**INTRODUCTION**

Madhumeha is one of the Ashtamaharoga urinary disorders mentioned by Charakacharya. Madhumehi passes urine having quality concordant with madhu in its colour, taste, smell, and consistency. Madhumeha unlike other disorder is a disease of bastigatavikara where tridoshas and dashadoshya’s like rasadi and gambeera majjadidhatu’s are involved which highlights the severity of disorder. Although a range of oral hypoglycemic agents have been discovered and replacement therapy for treatment of this grave disease, but all this provides a palliative role and cure of diabetes mellitus is still remote possibility. As man has entered in 21st century with modernization in each and every walks of life, he has also paid for it by living in several stressful psychological conditions. However, these stressors play certain role in development, progression, prognosis as well as management of disease. Also faulty food habits play major role in pathogenesis of number of diseases. Due to all these lifestyle changes people suffer from diseases or changes in body which are expected to happen in old age and thus day by day life of people is decreasing. So to avoid these things along with lifestyle changes “Rasayanaushadhi” will help. So keeping in mind the Rasayan and Madhumehaghna property of Guduchi study is carried out.

**EXCLUSION CRITERIA:**
1. Type 1 diabetes mellitus
2. D.M with pregnancy
3. Gestational Diabetes
4. FBS more than 250mg/dl     PPBS- more than 350mg/dl
5. HbA1C more than 8mosmol/ml
6. Diabetes Mellitus with any other complications.

**METHODOLOGY:**
Approval of ethical committee REF NO/PG/IEC/948/2016
Patients were selected.
Informed written consent obtained from all subjects fulfilling the inclusion criteria
Confirmation of diagnosis
Patients were given Guduchi Swaras with glimeperide
Regular follow up: Three months
Assessment of results and statistical analysis.

**PARAMETERS FOR STUDY:**

<table>
<thead>
<tr>
<th>Clinical symptoms</th>
<th>Block 1 (SWARAS)</th>
<th>Block 2 (GLIMEPERIDE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyphagia</td>
<td>Guduchi Swaras</td>
<td>Glimeperide</td>
</tr>
<tr>
<td>Polydipsia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyuria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycosuria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polydipsia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyurea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysuria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constipation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digestion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anemia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**KEYWORDS**

Madhumeha, Diabetes Mellitus, Guduchi Swaras, Glimeperide 1mg.
Laboratory investigations:
- FBSL
- PPBSL
- HbATC
- Urine analysis
- BUL
- SR. CREAT

Data analysis: 2 test and Wilcoxon rank test.

OBSERVATION, RESULTS AND DISCUSSION:

Demographic profile:
- **Age:** In this study 3 (6%) patients were in 30-40 age group, 16 (32%) patients were in 40-50 age group, 10 (20%) patients were in 50-60 age group, 16 (32%) patients were in 60-70 age group and 5 (10%) patients were in 70-80. Maximum no of patients are above 40 years of age. It reveals that the individuals are more affected by type 2 DM after 4th decade. The reason for this may be that the environmental factors like stress, wrong food habits, sedentary lifestyle etc., along with natural aggravation of vata at this stage of age.
- **Sex:** In this study 28 (56%) patients from trial group were females and 22(44%) from trial group were males. Majority of the patients were female. Here the reason are stress,food habits, sedentary lifestyle.
- **Religion:** In this study 35 (70%) patients were Hindus and 15 (30%) from trial group were Muslims. Majority of the patients belong to Hindu community. We can’t make special conclusion from this data because this occurrence is mainly due to demographic situation pertaining to this region.
- **Type Of Work:** 51 (10%), 42 (84%), 36 (6%) patients in the trial group having laborious, active and sedentary type of work respectively. Occupation plays major role in the manifestation of Madhumeha. The level physical activity the patient has in daily routine, play important roles in onset of Diabetes Mellitus. The dramatic increase indicates that lifestyle factors (sedentary lifestyle) may be particularly important in triggering the genetic elements that cause this type of diabetes. Here the stress factor was dominant in the active group so in this study maximum patients were having active type of occupation.
- **F/H/DM:** 35 (70%) patients in the trial group having positive family history for DM. While 15 (30%) patients in the trial group having negative family history for DM. Maximum patients had positive family history for DM. It suggests that type 2 Diabetes Mellitus has a strong genetic component.
- **Ahara:** 43 (86%) patients in the trial group having mix (veg & non veg) type of diet and 7 (14%) patients have only veg diet. Maximum patients had mixed i.e. both vegetarian and nonvegetarian diet. This leads to agnidusthi, as mansahar is guru; also it causes mansa and medodusti by samanavishesh siddhant (Principle of similarity and dis-similarity).
- **Vyasana:** 12 (24%), 17 (34%), 26 (52%), 14 (28%), patients in trial group having tea, tobacco, mishri and alcohol as there vyasana (habit) respectively. Majority of the patients were having the addiction of tea, tobacco, mishri and alcohol. These factors mainly responsible for the production of Vata and leads to cause digestive problems.
- **Prakriti:** 12 (2%) patients in trial group having kaphapitta prakriti, 3 (6%) patients having kapha vata prakriti, 0 (0%) patients having pitta kapha prakriti. 19 (38%) patients having pitta vata prakriti. 3 (6%) patients having vata kapha prakriti. 24 (48%) patients having vatta pitta prakriti.
- **Aharshakti:** In trial group 22(44%), 0(0%), 28(56%) patients having aawar, pravara and madhyam aaharshakti respectively. Maximum no. of patients were having madhyam and patients were having aawara Aaharshakti. It indicates jatharagnimandya was not there but dhatwagni and bhutagni were hampered widely which can be co-related to metabolic derangement that ultimately leads to ama formation.

