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Trivanga Bhasma

INTRODUCTION

ABSTRACT

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Ayurvedic term for Diabetes mellitus. Increased
trea

KEYWORDS

Eugenia jambolana

Ayurvedic drugs, India, antidiabetic, Madhumeha.

INTRODUCTION

Diabetes is a challenge for every medical faculty. There are

Many Ayurvedic formulations, herbs, minerals found for the
treatment of diabetes (Madhumeha) herbal medicine are

ATTENDANTLY DRUGS IN AYURVEDA

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ABSTRACT

Ayurveda the Indian traditional Medical science uses many drugs for diseases derived from medicinal plants, Minerals, herbo mineral. Diabetes (Madhumeha) is an important human ailment afflicting many from various walks of life in different countries. This review focuses on Ayurvedic drugs like plants, minerals in single or compound form in various research institutes and articles. A list of Ayurvedic drugs having antidiabetic and related beneficial in treatment of diabetes is compiled. These include, Trivanga Bhasma, Triphala Churna, Terminalia chebula, Nimbapatra, Ashvattha, Acacia arabica, Mangifera indica, Eugenia jambolana, Allium cepa, Allium sativum, Aloe vera, Tinospora cordifolia etc.

KEYWORDS: Ayurvedic drugs, India, antidiabetic, Madhumeha.

Trivanga Bhasma

For this study 36 patients had enrolled, having age more than 30 year. Signs & symptoms of D.M. were noted & blood sugar test was done. Fasting & post prandial blood sugar were done before starting the treatment, in the middle of treatment & after the treatment. The drug was given for three months duration & follow up was taken every after 15 days. The dose of Trivanga Bhasma was 1tds with lukewarm water (Each tablet of 125 mg).2

Triphala Churna (Powder)

A comparative study of Honey (Madhu) and lukewarm water (Ushnoda) as Anupana (Vehicle) with powder of Triphala choura in Diabetes Mellitus. For this study research design was single blind randomized comparative 60 patients of diabetes were selected and divided into two groups. Group A – 30 patients treated with Triphala powder with honey. Group B – 30 patients treated with Triphala powder with lukewarm water. Dose of Triphala powder was decided as 5 gm twice a day divided doses & duration of treatment was 90 days. Drug was well tolerated by all patients. Drug does not pose any side effect or problem of toxicity. Triphala powder along with honey should more beneficial result in Diabetic patients.3

Terminalia chebula (Haritaki Churna)

In this double blind clinical study 100 patients of diabetes mellitus were selected randomly. Which were randomly divided into four groups. Powder of Terminalia chebula in the dose of 10 gm twice per day was administered in Group 1, 2 with Jala and in Group 2 with honey. Effect of Terminalia chebula powder vehicle with as a water and honey in both fasting and post prandial state in urine and blood sugar is satisfactory. The drug with water has useful role in the therapy as far as urine and BSL, fasting and post prandial are concerned it is also cost effective.5

Nimbapatra (Azadirachta indica) Svarasa

In this research work tried to study effect of Nim leaves juice on Diabetes. He had prepared nimb patra svarasa ghavanavati. 500 mg thrice a day was administered. Clinical study was carried out on 60 patients. Patients having BSL more than 280 & having complications like hypertension, heart disease, fever etc were excluded. Patients having kapha prakruti was benefitted by drug. Patients having dhatukshayaja Madhumeha was not benefical by the drug. Patients having symptoms like Pipasa, Madhura, Shukla moortrata, Tandra, Hastapadataladaha, Snigdha-picchhila-gurugratra, Talu-jivhas-dantamalotpatti were cured by the drug.5

Nishakatakadi Churna

Nishakatakadi churna was given in the dose of 3 gms thrice daily before meals with lukewarm water for 30 days in both the groups. Diet restrictions according to pathya-apaathya were advised. nishkatakadi churana provided better results.6

