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Review Article

Naga Bhasma in the Management of Diabetes mellitus: A Review

Monika Sharma¹, Sandeep Charak²

1. Ph.D Scholar, PG department of Agada Tantra, National Institute of Ayurveda, Amer Road, Jaipur, 302002
2. Medical Officer, Jamu & Kashmir Ayush Department.

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Corresponding author- **Dr. Monika Sharma, Ph.D**
 Scholar, PG department of Agada Tantra, Email- sharmania64@gmail.com

Abstract-

Diabetes mellitus (DM) affects 5-6% of global adult population. “World Diabetes Congress” summarized on 14th Nov. 2009; that Diabetes is expected to affect 380 million by 2025. Every 10 seconds a person dies from Diabetes related disorder. India has the largest Diabetes population in the world with an estimated 41 million people, amounting to 6% of the adult population. As age progresses, in either sex, the probability to get Diabetes increases. In the population that is above 60 years of age, approximately 18.3 percent have Diabetes. Now a day’s many Ayurvedic herbal or herbo-mineral formulations have been used in the treatment of Diabetes mellitus throughout

the world. *Naga Bhasma* (lead calx) has significantly anti-diabetic potential and can be viewed as rejuvenating tonic diabetic weakness and diabetic coma as well. It shows Rasayana effect chiefly by enhancement of immunity i.e. *Oja*. By virtue of its *kaphashamaka*, *Masa-medokarshka* and *lekhana* property it can be used a novel anti-diabetic drug. India has the largest

Diabetes population in the world with an estimated 41 million people, amounting to 6% of the adult population. Diabetes mellitus is a clinical syndrome characterized mainly by hyperglycemia due to absolute or relative deficiency of insulin. Hence there is needed to look out toward Ayurveda for Diabetes Mellitus Management.

1. INTRODUCTION

Diabetes mellitus is one of the burning problems of modern society which has taken the humanity all over the world in its grip. India tops the world with largest number of diabetic subjects in order to achieve the bitter title of “Diabetes capital of the world”. The reason being is presence of certain unique clinical and biochemical abnormalities in Indians which include increased Insulin resistance and greater abdominal adiposity despite lower body mass index. It need not to be mentioned that sedentary life style, devoid of physical activity and excess intake of calorie rich food forms the predisposing factors for the diabetes to precipitate in genetically determined Individuals. *Bhasma* may be described as a special formulation in which the qualities of organic matter are imparted to a nonorganic (inorganic) substance by processing with substances of herbal/animal kingdom.¹ Naga is *Tikta*, *Madhura in Rasa*; *Atyushna* in *Virya*; *Snigdha*, *Dipana*, *Rasayana in Guna* and *Lekhana*, *Medohara*, *Pramehaghna*, Diabetes Mellitus (*Madhumeha*) should be managed by using *Naga Bhasma* successfully.²

2. AIMS & OBJECTIVE

1. To evaluate, elaborate and discuss the Diabetes mellitus with special reference to *Madhumeha*.
2. To evaluate, elaborate and discuss the management of Diabetes mellitus with special reference to *Madhumeha*.

3. MATERIAL AND METHOD:

Material related to Diabetes mellitus and *Madhumeha* is collected from Ayurvedic text including *Bahatriye*, *Laghutrye* and text book of modern medicine respectively. The available commentaries of Ayurvedic *sahitas* have also referred to collect relevant matter. The index, non index medical journals has also referred to collect information of relevant topic.

4. CONCEPTUAL STUDY

4.1 Definition of Diabetes Mellitus (*Madhumeha*)

It is chronic disease associated with abnormally high levels of the sugar glucose in the blood. Diabetes is due to one of two mechanism first Inadequate production of insulin (which is made by the pancreas and lowers blood glucose), or second Inadequate sensitivity of cells to the action of insulin³.