**Vyayamshakti:** In trial group 28 (56%) patients were having aawar, 3 (6%) patients were having pravara and 19 (38%) were having madhyam vyayamshakti. Majority no. of patients had aawara vyayamshakti. This data is relevant to classics that Avayama is one of the causes to precipitate the Madhumeha. Avayama leads less consumption and more restoration of fat in the body precipitate sthaliya.

**Statistical Analysis:**

<table>
<thead>
<tr>
<th>LAKSHANA</th>
<th>MEDIAN</th>
<th>WTILCOXAN RANK</th>
<th>P-VALUE</th>
<th>% EFFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRABHUTMUTRATA</td>
<td>1</td>
<td>0</td>
<td>0.000</td>
<td>79.2</td>
</tr>
<tr>
<td>PIPASA</td>
<td>1</td>
<td>0</td>
<td>0.000</td>
<td>52.6</td>
</tr>
<tr>
<td>ABHYAVRANSHAKTI</td>
<td>1</td>
<td>0</td>
<td>0.000</td>
<td>57.8</td>
</tr>
<tr>
<td>KARPADTALADAHA</td>
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<td>0</td>
<td>0.000</td>
<td>56.3</td>
</tr>
<tr>
<td>AVILMUTRATA</td>
<td>0</td>
<td>0</td>
<td>0.003</td>
<td>50.0</td>
</tr>
<tr>
<td>SWEDADHIKYA</td>
<td>1</td>
<td>0</td>
<td>0.000</td>
<td>62.3</td>
</tr>
<tr>
<td>DAURBALYA</td>
<td>1</td>
<td>0</td>
<td>0.000</td>
<td>45.7</td>
</tr>
<tr>
<td>NIDRADHYA</td>
<td>0</td>
<td>-2.449</td>
<td>0.014</td>
<td>60.0</td>
</tr>
<tr>
<td>URINE(R)</td>
<td>0</td>
<td>-4.490</td>
<td>0.000</td>
<td>44.9</td>
</tr>
<tr>
<td>ALASYA</td>
<td>0.5</td>
<td>-4.472</td>
<td>0.000</td>
<td>74.1</td>
</tr>
</tbody>
</table>

| % EFFECT |

Discussion on probable mode of action of drug:
- **Guduchi:**
  - Katu, Tikta and Kashaya rasa
  - Madhura vipaka
  - Ushna vriya. (hot in potency)
- **Kapha Pittagghna, Mutakrichhrjait, Grah and Dahashamak**
- **Guduchi:**
  - Katu, Katu, Kashaya rasa; Laghu gunda produces rookshana effect and they are having opposite qualities to that of kapha and meda hence they act as meghagna and kaphagna.
  - **Bahudravatmaka kapha** is the main dosha visheshha involved in Madhumeha. These Tikta, Katu, Kashaya rasa possess the kaphahara, meda and kleda upashoshna properties, so bahudrava will be reduced by the absorption of excessive fluid from the body.
  - It reduces the formation.
  - **Guduchi** is described having property mutakrichhagha...
hence it is having gamitva to that strotas. Prabhoot mutrta, Avilmutrata, Mutramadhurya are the symptoms which reduce effectively by its use.

Thus Guduchi due to its rasa, virya and vipaka help to normalize the functions of jathragni and dhatwagni. That in turn helps to form dhatus in proper proportion with samyak quality. Thus once these factors get normalize in the body they in turn clear the path of vata which stops the depletion of vital dhatus and normalize the physiology of the body and disease Madhumeha get alleviate.

Madhu:
• Sheet virya (cold in potency)
• Chakshushya (improves vision)
• Deepana (improves digestion power)
• Swarya (improves voice)
• Heals ulcer
• Bestows softness - enters into minute pores
• Purifies the channels or tissue pores
• Reduces obesity
• Yogavahi

As it is Yogavahi, when it is combined with another drug its potency is aroused and it supports the activity of other drug.

The objective parameters showed high significance rate statistically with Guduchi swaras and anupana madhu as an adjuvant with Glimeperide. The subjective parameters Quantity of urine, pipasa, Kshudha, Karapadatala daha, Avilmutrata, Mutramadhurya, Pindikoudvestanam, Total global count showed high significance rate statistically with Guduchi swaras and anupana madhu as an adjuvant with glimeperide.

CONCLUSION:
Guduchi swaras with anupana madhu is highly effective as an adjuvant with Glimeperide in Madhumeha (Type 2 DM) with uncontrolled BSL.

ABBREVIATIONS:
• PR MU - Prabhut mutrata
• PIP - Pipasa
• ABH SHK - Abhyavarana Shakti
• KP DA - Karpadatala daha
• AVI MU - Avil mutrata
• SWE - Svedadhiyka
• DAU - Daurbalya
• NID - Nirdadiyka
• ALA - Alasya
• FBSL - Fasting blood sugar level
• PPBSL - Post prandial blood sugar level
• BUL - Blood urea level
• SR. CREAT - Serum creatinine
• F/H/O DM - Family history of diabetes mellitus

REFERENCES:
5. Harsh Mohan’s Pathology quick review, 2nd ed,2006 reprint ,jaypee brothers,medical pub, new delhi, India ,pp842
7. Harsh Mohan’s Pathology quick review, 2nd ed,2006 reprint ,jaypee brothers,medical pub, new delhi, India ,pp 621
9. Research in Ayurveda; Dr. M.S. Baghel, Edited by Dr. G.K. Jain, Mridu
10. Ayurvedic publications and Sales, 2007