dried. These chakrikas were kept in round and shallow earthen pots of equal shape and size placed one above the other. They were compactly sealed with kapada mitti. (This is called sharava samput). After drying of sealed Sharav samput it was subjected to puta (fire). The temperature raises about 800-850°C. After self cooling the vanga was collected from sharav samputa for next puta. 1/10th of Shuddha Hartala was added to vanga and this was again triturated with lemon juice, then chakrikas were prepared, dried and again subjected to Gaja puta. This procedure was repeated for 8 times for next putas. The Vangabhasma obtained after 10 putas passed all Bhasma Parikshas.

Test performed for prepared Medicine :

Sr.	Test	Result
1.	Loss on Ignition	0.57
2.	Loss on drying at 110°C	0.35
3.	% of total Tin as SNO ₂	92.3
4.	% of Free Tin	0.2
5.	Arsenic as 'As'	0.031

Dose : 125 mg TDS with hot water after meal.

Duration : The trial drug Vangabhasma was given for a period of 21 days including follow up on every 7 days.

Diet : No specific diet was recommended. The patients were to take sugar free diet, and also advised not to take any modern medicine of diabetes.

Criteria for Assessment :

Record of subjective improvement regarding polyuria, intense thirst, hastapadataladaha and general feeling of well being, a few objective parameters were also adopted to assess the improvement.

Criteria for diagnosis of Madhumeha (Diabetes Mellitus) clinically :

- 1) Polyuria
- 2) Intense thirst
- 3) Hastapadataladaha
- 4) Blood sugar level

Criteria of result :

- 1) *Relieved* : Those in whom all the clinical features of the disease disappeared and the readings of the investigations done for assessment came within normal range were declared relieved.
- 2) *Unchanged* : Those in whom, there was no improvement in sign and symptoms as well as in investigations done after treatment were termed as unchanged.

Over all therapeutic response of the Vanga bhasma in Madhumeha (Diabetes Mellitus) :

The response of the Vangabhasma has been evaluated in 30 patients suffering from Madhumeha (D.M.) meeting the subjective and objective parameters of assessment are shown in Table No. 3.

The effect of the drug on polyuria, intense thirst, hastapadataladaha and blood sugar were encouraging and satisfactory.

TABLE NO. 1 : OBSERVATIONS AND RESULTS^{1,5}:

Sr. No.	Sign and Symptom	No. of patients	Percentage (%)
1	Polyuria	30	100.00
2	Intense thirst	30	100.00
3	Hastapadataladaha	28	93.3
4	Kshudhavridhi	24	80.00
5	Shithilangata	26	86.6
6	Constipation	03	10.00
7	Bhrama	08	26.6
8	Joint pain	18	60.00
9	Pindikodveshtana	13	43.3
10	Bahusweda pravritti	18	60.00

TABLE NO. 2 : EFFECT OF VANGA BHASMA ON 30 PATIENTS OF MADHUMEHA (DIABETES MELLITUS) :

Sr. No.	Sign	Mean score		S.D. ±	S.E. ±	't' value	p
		B.T.	A.T.				
1	Polyuria	2.9	1.4	0.7	0.1	10.7	p<0.05
2	Intense thirst	2.3	1.1	0.6	0.1	10.7	p<0.05
3	Hastapadataladaha	2.1	0.9	0.7	0.1	7.3	p<0.05
4	Blood sugar (P.P.)	196.9	142.6	47.0	8.6	6.3	p<0.05

TABLE NO. 3 : EFFECT OF VANGABHASMA AFTER 21 DAYS OF TREATMENT :

