A COMPARATIVE STUDY OF VAMANA AND VIRECHANA IN MADHUMEHA W.S.R NIDDM TYPE-2

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ABSTRACT

Ayurveda advocates two kinds of treatment measures, namely Samshodhana and Samshamana. The vitiated doshas, which are eliminated from the Urdhwamarga i.e.by mouth is called Vamana, through Adhomarga (guda) is called Virechana. Vamana is indicated mainly for kapha dosha and kapholbana samsargaja or sannipataja doshas. Virechana is indicated for pitta dosha, pitta samsargaja doshas, kapha and vata doshas. Both Vamana and Virechana are the best treatment procedures for kledanashana, which is the key factor of prameha samprapti. In the modern system of medicine Madhumeha can be compared to Diabetes mellitus. In Ayurveda several treatment modalities are available to deal with the Madhumeha. Among these Vamana and Virechana have great importance in the treatment of Sthoola and Balawan Madhumehi.

Keywords:Vamanakarma; Virechanakarma; Sthoola Madhumeha; Diabetes mellitus; Trikatu churna, Nimba taila, Ikshwaku beeja majja, Abhayadi Modaka.

INTRODUCTION:
Vamana is indicated mainly for kapha dosha and kapholbana samsargaja or sannipataja doshas. Virechana is indicated for pitta dosha, pitta samsargaja doshas, kapha and vata doshas. Both Vamana and Virechana are the best treatment procedures for kledanashana, which is the key factor of prameha samprapti. Madhumeha is a disease Known to mankind since Vedic period. The term “meha” is attributed to ‘Madhumeha’. And the word “Madhumeha” is applied to all “prameha”. The Sthoola Madhumeha is due to Kapha, Pitta and doshavarananajanya Vata predominance. Vataprakopa is due to avarana caused, mainly by the vitiation of kapha and Pitta. In case of sthoulya; kapha, meda and moortra vardhaka factors are the main causes. In modern system of medicine, Madhumeha can be compared to Diabetes mellitus, which is known as “Richman’s disease” particularly, because a person who is able to enjoy the pleasure of life without any perceptible exercise is usually affected with this disease. The importance of over nutrition is shown by the fact that, above the age of 40 years, 80% of the people who suffer from Type-2 diabetes are considerably over weight. So obesity is the risk factor for the Diabetes mellitus and complications like Stroke, Ischemic heart disease, End stage renal disease, chronic infections etc may occur.

Objectives of the study:
1) To evaluate the efficacy of Vamana karma in Madhumeha. (NIDDM Type-2)
2) To evaluate the efficacy of Virechana Karma in Madhumeha. (NIDDM Type-2)
3) To evaluate the comparative efficacy of Vamana and Virechana karmas in Madhumeha. (NIDDM Type-2).
METHOD
Research Design:
Comparative clinical trial was conducted. The patients were assigned in to 2 groups.
Group-A—15 patients were received classical Vamana karma.
Group-B---15 patients were received classical Virechana karma.
Source of Data:
Patients suffering from Madhumeha were selected from the OPD and IPD of Jayachamarajendra Institute of Indian Medicine Hospital (Teaching Hospital of G.A.M.C.) Bangalore -09.
Sample size & Grouping:
The sample size of 30 patients were taken for the study.
Group-A—15 patients received Vamana karma.
Group-B---15 patients received Virechana karma.
Diagnostic criteria:
The diagnosis of the disease Madhumeha is made according to signs and symptoms mentioned in Ayurvedic and Modern texts. These are as follows-
- Prabhuta mutrata
- Avila mutrata
- Pipasa adhikya
- Hastapadatala daha
- Increased levels of FBS & PPBS
Inclusion criteria:
Patients satisfying the following criteria were taken for study. They are –
- Obese diabetic patients having good physical strength.
- Patients having the history of disease up to 2 years.
- The patients between the age group of 25 to 65 years.
- FBS ranges from 110 mg/dl up to 250 mg/dl
- PPBS range from 140 mg/dl up to 300 mg/dl
- Patient fit for Vamana and Virechana.
- Patients with uncomplicated NIDDM TYPE 2.
Exclusion criteria:
If any of the following conditions were noted, such patients were excluded from the study. They are –
- IDDM type 1 and 2.
- Patients having the history of disease more than 2 years.
- Patients suffering with other systemic disorders.
- Patients unfit for Vamana and Virechana karmas.
- Patients below the age group of 25 years and above 65 years of age.
- Patients with complications of NIDDM type 2.
Plan of study:
Shodhana therapy is divided into Poorvakarma, Pradhanakarma and Paschatkarma.
Poorkarma: For both Vamana and Virechana groups Poorvakarma is same. Following points were considered in Poorvakarma.
Deepana-pachana – Trikatu churna 3 gms, 3 times a day ½ hr before food, with hot water, till nirama lashkanas appears.6
Snehapana:
For snehapana, Nimba taila7 was selected. After attaining appropriate niramata, the snehapana was started with Hruseeyasi matra i.e. 30 ml and gradually increased according to Agni and Koshtha till na ati snigdha lakshanas appears8.
Vishrama kala (Abhyanga and sweda):
As sweda is contraindicated in Madhumeha, the patients were administered with abhyanga and sukoshna jala snana. For abhyanga moorchita tila
Niddm Type-2 taila was used. Vishrama kala for Vamana is 1 day and for Virechana is 3 days⁹.

