CLINICAL EFFICACY OF LAGHU MALINI VASANT RASA ON MADHUMEHA (TYPE-2 DIABETES MELLITUS)

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Scholar
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Introduction
DIABETES

DIABETES IS ON THE RISE

422 MILLION adults have diabetes

3.7 MILLION deaths due to diabetes and high blood glucose

1.5 MILLION deaths caused by diabetes
Global Prevalence of Diabetes

Estimates for the year 2000 and projections for 2030

OBJECTIVE — The goal of this study was to estimate the prevalence of diabetes and the number of people of all ages with diabetes in 2000 and 2030.

RESEARCH DESIGN AND METHODS — Data on diabetes prevalence by age and sex from a limited number of countries were extrapolated to all 191 World Health Organization member states and applied to United Nations' population estimates for 2000 and 2030. Urban and rural populations were considered separately for developing countries.

RESULTS — The prevalence of diabetes for all age-groups worldwide was estimated to be 2.8% in 2000 and 4.4% in 2030. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030. The prevalence of diabetes is higher in men than women, but there are more women with diabetes than men. The urban population in developing countries is projected to double between 2000 and 2030. The most important demographic change to diabetes prevalence across the world appears to be the increase in the proportion of people ≥65 years of age.
NEW DELHI: Over a quarter of India's diabetics, which number at least 559,718 though data from several states was not available, are in the state of Gujarat which has the highest number at...
*Group of **metabolic diseases** characterized by hyperglycemia resulting from **defects in insulin secretion**, insulin **action**, or both.

Chronic hyperglycemia → dysfunction or failure of organs especially eyes, kidney, nerves heart and blood vessel.

<table>
<thead>
<tr>
<th>Types**</th>
<th>Type-1</th>
<th>Absolute deficiency of insulin</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Type 2</td>
<td>Relative deficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resistance to insulin action</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate compensatory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>insulin secretory response</td>
</tr>
<tr>
<td>Other:</td>
<td>Drug induced, MODY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gestational Diabetes mellitus</td>
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</tr>
</tbody>
</table>

* *American Diabetes association,2008*
Type -2 Diabetes Mellitus

✓ More prevalent.
✓ Strong Genetic predisposition.
✓ Risk increases with age, obesity, lack of exercise, associated dyslipidemia, CVS disorders.
✓ Manifestation of classical symptoms like Polyuria, polyphagia but weight loss, polydypsia rare- hyperglycemia may remain undiagnosed for longer period till complication appears (Silent Killer).
• Evaluation of Clinical Efficacy of *Laghumalini Vasant Rasa* on *Madhumeha* (Type–2 Diabetes Mellitus).
Total 35 patients of *Madhumeha* with classical symptoms and fulfilling selection criteria were selected from OPD and IPD of R.S. & B.K. Dept., I.P.G.T. & R.A. Hospital, Jamnagar
Clinical Study was started after obtaining Institutional Ethics Committee clearance
PGT/7–A/Ethics/2011–2012/2087/27

In Clinical Trial Registry India (CTRI) No – CTRI/2011/11/00211 on 08.11.2011.
<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Age: 30 – 65 years.</td>
<td>- Blood sugar – Fasting (\leq 126) mg/dl. And PPBSL (&lt;200)mg/dl</td>
</tr>
<tr>
<td>- Classical Symptoms of Madhumeha.</td>
<td>- Malignant and accelerated hypertension.</td>
</tr>
<tr>
<td>- Blood sugar – Fasting &gt; 126 mg/dl</td>
<td>- Age below 30 and above 65 years.</td>
</tr>
<tr>
<td>- PPBSL &gt; 200 mg/dl.</td>
<td>- Lactating mother.</td>
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<td></td>
<td>- CNS disorder e.g. encephalopathy</td>
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</tbody>
</table>
Criteria Of Diagnosis Of Type-2 Diabetes Mellitus

- Symptoms of Diabetes, Polyuria *(Prabhuta avil mutratata)*, Polydypsia *(Galatalushosha)*, Polyphagia, Sweetening in the mouth *(Asyamadhurya)*, and Weight loss.

✓ Fasting plasma glucose \( \geq 126 \text{ mg/dl} \).
✓ Post prandial glucose level \( \geq 200 \text{ mg/dl} \).
Introduction Of Drug

“सर्व रोगेषु वसन्तः।”

✓ **Vasanta Kalpa** – Chiefly prescribed for acute and chronic ailments.

✓ 8 **Vasanta Malati Kalpa** have been described in text in which method of preparation are alike (*Bhavana*) but they differ in properties according to ingredients used.