Ayurvedic remedies for *Madhumeha* (diabetes mellitus) are the oldest among all the available therapies, which includes in the

Prameha category. *Pramehas* are a list of urinary disorders, especially characterized by profuse urination with several abnormal qualities due to *Doshic* imbalances. The main causes of *prameha* are lack of exercise and improper food habits in excess food intake which falls in the category of *ushna*, *snigdha* and *guru* are the primal cause of this disease.⁴

4.2 Etiology Classification of DIABETES MELLITUS -

Type 1 diabetes, Type 2 diabetes, Other specific type of diabetes - Hepatocyte nuclear transcription factor, Glucokinase, Insulin promoter factor, HNF-1 beta, NeuroD1, Mitochondrial DNA, Mitochondrial DNA, Proinsulin or insulin conversion, Genetic defects in insulin

action, Diseases of the exocrine pancreas, Endocrinopathies, Drug- or chemical-induced, Infections, Uncommon forms of immune-mediated diabetes and Other genetic syndromes sometimes associated with diabetes.⁵

According to the Ayurveda *Madhumeha* or *Pramehas* are classified as twenty types - *Vataja pramehas* -4 type, *Pittaja pramehas* -6 type and *Kaphaja pramehas* -10 type⁶.

4.3 Symptoms of Hyperglycaemia⁷

Thirst, dry mouth, Polyuria, Nocturia Tiredness, fatigue, Recent change in weight, Blurring of vision, Pruritus vulvae, balanitis (genital candidiasis), Nausea, headache, Hyperphagia; predilection for sweet foods, Mood change, irritability, difficulty in concentrating, apathy

4.4 Clinical Examination of The Patient With Diabetes (Table no:1)

Sr.no	Clinical feature
1.	Hands-Duputyren's contracture, carpal tunnel syndrome. limited joint mobility, sensory abnormality and wasting of small muscles
2.	Skin-Bullosis, Pigmentation, Granuloma annulare and Vitiligo.
3.	Axilla- Acanthosis nigricans
4.	Neck-Carotid pulses, Bruits and Thyroid enlargement
5.	Head-Cranial nerve palsy, Ptosis and Xanthelasma
6.	Eye-Lens opacity
7.	Abdomen-Hepatomegaly
8.	Legs-Muscle wasting, Sensory abnormality, Hair loss and Tendon reflexes
9.	Feet-sensation,Peripheral pulses
10.	Observation-Weight loss in insulin deficiency, Obesity in type 2 diabetes, Dehydration, Air hunger, Hepatomegaly

In Ayurveda these clinical feature included in *Madhumeha* -*Malina danta* (Tartar in teeth), *Hasta pada daha* (Burning sensation of hands and feet), *Deha chikkanata* (Excess glossy/ oily skin) *Trishna* (Excessive thirst), *Madhuryamasya* (Feeling sweetness in mouth) , *Prabhuta mutrata* (Excessive urination), *Avila mutrata* (Turbid urination) , *Madhu samana varna* (Urine having colour of honey), *Sweda* (Excess perspiration), *Shayana asana Swapna sukha* (Desire for sedentary life) etc⁸.

4.5 Samprapthi ghatakas

- *Dosha* – *vata, pitta, kapha*
- *Dushya* – *meda, mamsa, kleda, rakta, vasa, majja, lasika, rasa and ojas*
- *Srotas* (channel) – *mootravaha*
- *Srotodusti* – *atipravrutti*
- *Agni* – *dhatvagni*
- *Udhhavasthana* – *kostha*
- *Vyaktasthana* – *mootravaha srotas* (urinary tract)

4.6 Criteria for the diagnosis of diabetes mellitus-

- Symptoms of diabetes plus random blood glucose concentration >11.1mmol/L(200 mg/dl).

- Fasting plasma glucose >7.0 mmol/L (126 mg/dl).
- Two hour plasma glucose >11.11mmol/L(200 mg/dl) during an oral glucose tolerance test.⁹

Charaka describes the prognosis in three categories

- *Sadhya* – Curable: Patients who have diagnosed early in the onset, those who are *sthoola* (obese) and the origin of their disease in *apathyaja*.
- *Yapya* – Palliable : *Pittaja prameha* and certain types of *kaphaja pramehas* are however helps control with treatment (palliative management).
- *Asadhya* – Incurable: *Vataja* describes the incurable version of *prameha* and inherited diabetes, a *krisha* (lean) patient who is suffering with *Sahaja variety*.¹⁰

4.7 Management of Diabetes mellitus through *Naga Bhasma*

In Ayurvedic, system of medicine, various herbal, herbo-mineral and minerals are using popularly and very effectively in the treatment of *madhumeha* with different disease conditions. The *Naga bhasm* used in *madhumeha* with different formulation, which are giving below-

