CLINICAL STUDY ON VIRECHANA KARMA IN THE MANAGEMENT OF MADHUMEHYA W.S.R. TO TYPE –II DIABETES - A CASE STUDY

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Dr. B.R.K.R Govt. Ayurvedic Medical College, Hyderabad, Telangana, India

INTRODUCTION
In modern era, sedentary life style attributed a lot of stress and over nutrition which made diabetes as one of the most prevalent diseases in the world. Although much advancement in modern medicine, still there is no clear and proper solution provided to the level of utmost satisfaction in redressing many ailments. Thus, it became a biggest silent killer in today’s world. In Ayurveda, it can be compared with Madhumeha, where the Kapha increases in quantity and also gets liquefied. (Bahu Dravah sleshma), followed by saithilya or sithlikarana (preparation of a base for the initiation of pathological events, in other words, body’s susceptibility for the disease), in addition association of Pitta and Vata vitiates meda, mamsa and sareera kleda produces, thus leading to various presenting features of the disease Madhumeha. Virechana karma is one such treatment module of Apatarpana explained by Acharya(s) in prameha.

Brief History of the patient:
M.RAVINDER 53 years old male patient, weighing 60 kg, presented in Dr. B.R.K.R Govt. Ayurvedic Medical College, Hyderabad O.P.D with persistent hypoglycaemic levels.

Past History: underwent treatment with hypoglycaemic drugs

Family History: Strong presence of Diabetes mellitus since past two generations, both Maternal and Paternal.

Patient’s condition when attended:
1. Patient is conscious, coherent and afebrile
2. Pulse : 78/min
3. Blood Pressure:130/80 mm of hg
4. Systemic Examination:
   • CVS : S₁S₂ heard
   • Lungs : B/L clear
   • P/A Soft

Asthavidha Parikshana:
1. Nadi : vatapitta
2. Mutra : bahumutrata
3. Mala : malabaddata, sama
4. Jivha : nirama
5. Sabda : prakrta
6. Sparsa : samaseetoshna
7. Druka : prakrta
8. Aakruti:Madhya (Height - 167.64cm, Weight – 60 kg, BMI – 21.3)

Dasavidha Parikshana:
1. Prakrti : vata kapha
2. Vikrti involves
   ➢ Dosa : vata
   ➢ Dusya : rasa, medo, ojas
   ➢ Sroto dusti : mutravaha srotas
3. Sara : madhyama
4. Samhanana: madhyama
5. Pramana : madhyama
6. Satva : madhyama

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7. Satmya: madhyama
8. Aharasakti: pravara
9. Vyayamasakti: madhyama
10. Vayah: madhyama

METHODS

Poorva karma:
- Deepana Pachana with Chitrakadi Vati 2 tablets b.i.d. for 3 days
- Sneha pana 30 ml Triphala Ghrita for 3 days
- Sarvanga Abhyanga with Tila taila for 2 days
- Bhaspa Sweda for 15 min for 2 days

Pradhana karma: Virechana with Abhayadi Modaka 1 tablet for three cycles.

Paschat karma: Samsrajana karma, laghu bhojana.

Investigations:
- Fasting blood sugar (FBS),
- Postprandial blood sugar (PPBS),
- Sugar in urine, etc. were carried out to confirm the diagnosis.

RESULTS

The table format below shows the data of before (BT) and after (AT) treatment results in FBS, PLBS, and HbA1C and in Urine sugars with the Virechana karma done in 3 cycles followed by laboratory test reports:

<table>
<thead>
<tr>
<th></th>
<th>FBS(mg/dl)</th>
<th>PLBS(mg/dl)</th>
<th>HbA1C</th>
<th>Urine Sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BT</td>
<td>AT</td>
<td>BT</td>
<td>AT</td>
</tr>
<tr>
<td>Pt-1</td>
<td>Cycle-1</td>
<td>209</td>
<td>256</td>
<td>10.6</td>
</tr>
<tr>
<td></td>
<td>Cycle-2</td>
<td>224</td>
<td>244</td>
<td>165</td>
</tr>
<tr>
<td></td>
<td>Cycle-3</td>
<td>124</td>
<td>198</td>
<td>144</td>
</tr>
</tbody>
</table>
**Vijaya Diagnostic Centre**