Pradhana karma:
A) Vamana karma:
For Group-A patients, After 1 day Vishrama kala, patients were subjected to Vamana after assessing the status of patient’s koshta, bala, etc. The medicine used was Ikshwaku beeja majja yoga¹⁰.

B) Virechana karma:
For Group-B patients, after 3 days Vishrama kala, patients were subjected to Virechana after assessing the status of patient’s koshta, bala, etc. The medicine used was Abhayadi Modaka¹¹.

Paschat karma:
Samsarjana karma:
In both the groups, Samsarjana krama was performed depending upon the Shuddhi¹².

Follow up:
Follow up for one month. During this period, placebo capsules were given and patients were advised to follow the diet.

Investigations and Selection of Patients:
Subjective parameters:
The following parameters were taken for assessing the patient. They are –
1. Prabhoota mootrata
2. Avila mootrata
3. Pipasadhiyka
4. Kara-pada daha and suptata

Objective parameters:
1. Fasting Blood Sugar
2. Post Prandial Blood Sugar
3. Fasting Urine Sugar
4. Post Prandial Urine Sugar

Method of assessment of Grading:
Grading of parameters:
The results were evaluated by observing subjective and objective parameters by grading method. The grading was done in the following manner.

Subjective parameters:
A) Prabhuta mutrata:

Frequency
Grade: 0 – 3-5 times/day; 0 times/night
1 – 5-7 times/day; 1-2times/night
2 – 7-9 times/day; 3-4 times/night
3 – >10 times/day; > 4 times/night

B) Avila mutrata:
Grade: 0 – Clear 2 – Buffy
1 - Milky white 3 - Turbid

C) Pipasadhiyka:
Grade: 0 – Normal 2 – Moderately increased
1 – Slightly increased 3 - Severely increased

D) Kara-pada daha and Suptata:
Grade: 0 – Absent 3 – Mild but continuous
1 – Occasional 4 – Severe and continuous

Objective Parameters:
01. FBS (Fasting blood sugar) –
FBS levels (mg/dl),
Grade: 0 - 110 & below
1 - 111 -150
2 - 151-190
3 - 191-230
4 - 231-270

02. PPBS (Post Prandial blood sugar) –
PPBS Levels (mg/dl),
Grade: 0 - 140 & below
1 -141-180
2 -181-220
3 -221-260
4 -261-300

03. Urine sugar –
Grade: 0- Nil/ Absent
1- 0.5 %
2- 1.0 %
3- 1.5 %
4- 2 % and above

Overall Assessment
The overall assessment of the study was performed by considering all the parameters of assessment and for that following method of overall grading was used.
01. **Good response** - Patients with 60% and above results by considering all subjective and objective parameters.

02. **Moderate response** - Patients with 30% to 59% results, by considering all subjective and objective parameters.

03. **Poor response** - Patient with 1% to 29% of results by considering all subjective and objective parameters.

04. **No response** - Patients with no change after considering all Subjects and Objective parameters.

**OBSERVATIONS AND RESULTS**

The effect of therapy on various parameters studied under two headings.