Table no 2: Various Shastrokt Ayurvedic Formulation of Diabetes mellitus Containing Naga Bhasm¹¹

S.r.no	Formulation	Content	Dose
1.	<i>Vasant Kusumakar Ras</i>	<i>Praval pisthi, Mukta pisthi, Abhrak Bhasm, Suvrana Bhasm, ropya Bhasm, Nag Bhasm, Loha Bhasm, Vang Bhasm etc.</i>	1-3 rati
2.	<i>Vrahad yograj Gugglu</i>	<i>Sunthi, Pipali, chitraka</i>	2-4 tab

		<i>Mool, Vacha, Silver, Loha bham, Abharak Bhasm, Mandoor Bhasm, Nag Bhasm, Ras sindoor etc.</i>	
3.	Laxmi Vilas Ras (Suvrna Ras)	<i>Suvrana Bhasma, Ropya Bhasma, Abhrak Bhasma, Nag Bhasma, Kant loha, Vatsanabh, Mukta bhasma</i>	¼-1 rati
4.	Pushpa danva Ras	<i>Parada, Nag, Loha Bhasma, Abhraka Bhasma, Dahtura, Bhang etc.</i>	1-3 tab
5.	Naga Bhasma	<i>Naga bhasma</i>	½-1 rati
6.	Pranda parpati	<i>Parada, Abhrak, Loha, Nag Bhasma, Vang Bhasma Vatsnabha</i>	½-1 rati
7.	Trivanga Bhasma	<i>Vang Bhasma, Zasada Bhasma, Nag bhasma</i>	1-2 rati
8.	Mehantaka ras	<i>Abhraka, Loha, Naga Bhasma, vang Bhasma</i>	1-2 tab.
9.	Prameha gaj kesri ras	<i>Loha, Nag, Vanga, Abhraka, Shilajit etc.</i>	1-2 tab.

Table no: 3 Various Patent Ayurvedic Formulation of Diabetes mellitus Containing Naga Bhasm¹¹

S.r.no	Formulation	Content	Dose
1.	Diabegon capsule	<i>Triphala, Trikatu, Gudmar Patra, Jamun beeja, Vijayasara, Methidana, Haridra, Amrita Satva, Karela, Suddha Shilajatu, Lauha Bhasma, Trivang Bhasma etc.</i>	1-2 capsule
2..	Diabenil	<i>Suddha shilajatu, jatiphala, Madhunashini, katiphala, pravala Bhasma, Trivang Bhasma, Methika swaras, Daruharidra etc.</i>	1 cap
3.	Glycem capsule	<i>Nimb, Amalaki, Haridra, Lodhra, Yasthi madhu, Vang Bhasm, Naga Bhasm etc.</i>	1-2 cap
4.	Hyponidd Tablet	<i>Amalaki, Haridra, Guduchi, Chirayita, Shilajatu, Trivang Bhasm etc.</i>	2 tab
5.	Limit capsule	<i>Karela, Madhusnuhi, Jambubeej, Trivang Bhasm, Methi etc.</i>	1-2 cap
6.	Madhu doshantk	<i>Shilajatu, Trivang Bhasm, Arjun chhal, Bhringraj, Tejpatra, Bel patra, Karela, Gurmar etc.</i>	2 tsf
7.	Madhunil Powder	<i>Vijayasara, Shilajit, Gudmar, Methi, Karela,</i>	1 tsp twice

		<i>Trivang Bhasm, Katuki etc.</i>	a day
8.	Tribangshila tablet	<i>Trivang Bhasm, Nimb, Gurmar, Shila niryas etc.</i>	2-4 tabs.
9.	Regulose capsule	<i>Vijasar, Chopchini, Trivang Bhasm, Haldi, Jamunguthali, Vrad Vangeshwar ras, Shiva gutika etc.</i>	1-2cap

5. CONCLUSION-

Madhumeha, or diabetes mellitus, is a burning problem of present era. *Naga* is Tikta, *Madhura* in Rasa; *Atyushna* in Virya; *Snigdha*, *Dipana*, *Rasayanain Guna* and

Lekhana, *Medohara*, *Pramehaghna*, Diabetes Mellitus (*Madhumeha*) should be managed by using *Naga Bhasma* successfully.

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