Medoghna Rasayan Vati

The patients having classical signs & symptoms of Diabetes mellitus type 2 have been selected randomly. Diagnostic criteria was increase in Blood sugar level either fasting or post prandial or both & Glucose tolerance Test. Patients of sahaja Madhumeha (IDDM) age below 20 yrs & above 60 yrs having severe diabetic complications cardiac problems, Diabetes mellitus due to other hormonal disturbances like phaeochromocytoma, acromegaly Thyrotoxicoses etc, Diabetes due to side effect of drugs like thiazide groups, steroids were excluded. Routine hematological, biochemical,
urine examinations were carried out, selected patients were
categorized randomly in the following two groups. Group A –
Medoghna Rasayana vati 11 patients of Diabetes mellitus
were included in this group & given medoghna Rasayana vati
in the dose of 1 gm twice/day with lukewarm water before
meals for 60 days. Group B – Medoghna Rasayana vati with
modern anti diabetic medicine, 15 patients were registered in
this group treated with medoghna rasayana vati in the dose of
1 gm twice/day with lukewarm water before meals for 60
days along with modern medicine. Medohara rasayana vati
was prepared as per reference from Su. chi 9/6. Ingredients
are Bhallantaka, Tuvaraka, Khadira, Agaru, Vijayasara,
Guggulu. Shilajitu, Makshika & Ayaskriti. All the patients
were allowed to take their routine diet but advised not to take
extra carbohydrates and fatty foods. After treatment patients
were assessed as per improvement in signs & symptoms
Fasting blood sugar & post prandial blood sugar levels, Sr.
Cholesterol, Urine sugar. The patients were examined weekly.  
Medoghna rasayana vati group and medoghna rasayana vati
with modern antidiabetic drugs both provided better relief in
signs & symptoms of the disease. Relief in post prandial
blood sugar was found significantly in with modern medicine
group. Thus it can be said the medoghna rasayana vati can be
a good complementary medicine to achieve better control in
blood sugar levels.

Kuberaksha (Caesalpinia bonducella (L.) Fleming)
In experimental study, the test drug was evaluated for it’s
hypoglycemic, Antidiabetic & hyperglycemic activity in the
normal rats, alloxan induced diabetic rats & normal mice
respectively. In clinical study kuberaksha leaf ghanvati &
Kuberaksha kernel seed powder capsule were given to
Madhumeha patients in the dose 3 gm into three divided
doses with lukewarm water for 6 weeks.
In experimental study, both groups were reduced blood sugar
at low dose. In higher dose ghanvati group showed increases
in BSL where as Kernel seed powder group significantly
decreased BSL. The test drugs did not affect blood sugar
level in the normal rats. In clinical study 26 patients were
completed treatment in which 7.69% patients were
moderately improved & 61.55 % patients were not improved.
Leaf Ghanvati was more effective than kernel seed powder
capsule. Both the groups were not effective at the dose of
3gm/day.  

Meha-Mudgaravati
46 patients of type II Diabetes mellitus were treated with
mehamudgaravati (250 mg each) TDS for 3 months. Meha
mudgar vati is hypolipidemic, hypocholesterol, and
hepatoprotective as it contains Loha, guggulu, triphala,
trikatu, pippalmula, trivritta, bilve etc.  

Ashvattha (Phyecus religiosa)
44 patients were randomly divided in four groups. Patients of
erecitile dysfunction not having diabetes mellitus were
divided in i) Group AG ii) Group PG Group AG was given
Ashvattha powder (Root, Stem bark, fruit, leaf buds) in 10
gm dose twice a day with one glass milk before meals. Group
PG was placebo, given 500 mg starch capsule twice a day
with milk before meals. 10
Patients with diabetes mellitus were divided in i) AGDM was
treated like AG group with Ashvattha 10 gm BD with milk &
group PGDM with 500 mg starch one BD with milk.
Duration was 45 days. Sexual desire was assessed and scored. Errection, rigidity, ejaculation, orgasm, performance, anxiety, post act
exhaustion, frequency of coitus, feeling after sex were
examined and scored from 0 to 3 questioners was prepared.
Haemogram, Fasting blood sugar, Post prandial blood sugar,
Lipid profile, Blood urea level, Sr. Creatinine, routine
microscopic urine Biomarkers, Sr. Testosterone, Sr. DHEA-S
& Semen analysis was carried out. Erectile dysfunction is
more common in diabetes mellitus & more difficult to cure
than in non diabetes mellitus. Ashvattha (phyecus religiosa)
showed highly significant increased in total sperm count and
total motilily in non diabetic patients. Ashvattha is an
additional new shukra vrudhdikar vrushya (aphrodisiaci) drug can be used in oligo -asthnoospermia