A) Within the groups

B) In between Groups

**A) Statistical results within the groups:**

**Table No. 1: The Statistical results of Group-A (Vamana):**

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subjective Parameter</th>
<th>Mean</th>
<th>S.D</th>
<th>S.E</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prabhootha mutrata</td>
<td>1.81</td>
<td>0.809</td>
<td>0.208</td>
<td>8.65</td>
<td>&lt; 0.001</td>
<td>H.S.</td>
</tr>
<tr>
<td>2</td>
<td>Avila moootrata</td>
<td>1.53</td>
<td>0.644</td>
<td>0.166</td>
<td>9.20</td>
<td>&lt; 0.001</td>
<td>H.S.</td>
</tr>
<tr>
<td>3</td>
<td>Pipasadhiyka</td>
<td>1.67</td>
<td>0.49</td>
<td>0.126</td>
<td>13.20</td>
<td>&lt; 0.001</td>
<td>H.S.</td>
</tr>
<tr>
<td>4</td>
<td>Kara-pada daha &amp; suptata</td>
<td>1.33</td>
<td>0.49</td>
<td>0.126</td>
<td>10.51</td>
<td>&lt; 0.001</td>
<td>H.S.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>FBS</td>
</tr>
<tr>
<td>35.87</td>
</tr>
<tr>
<td>16.18</td>
</tr>
<tr>
<td>4.177</td>
</tr>
<tr>
<td>8.597</td>
</tr>
<tr>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H.S.</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>PPBS</td>
</tr>
<tr>
<td>75.67</td>
</tr>
<tr>
<td>33.46</td>
</tr>
<tr>
<td>8.639</td>
</tr>
<tr>
<td>8.76</td>
</tr>
<tr>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H.S.</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>F.U. Sugar</td>
</tr>
<tr>
<td>0.233</td>
</tr>
<tr>
<td>0.41</td>
</tr>
<tr>
<td>0.105</td>
</tr>
<tr>
<td>2.20</td>
</tr>
<tr>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>S.</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>P.P.U. Sugar</td>
</tr>
<tr>
<td>0.60</td>
</tr>
<tr>
<td>0.507</td>
</tr>
<tr>
<td>0.130</td>
</tr>
<tr>
<td>4.527</td>
</tr>
<tr>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H.S.</td>
</tr>
</tbody>
</table>

**Statistical conclusion:**

Statistical Results within the group are calculated by using “One Tailed Paired T Test.”

1) All the subjective parameters shows highly significance, as p value is < 0.001.
2) The mean effect of *Prabhootha mutrata* before and after the treatment is high as compared with other parameters.
3) The mean effect of *Kara-pada daha & suptata* before and after the treatment is less as compared with other parameters.
4) The objective parameters FBS, PPBS and PP urine sugar shows highly significance as p value is < 0.001.
5) The objective parameter Fasting urine sugar shows significant change as p value is < 0.05.
6) The mean effect of P.P.B.Sugar before and after the treatment is high as compared with other parameters.
7) The mean effect of Fasting Urine Sugar before and after the treatment is less as compared with other parameters.

**Table No. 2: The Statistical results of Virechana (Group-B):**

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subjective Parameter</th>
<th>Mean</th>
<th>S.D</th>
<th>S.E</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prabhootha mutrata</td>
<td>1.73</td>
<td>0.46</td>
<td>0.118</td>
<td>10.69</td>
<td>&lt; 0.001</td>
<td>H.S.</td>
</tr>
</tbody>
</table>
Statistical conclusion:
Statistical Results within the group are calculated by using “One Tailed Paired T Test.”
1) All the subjective parameters shows highly significance, as p value is < 0.001.
2) The mean effect of Kara-pada daha & suptata before and after the treatment is high as compared with other parameters.
3) The mean effect of Avila mootrata before and after the treatment is less as compared with other parameters.
4) The objective parameters FBS, PPBS and PP urine sugar show highly significance as p value is < 0.001.
5) The objective parameter Fasting urine sugar shows Non-significant change as p value is > 0.05.
6) The mean effect of P.P.B.Sugar before and after the treatment is high as compared with other parameters.
7) The mean effect of Fasting Urine Sugar before and after the treatment is less as compared with other parameters.

Table No. 3: Showing the comparative effect of Group-A & Group-B:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subjective Parameter</th>
<th>Gr.</th>
<th>Mean</th>
<th>S.D</th>
<th>S.E</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prabhoo ta mutrata</td>
<td>B</td>
<td>1.73</td>
<td>0.46</td>
<td>0.118</td>
<td></td>
<td></td>
<td>N.S.</td>
</tr>
<tr>
<td>2</td>
<td>Avila mootrata</td>
<td>A</td>
<td>1.53</td>
<td>0.644</td>
<td>0.166</td>
<td>0.00</td>
<td>&gt; 0.05</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>1.53</td>
<td>0.52</td>
<td>0.134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pipasadhikya</td>
<td>A</td>
<td>1.67</td>
<td>0.49</td>
<td>0.126</td>
<td>1.058</td>
<td>&lt; 0.05</td>
<td>S.F.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>1.87</td>
<td>0.52</td>
<td>0.134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Kara-pada daha &amp; suptata</td>
<td>A</td>
<td>1.33</td>
<td>0.49</td>
<td>0.126</td>
<td>4.456</td>
<td>&lt; 0.001</td>
<td>H.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>2.21</td>
<td>0.56</td>
<td>0.144</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Objective parameters