**LABORATORY TEST REPORT**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>10/05/2015 07:07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regn Date</td>
<td>10/05/2015 07:09</td>
</tr>
<tr>
<td>Name</td>
<td>MR. RAVINDER</td>
</tr>
<tr>
<td>Regn No</td>
<td>101596246</td>
</tr>
<tr>
<td>Ref By</td>
<td>Dr. PRAVEEN K MADIKONDA</td>
</tr>
<tr>
<td>Sample Type</td>
<td>Urine</td>
</tr>
</tbody>
</table>

**Sample Collection:** 10/05/2015 07:09  
**Print Date:** 10/05/2015 19:44  
**Age / Sex:** 53 Years / Male  
**Regn Centre:** Himayatnagar  
**Ref no.:**

## COMPLETE URINE EXAMINATION (CUE)

### Macroscope Examinations

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th>Biological Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Colour</strong></td>
<td>Pale Yellow</td>
<td>Pale Yellow</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Clear</td>
<td>Clear</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.038</td>
<td>1.016 - 1.022</td>
</tr>
<tr>
<td><strong>Reaction/pH</strong></td>
<td>Acidic (5.0)</td>
<td>4.6 - 8</td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td>Nil</td>
<td>Nil - Trace</td>
</tr>
<tr>
<td><strong>Urobilinogen</strong></td>
<td>Normal</td>
<td>0.2 - 1 mg/dL</td>
</tr>
<tr>
<td><strong>Bilirubin</strong></td>
<td>Negative</td>
<td>0 - 0.02 mg/dL</td>
</tr>
<tr>
<td><strong>Ketones</strong></td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td><strong>Nitrites</strong></td>
<td>Negative</td>
<td>Negative</td>
</tr>
</tbody>
</table>

### Microscopic Examinations

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pus Cells</strong></td>
<td>0-1/HPF</td>
<td>Reagent Strain Method (Photoelectric color comparison), Microscopy.</td>
</tr>
<tr>
<td><strong>R.B.C</strong></td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td><strong>Epithelial Cells</strong></td>
<td>0-1/HPF</td>
<td></td>
</tr>
<tr>
<td><strong>Casts</strong></td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td><strong>Crystals</strong></td>
<td>Nil</td>
<td></td>
</tr>
</tbody>
</table>
Dr. M. Pranitha
Clinical Study On Virechana Karma In The Management Of Madhumeha W.S.R. To Type –II Diabetes - A Case Study

Vijaya Diagnostic Centre
3-6-16 & 17, Street # 19, Himayatnagar, Hyderabad-29. Ph: 23429422 / 423 / 424 / 425.
email: info@vijayadiagnostic.com
www.vijayadiagnostic.com

LABORATORY TEST REPORT

Regn Date : 17/05/2015 09:01
Name : MR. RAVINDER
Regn No : 1015101380
Ref By : DR. PRAVEEN
Sample Type : Whole Blood - EDTA

GLYCOXYLATED HAEMOGLOBIN (HbA1c)

<table>
<thead>
<tr>
<th>TEST NAME</th>
<th>RESULT</th>
<th>BIOLOGICAL REFERENCE INTERVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycosylated Haemoglobin</td>
<td>10.6</td>
<td>&lt; 5.6% : Non Diabetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.7 - 6.4% : Increased Risk for Diabetes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 6.5% : Diabetic Range</td>
</tr>
</tbody>
</table>

Method : High Performance Liquid Chromatography (HPLC)

NABL Accredited
Certificate 9 M-0647

NARENDRA.B
BIOCHEMIST

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email: info@vijayadiagnostic.com
www.vijayadiagnostic.com

LABORATORY TEST REPORT

Regn Date : 17/05/2015 19:10
Name : MR. RAVINDER
Regn No : 1015101380
Ref By : SELF
Sample Type : Fluoride Plasma

FASTING PLASMA GLUCOSE (FPG)