Sr. No.	Signs and symptoms	No. of patients before treatment	No. of patients and percentage	
			Unchanged after treatment	Improvement after treatment
1	Polyuria	30	04 (13.33%)	26 (86.66%)
2	Intense thirst	30	03 (10.00%)	27 (90.00%)
3	Hastapadataladaha	28	04 (14.29%)	24 (85.71%)
4	Blood sugar (P.P.)	30	06 (20.00%)	24 (80.00%)
5	Kshudhavridhi	24	04 (16.66%)	20 (83.33%)
6	Shithalangata	26	05 (19.24%)	21 (80.76%)
7	Constipation	03	02 (66.66%)	01 (33.33%)
8	Bhrama	08	03 (37.5%)	05 (62.5%)
9	Joint pain	18	03 (16.66%)	15 (83.33%)
10	Pindikodveshtana	13	03 (23.7%)	10 (76.92%)
11	Bahusweda pravritti	18	05 (27.77%)	13 (72.22%)

DISCUSSION

On going through Rasagranthas, Vanga bhasma is of Tikta rasa and Ushna Veerya. It has Ruksha, Laghu, Sara, Teekshna gunas. These properties are helpful in overcoming the samprapti of Madhumeha. Due to Tikta rasa and Ushna Veerya. Vanga bhasma is helpful in removing kleda, which in turn causes srotomukhavishodhana. Vanga bhasma is Kapha Vatashamaka. This property of Vanga bhasma may be helpful in treating Dhatushaithilya, which is a major cause of Madhumeha^{3,4}.

In present study, response of the treatment of the Vangabhasma was highly encouraging, within 21 days the relief was observed in polyuria, joint pain were reduced to 86.66%. Blood sugar and shithilangta reduced (80%), Hastapadataladaha (85%), Kshudhavridhi (83.33%), Constipation (33.3%), Bhrama (62.5%), Pindikodveshtan (76.92%) and Bahuswedapravritti (72.22%).

CONCLUSION

Vangabhasma showed encouraging result and able to control the severity of polyuria, intense thirst, blood sugar and hastapadataladaha, within a short period of treatment. During the course of treatment no adverse effects were noticed, hence it is clear that the Vangabhasma is an ideal drug for the treatment of Madhumeha (Diabetes Mellitus). Besides the treatment, the patients of Madhumeha must follow the regime of pathya and apathya.

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हिन्दी सारांश

मधुमेह पर वंगभस्म के प्रभाव का चिकित्सकीय अध्ययन

सी. ई. लगड एवं राजेश इंगोले

आज के युग में जीर्ण व्याधीयों में मधुमेह अन्य रोगों की अपेक्षा सबसे अधिक प्रमाण में प्रभावित करता है। शास्त्र में मधुमेह की चिकित्सा हेतु अनेक योगों का वर्णन किया गया है। किंतु वंगभस्म का प्रयोग मधुमेह पर चिकित्सिय रूप से प्रभावशाली है। प्रस्तुत अध्ययन में मधुमेहपर वंगभस्म के प्रभाव का विस्तृत अध्ययन किया गया है। वंगभस्म का शास्त्रीय पद्धति से निर्माण कर उसका आयुर्वेदीय व आधुनिक परीक्षण किया गया। इन परीक्षणों के उपरांत वंगभस्म का चिकित्सकीय प्रभाव परखने के लिए मधुमेह के ३० रूग्णों को वंगभस्म २१ दिनों तक दिया गया। जिसका परिणाम उत्साहवर्धक था। २१ दिनों में रूग्णों को बहुमूत्रता, सन्धि शूल (८६.६६% सुधार), रक्तगत शर्करा व शिथिलांगता (८०%), हस्तपादतलदाह (८५%) क्षुधावृद्धि (८३.३३%), मलबद्धता (३३%), भ्रम (६२.५%), पिण्डीको द्र्वेष्टन (७६.९२%) व बहुस्वेद प्रवृत्ति (७२.२२%) में उत्साहवर्धक उपशय पाया गया। साथ ही अन्य कोई दुष्परिणाम नहीं पाया गया। अतः वंगभस्म को उपरोक्त तथ्यों के आधार पर मधुमेह की उत्तम औषधी के रूप में चिकित्सार्थ प्रयोग किया जा सकता है।