Acacia arabica (Babbul)
It is found all over India mainly in the wild habitat. The plant
extract acts as an antidiabetic agent by acting as secretagogue
to release insulin. It induces hypoglycemia in control rats but
not in alloxanized animals. Powdered seeds of Acacia
arabica when administered (2.3 and 4 g/kg body weight) to
normal rabbits induced hypoglycemic effect by initiating
release of insulin from pancreatic beta cells. 11

Mangifera indica (Mango)
The leaves of this plant are used as an antidiabetic agent in
Nigerian folk medicine, although when aqueous extract given
orally did not alter blood glucose level in either
normoglycemic or streptozotocin induced diabetic rats.
However, antidiabetic activity was seen when the extract and
glucose were administered simultaneously and also when the
extract was given to the rats 60 min before the glucose. The
results indicate that aqueous extract of Mangifera indica possess hypoglycemic activity. This may be due to an
intestinal reduction of the absorption of glucose. 12

Eugenia jambolana (Indian Gooseberry, Jamun)
The extract of jamun pulp showed the hypoglycemic activity
in streptozotocin induced diabetic mice within 30 min of
administration while the seed of the same fruit required 24 h.
The oral administration of the extract resulted in increase in
serum insulin levels in diabetic rats. Insulin secretion was
found to be stimulated on incubation of plant extract with
isolated islets of Langerhans from normal as well as diabetic
animals. These extracts also inhibited insulinase activity from
liver and kidney. 13

Allium cepa (Onion)
Various ether soluble fractions as well as insoluble fractions
of dried onion powder show anti-hyperglycemic activity in
diabetic rabbits. Allium cepa is also known to have
antioxidant and hypolipidaemic activity. Administration of a
sulfur containing amino acid from Allium cepa, S-methyl
cysteine sulphoxide (SMCS) (200 mg/kg for 45 days) to
alloxan induced diabetic rats significantly controlled blood
glucose as well as lipids in serum and tissues and normalized
the activities of liver hexokinase, glucose 6-phosphatase and
HMG Co A reductase. 14

Allium sativum (Garlic)
This is a perennial herb cultivated throughout India. Allicin, a
sulfur-containing compound is responsible for its pungent
odour and it has been shown to have significant
hypoglycemic activity. This effect is thought to be due to

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increased hepatic metabolism, increased insulin release from pancreatic beta cells and/or insulin sparing effect. 15

**Aloe vera and Aloe barbadensis**

Treatment of chronic but not single dose of exudates of *Aloe barbadensis* leaves showed hypoglycemic effect in alloxanized diabetic rats. Single as well as chronic doses of bitter principle of the same plant also showed hypoglycemic effect in diabetic rats. This action of *Aloe vera* and its bitter principle is through stimulation of synthesis and/or release of insulin from pancreatic beta cells. 16

**Tinospora cordifolia** (Guduchi)

Oral administration of an aqueous *T. cordifolia* root extract to alloxan diabetic rats caused a significant reduction in blood glucose and brain lipids. Though the aqueous extract at a dose of 400 mg/kg could elicit significant anti-hyperglycemic effect in different animal models, its effect was equivalent to only one unit/kg of insulin. 17

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### Table: Ayurvedic Plans used for Madhumeha (Diabetes Mellitus) in text and Traditionally 18