<table>
<thead>
<tr>
<th>TEST NAME</th>
<th>RESULT</th>
<th>BIOLOGICAL REFERENCE INTERVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting Plasma Glucose</td>
<td>209</td>
<td>70 - 100 mg/dL</td>
</tr>
</tbody>
</table>

Method : Hexokinase

NABL Accredited
Certificate = 3 M-0647

NARENDRA.B
BIOCHEMIST
Dr. M. Pranitha1 Clinical Study On Virechana Karma In The Management Of Madhumeha W.S.R. To Type –Ii Diabetes - A Case Study

---

**Biochemistry**

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Method</th>
<th>Results</th>
<th>Units</th>
<th>Biological Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting - Plasma Glucose</td>
<td>Hexokinase</td>
<td>129</td>
<td>mg/dl</td>
<td>70 - 100 mg/dl</td>
</tr>
</tbody>
</table>

**Interpretation**: ADA guidelines for diagnosis of D.M in non-pregnant adults. Include RPG >= 200 mg/dl, FPG >= 126 mg/dl

---

**Suggested Clinical Correlation**

**Verified By**

**Authorized By**

**Consultant Biochemist**

---

*Ground Floor, Windsor Plaza, Nallakunta, Hyd- 44. Ph.: 040-6672 3900/01/02,*
<table>
<thead>
<tr>
<th>Investigation</th>
<th>Method</th>
<th>Results</th>
<th>Units</th>
<th>Biological Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBA1C (GLYCOSYLATED</td>
<td>HPLC</td>
<td>7.9</td>
<td>%</td>
<td>As per ADA Guidelines,</td>
</tr>
<tr>
<td>HAEMOGLOBIN)</td>
<td></td>
<td></td>
<td></td>
<td>NON-DIABETIC : 4.0 - 6.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DIABETIC:-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>i) Goal of Therapy : &lt; 7.0 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ii) Poor control : &gt; 8.0 %</td>
</tr>
</tbody>
</table>

**Specimen:** WHOLE BLOOD

**Interpretation:**
Hba1C is useful in monitoring long term blood glucose level control. Abnormal haemoglobin might affect the half life of red cells or in vivo glycation, any cause of shortened erythrocyte survival or decrease in mean erythrocyte age will affect HbA1C values. Specimen containing high amounts of HbF may result in lower than expected HbA1C. As per ADA guidelines the diagnosis of diabetes should be greater than 6.5 %.
**Patient ID:** 0100185125

**SID No.:** 01076939

**Ref By:** Dr. PRAVEEN.K.MADIKONDA

**Register Date Time:** 26/11/2015 07:22

**Sample Collected Date Time:** 26/11/2015 07:28

**Report Date Time:** 26/11/2015 09:10

---

**Investigation:** Fasting Plasma Glucose

**Method:** Hexokinase

**Results:** 145 mg/dL

**Units:** mg/dL

**Biological Reference Interval:** 70 - 100 mg/dL

**Specimen:** Plasma

**Interpretation:**

ADA guidelines for diagnosis of D.M in non-pregnant adults. Include RPG >= 200 mg/dL, FPG >= 126 mg/dL

---

**Suggested Clinical Correlation**

**Verified By:** Dr. Praveena

**Checked By:** DR. PRAVEENA

**DONE BY:**

**Consultant Biochemist:**

**Authorized By:**

**Consultant Biochemist:**
### Pathology

**Complete Urine Examination**

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Method</th>
<th>Results</th>
<th>Units</th>
<th>Biological Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen</td>
<td>URINE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td>Dipstick &amp; Microscopy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Dipstick &amp; Microscopy</td>
<td>Pale Yellow</td>
<td></td>
<td>Pale Yellow</td>
</tr>
<tr>
<td>Appearance</td>
<td></td>
<td>Clear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sediments</td>
<td></td>
<td>Absent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td></td>
<td>1.005</td>
<td>1.005-1.030</td>
<td></td>
</tr>
<tr>
<td>PH</td>
<td></td>
<td>5.0</td>
<td>5.0-8.0</td>
<td></td>
</tr>
<tr>
<td>Albumin</td>
<td></td>
<td>Negative</td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>sugar</td>
<td></td>
<td>Trace</td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Bile Salts &amp; Pigments</td>
<td></td>
<td>Negative</td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Ketone Bodies</td>
<td></td>
<td>Negative</td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Urobilinogen</td>
<td></td>
<td>0.2</td>
<td></td>
<td>&lt;1 EU/UL</td>
</tr>
<tr>
<td>Nitrate</td>
<td></td>
<td>Negative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Microscopic Examination**