✓ **Laghu Malini Vasanta**: *Rasaka* and *Maricha* Containing **Vasanta Kalpa** mentioned in *Jeerna Jwara*. 
<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rasaka Bhasma</td>
<td>2</td>
</tr>
<tr>
<td>Maricha</td>
<td>1</td>
</tr>
<tr>
<td>Freshly Prepared butter with cow milk</td>
<td>q.s. levigating media</td>
</tr>
<tr>
<td>Lemon juice</td>
<td>q.s. levigating media</td>
</tr>
</tbody>
</table>
**Dose:** 250 mg *(Yoga Ratnakara)*
125 mg *(AFI 20:36)*

**Sahapana:** Pippali + Madhu

वल्लद्वयं चार्स्य कणामधुभयं प्रदापयेत्। (योगरत्नाकर ज्वराधिकार)

**Indications:**
- धातुगते जीर्णज्वरे देयं
- रक्तान्नविते अतिसारे
- रक्तभवे विकारे
- पितभवे घोर व्यथे
- प्रदरं आशु नाशयति
- दुर्नामोशणितं आशु नाशयति
- विषम नेत्ररोगं च
- सर्वरोगहरः
- सर्व ज्वरहरः श्रेष्ठो
- गर्भपोषण उत्तमः- जयन्त्या: पुष्पकैः सहः
Line of Treatment

- Ayurvedic Chikitsa Sutra
  - Nidana Parivarjana
  - Sthula, Bahu Dosha → Sanshodhana (Snigdha Yoga) → Santarpana.
  - Krusha → Sanshamana Laghu, Santarpana.

- Management*
  - Patients Education
    - DSME Diabetes self management Education
    - SMBG: Self Monitoring of Blood Glucose
    - CGM: continuous blood monitoring
  - Life Style Modification
  - Pharmacotherapy: Oral Anti diabetic drug Insulin

* As per guidelines of American Diabetes association, 2008
Assessment Criteria of The Patients

- Improvement in classical symptomatology after treatment.
- Laboratory investigations conducted before & after treatment.
- Statistical analysis (paired ‘t’ test) of obtained data.
Effect of Therapy on Symptoms (n=35)

- Prabhuta Mutrata: 77.77%
- Karapadatala Daha: 64.70%
- Karapadatala..: 59.43%
- Pindikodweshtana: 46.15%
- Daurbalya: 48.27%
- Shrama: 48.48%
- Khsudhadiikya: 33.33%
Effect of therapy on Blood & Urine Sugar level (n=35)
Effect of Therapy on Haematological parameters (n=35)

- Hb%: -0.96%
- WBC: -1.70%
- ESR: -1.43%
- Total RBC: -10.20%
Effect of Therapy on biochemical parameters (n=29)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uric acid</td>
<td>8.36%</td>
</tr>
<tr>
<td>Sr. Creat.</td>
<td>1.01%</td>
</tr>
<tr>
<td>Blood urea</td>
<td>-9.56%</td>
</tr>
<tr>
<td>Sr. Alk phos.</td>
<td>-1.37%</td>
</tr>
<tr>
<td>Sr. Glob.</td>
<td>0.10%</td>
</tr>
<tr>
<td>Sr. Alb.</td>
<td>-1.00%</td>
</tr>
<tr>
<td>Sr. Protein</td>
<td>-2.08%</td>
</tr>
<tr>
<td>SGOT</td>
<td>2.73%</td>
</tr>
<tr>
<td>SGPT</td>
<td>-12.29%</td>
</tr>
<tr>
<td>HDL</td>
<td>-4.33%</td>
</tr>
<tr>
<td>Sr. Trigly.</td>
<td>-2.78%</td>
</tr>
</tbody>
</table>
Discussion
**Observations:**

- **Genetic predisposition (52.72%)**

- **Age group:** 51–60 yrs (49.09%)

  Association of disease with increased age and heredity.

- History of past medication of allopathic drug and chronicity > 2 yrs was noted in 61.82% of patients.
Highly significant relief was observed in symptoms like Kara Pada Suptata, Shrama and Daurbalya (p < 0.001) whereas in symptoms like Karapadatala Daha, Pindikodweshtana and Prabhuta Mutrata significant relief was noted (P<0.05). This may be as drug acts on Dhatvagni, relives Srotorodha and thereby facilitates nourishment to depleted Dhatu.

Significant decrease in urine blood sugar and post prandial blood sugar was observed (p < 0.05). Drug showed fasting blood sugar lowering effect too.
Probable mode of action of drug

- **Madhumeha**
  - KP Prakopa
- **Kaphahara**
  - Pittahara
  - Ushna, Teekshna, Drava Guna
- **Dhatvagnimandya + Strotorodha**
  - Malavruddhi
  - Prasad Dhatu Kshaya
  - Vataprapkopa
- **LGV**
  - Yashada
  - Maricha - Pramathi
- **Acts on Dhatvagni + Strotorodha**
  - Prasad Dhatu Nirmana
  - No further Vataprakopa
  - Guru, Drava Guna
• *Laghu Malinivasant Rasa* shown maximum relief in both subjective and objective parameter.

• Drug shown highly significant relief in symptoms of *Karapada Tala Daha, Daurbalya, Karapada Suptata.*

• It also shown significant relief in *Prab hutamutrata* and *Pindikodweshtana* along with significant reduction in postprandial blood sugar level and urine sugar level.
1 out of 3 U.S. adults has prediabetes, and only 11% know they have it.

Monitor and/or lower your blood pressure and cholesterol:

- 30 minutes of activity per day five days per week or 150 per week.
- Helps lower risk of developing type 2 by 58%.

Eat a healthy diet.

Choose you:

- Eat well
- Prevent diabetes
- Move more
Thank you ...
Happy Doctors’ Day!