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subjective Parameter</th>
<th>Gr.</th>
<th>Mean</th>
<th>S.D</th>
<th>S.E</th>
<th>t-value</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F.B.S</td>
<td>A</td>
<td>35.87</td>
<td>16.18</td>
<td>4.177</td>
<td>0.075</td>
<td>&gt; 0.05</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>35.21</td>
<td>28.44</td>
<td>7.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>P.P.B.S</td>
<td>A</td>
<td>75.67</td>
<td>33.46</td>
<td>8.639</td>
<td>1.002</td>
<td>&gt; 0.05</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>88.60</td>
<td>34.84</td>
<td>8.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F.U.Sugar</td>
<td>A</td>
<td>0.233</td>
<td>0.41</td>
<td>0.105</td>
<td>0.407</td>
<td>&gt; 0.05</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>0.17</td>
<td>0.41</td>
<td>0.105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P.P.U.Sugar</td>
<td>A</td>
<td>0.60</td>
<td>0.57</td>
<td>0.130</td>
<td>1.08</td>
<td>&gt; 0.05</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>0.83</td>
<td>0.56</td>
<td>0.144</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Statistical conclusion:
To compare the Statistical Results in-between 2 Groups, the ‘un-paired t’-test is used.

1) The Subjective parameter Pipasadhikya shows highly significance, as ‘p<0.05’. By comparing the Mean, SD, SE of both the Groups, Group-B is more effective than Group-A in case of Pipasadhikya.

2) The Subjective parameter Kara-pada daha & suptata shows highly significance, as ‘p<0.001’. By comparing the Mean, SD, SE of both the Groups, Group-B is more effective than Group-A in case of Kara-pada daha & suptata.

OVER ALL ASSESSMENT

Table No. 4: The Overall Assessment.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Assessment</th>
<th>No. of patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Good response</td>
<td>21</td>
<td>70%</td>
</tr>
<tr>
<td>02</td>
<td>Moderate response</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>03</td>
<td>Poor response</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>04</td>
<td>No response</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Out of 30 patients, 21 patients (70%) got good response, 9 patients (30%) were responded moderately and no patients were responded as poor response and no response.

DISCUSSION ON RESULTS IN GROUP-A & IN GROUP-B:

In Group-A, out of 15 patients, 9 (60%) patients got good response and 6 (40%) patients were responded moderately, no patients were found as poor and no response.

In Group-B, out of 15 patients, 12 (80%) patients got good response and 3 (20%) patients were responded moderately, no patients were found as poor and no response.

Out of 30 patients, 21 patients (70%) got good response, 9 patients (30%) were responded moderately and no patients were responded as poor response and no response.

DISCUSSION ON TREATMENT RESULTS:

Vamana:
Parameters like vegiki, antiki and laingiki were noted by observing the procedure and interrogating with patient. In the present study 53.33% patients had 8 Vegas, 26.66% patients had 7 vegas. 20% patients had 6 vegas. Maniki pareeksha was not done in this study due to some technical difficulties.

Virechana
Parameters like vegiki, antiki and laingiki were noted by observing the procedure and interrogating with patient. In the present study 73.33% patients had 16-20 Vegas, 26.66% patients had 10-15 vegas.
0.001. The objective parameters FBS, PPBS and PP urine sugar shows highly significance as p value is < 0.001. The objective parameter Fasting urine sugar shows significant change as p value is < 0.05.

In Group-B, All the subjective parameters shows highly significance, as P value is < 0.001. The objective parameters FBS, PPBS and PP urine sugar shows highly significance as p value is < 0.001. The objective parameter Fasting urine sugar shows non-significant change as p value is > 0.05; because of less sample size, parameter Fasting urine sugar shows statistically non-significant change.

Statistical results In-between Group-A and Group-B; both the Groups are highly significant. There is no statistically significant difference between Group-A and Group-B in case of subjective and objective parameters except in case of Pipasadhikya and Kara-Pada daha and Suptata.


CONCLUSION
• The disease Madhumeha is Tridoshaja. Shoolu Madhumehi will have Kapha predominance, Pitta predominance and Vata predominance due to avarana.
• Bahu drava shleshma, Ati kleda and bahu abaddha dushya’s play important role in the manifestation of Madhumeha.
• Shoolu Madhumehi comes under Apathyanimitta Prameha. It can be correlated with NIDDM Type 2.
• Vamana and Virechana are apatarpama type of chikitsa and in Madhumeha successfully used for Kledanashana.

A close perusal of the observation and inference that can be drawn leads to the following conclusions –
1. Vamana and Virechana karmas are good and effective treatments in Shoolu Madhumeha and also showed the highly significant results.
2. In earlier case of Shoolu Madhumeha, classical Vamana and Virechana karma is proved to be most effective.
3. Compare to Vamana, Virechana is more effective in case of Pitta predominance.
4. Along with Vamana and Virechana karmas, administration of pathya ahara viharas will give more effect.

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