- Pus cells: 2-3 HPF
- RBC: NIL
- Epithelial cells: 1-2 HPF
- casts: NIL
- Crystals: NIL
- Amorphous Material: NIL

**Suggested Clinical Correlation**

- **DONE**
- **CHECKED BY**

**Authorized By**

Dr. Vijaya Kumar A

**Consultant Pathologist**

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### Biochemistry

<table>
<thead>
<tr>
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<th>Results</th>
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<th>Biological Reference Intervals</th>
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</thead>
<tbody>
<tr>
<td>Fasting Plasma Glucose</td>
<td>Hexokinase</td>
<td>124</td>
<td>mg/dL</td>
<td>70 - 100 mg/dL</td>
</tr>
</tbody>
</table>

**Specimen**: Plasma  
**Interpretation**: ADA guidelines for diagnosis of D.M in non-pregnant adults. Include RPG >= 200 mg/dL, FPG >= 126 mg/dL

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Method</th>
<th>Results</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine Sugar - Fasting</td>
<td>Strip</td>
<td>NIL</td>
<td></td>
</tr>
</tbody>
</table>

**Specimen**: Urine

---

**Suggested Clinical Correlation**

**Done By**

**Checked By**

**Verified By**

**Authorized By**

**Consultant Biochemist**

**Consultant Biochemist**
Biochemistry

HbA1c (GLYCOXYLATED HAEMOGLOBIN)

Investigation | Method | Results | Units | Biological Reference Values
--- | --- | --- | --- | ---
HbA1c | HPLC | 7.8 | % | As per ADA Guidelines,
NON-DIABETIC: 4.0 - 6.0
DIABETIC:
1) Goal of Therapy: < 7.0 %
2) Poor control: > 8.0 %

Specimen: WHOLE BLOOD

Interpretation:
HbA1c is useful in monitoring long-term blood glucose levels. An abnormal hemoglobin might affect the half-life of red cells or in vivo glycation. Any cause of shortened red cell survival or decrease in mean erythrocyte age will affect HbA1c values. Specimens containing high amounts of HbF may result in lower than expected HbA1c. As per ADA guidelines, the diagnosis of diabetes should be greater than 6.5 %.

Suggested Clinical Correlation

Verified By
Dr. Praveena
Consultant Biochemist

Authorized By
DR. PRAVEENA
Consultant Biochemist

Page: 1/2
DISCUSSION

1. Deepana-Pachana drug should be administered prior to Aahhyantara Snehapan because of their inherent properties of Amapachana and also helps in increasing the quantum of Agni.

2. Amapachana helps to reduce the Picchilta of morbid matter so that they can be easily dislodged.

3. In symptoms such as Kara Pada Tala Daha, Atisweda and Nidra-Tandra, Virechana showed good relief, as Virechan is best treatment for Pitta dosha.

4. Virechana karma controls the levels of Glucose and HbA1c levels by stimulating the β-cells of pancreas.

CONCLUSION

Madhumeha is a complicated disease in which every cell of human physiology is affected.

Virechana rejuvenates each and every cell of the body by nourishing the dhatus.

Virechana karma has its multi-dimensional effect on Madhumeha by correcting the metabolic impairment.
By following regular Ayurvedic way of life-style principles is always a best way to prevent further disease progression and to prevent complications.
Hence considering the positive and promising results attained through this case study, further similar research on large sample should be encouraged to enlighten Ayurvedic solutions.
Analysis of the results shown here are to enlighten scientific world about Ayurvedic solutions to carry on further studies for the same.

REFERENCES
5. Susruta Samhita by Dr. Ambika Dutta Sastry Chowkambha Orientalia Varanasi.
6. Astanga Hrdayam by Dr. Brahmananda Tripathi Chowkambha Orientalia Varanasi.