<table>
<thead>
<tr>
<th>Sanskrit/Local Name</th>
<th>Latin Name</th>
<th>Family</th>
<th>Part Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apamarga</td>
<td><em>Achyranthus aspera</em></td>
<td>Amaranthaceae</td>
<td>Entire Plant</td>
</tr>
<tr>
<td>Agaru</td>
<td><em>Aegle aegle</em></td>
<td>Thymelaeaceae</td>
<td>Stem</td>
</tr>
<tr>
<td>Argvadha</td>
<td><em>Cassia fistula</em></td>
<td>fabaceae</td>
<td>Flower</td>
</tr>
<tr>
<td>Ashvatha</td>
<td><em>Ficus religiosa</em></td>
<td>Moraceae</td>
<td>Stem Bark, Root Bark, Aerial Root</td>
</tr>
<tr>
<td>Babballa</td>
<td><em>Acacia arabica</em></td>
<td>fabaceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>Bilva</td>
<td><em>Aegle marmelos</em></td>
<td>Rutaceae</td>
<td>Leaves, Root Bark</td>
</tr>
<tr>
<td>Bhumimba</td>
<td><em>Andrographis paniculata</em></td>
<td>Acanthaceae</td>
<td>Entire plant</td>
</tr>
<tr>
<td>Bhanvaka</td>
<td><em>Coriandrum sativum</em></td>
<td>Apiaceae</td>
<td>Entire plant</td>
</tr>
<tr>
<td>Gunja</td>
<td><em>Abrus precatorius</em></td>
<td>fabaceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>Gambhari</td>
<td><em>Gmelina arborea</em></td>
<td>Verbenaceae</td>
<td>Stem, Root bark</td>
</tr>
<tr>
<td>Indravarni</td>
<td><em>Citrullus colocynhis</em></td>
<td>Cucurbitaceae</td>
<td>Fruit, Root</td>
</tr>
<tr>
<td>Jambira</td>
<td><em>Citrus aurantum</em></td>
<td>Rutaceae</td>
<td>Pulp</td>
</tr>
<tr>
<td>Jiraka</td>
<td><em>Cuminum cymimum</em></td>
<td>Apiaceae</td>
<td>Seeds</td>
</tr>
<tr>
<td>Khadira</td>
<td><em>Acacia chundra</em></td>
<td>fabaceae</td>
<td>Stem</td>
</tr>
<tr>
<td>Kajata (kaju)</td>
<td><em>Anacardium occidentale</em></td>
<td>Anacardaceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>Kanchara</td>
<td><em>Bauhinia variegata</em></td>
<td>caesalpinaceae</td>
<td>Flowers</td>
</tr>
<tr>
<td>Kasmunda</td>
<td><em>Benzicosa hispida</em></td>
<td>Cucurbitaceae</td>
<td>Fruit</td>
</tr>
<tr>
<td>Kasmarda</td>
<td><em>Cassia sopheru</em></td>
<td>fabaceae</td>
<td>Bark, Seed</td>
</tr>
<tr>
<td>Karpas</td>
<td><em>Gossypis arboreum</em></td>
<td>Malvaceae</td>
<td>Seeds</td>
</tr>
<tr>
<td>Lasuna</td>
<td><em>Allium sativum</em></td>
<td>Liliaceae</td>
<td>Bulk</td>
</tr>
<tr>
<td>Mayurshikha</td>
<td><em>Adiantum caudatum</em></td>
<td>Pindaceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>Mandhaparni</td>
<td><em>Centella asiatica</em></td>
<td>Apiaceae</td>
<td>Entire Plant</td>
</tr>
<tr>
<td>Nimbha</td>
<td><em>Asidulinda indica</em></td>
<td>Meliaceae</td>
<td>Stem</td>
</tr>
<tr>
<td>Palandu</td>
<td><em>Allium cepa</em></td>
<td>Liliaceae</td>
<td>Bulb</td>
</tr>
<tr>
<td>Panasa</td>
<td><em>Atrocarpus heterophyllus</em></td>
<td>Moraceae</td>
<td>Fresh matured leaves</td>
</tr>
<tr>
<td>Patta gobhi</td>
<td><em>Brassica oleraceae</em></td>
<td>Buseraceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>Palasha</td>
<td><em>Butea monosperma</em></td>
<td>fabaceae</td>
<td>Flowers</td>
</tr>
<tr>
<td>Kasspa</td>
<td><em>Alpinia galanga</em></td>
<td>Zingiberaceae</td>
<td>Rhizome</td>
</tr>
<tr>
<td>Santaparni</td>
<td><em>Alstonia scholaris</em></td>
<td>Apocynaceae</td>
<td>Stem bark</td>
</tr>
<tr>
<td>Satapushpa</td>
<td><em>Anethum graveolens</em></td>
<td>Apiaceae</td>
<td>Seeds</td>
</tr>
<tr>
<td>Sropa</td>
<td><em>Annona squamosa</em></td>
<td>Annonaceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>Udumbara</td>
<td><em>Ficus racemosa</em></td>
<td>Moraceae</td>
<td>Stem bark, root bark</td>
</tr>
<tr>
<td>Vasa</td>
<td><em>Adhathoda vasica</em></td>
<td>Acanthaceae</td>
<td>leaves</td>
</tr>
</tbody>
</table>

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### CONCLUSION

Ancient Ayurvedic Acharyas have very good knowledge about Diabetes Mellitus i.e. Madhumeha and its treatment. According to types of Madhumeha, age, bala and prakruti the use of Ayurvedic plant or metals is very important and effective. Most of these plants are used by people as vegetables in day today life.

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