



Clinical management of Madhumeha with Akulyadi Yoga


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Introduction: The advancement of industrialization and communication is contributing towards sedentary life styles; in turn causing chronic non-communicable diseases like Madhumeha vis-à-vis Diabetes Mellitus, etc. in fact Ayurveda is the first life science, which identified, diagnosed and managed Madhumeha. Madhumeha / DM are the present burning issue alarming the world. **Aim & Objective:** Management of Madhumeha with Akulyadi Yoga. **Methodology:** It is a clinical study. Diabetes Mellitus management with Akulyadi Yoga as a Shamana Chikitsa. Akulyadi Yoga ingredients are hypoglycemic agents collected from local area and prepared under GMP conditions, weighing about 500mg tablet form. Patients of Madhumeha fulfilling the criteria of diagnosis were selected in the present study. **Observation:** The male female ratio in the study is approximately 3:2 patients and 75% patients were recorded with sedentary life styles. In the present study 60% patients had family history and rest of the 40% patients had no family history of Madhumeha. **Discussion:** The key parameters to assess "glycemic" condition of Madhumeha exhibit, FBS with a mean difference of 48.605mg and PPBS with mean difference of 117.18mg for after too before data. **Conclusion:** This is strong evidence to state that the Akulyadi Yoga is good hypoglycemic agent combination of Ayurveda.

Keywords: Madhumeha, Akulyadi Yoga, Diabetes Mellitus

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Introduction

Ayurveda the heritage of Indian civilization is not only a medical system but also a full-fledged science, consisting of all medical and allied branches essential to lead a healthy life. Being a science *Ayurveda* believes in supreme power.

The *Ayurveda* has attracted the attention of global population specially the developed countries since ages. The main reason behind this was the holistic approach of *Ayurveda*, humanitarian approach, simplicity of the procedures, cure of chronic and incurable disease safer and non-toxic herbal resources.[1]

The purpose of Ayurveda is to maintain health and to treat diseases, in order to achieve the ultimate goal. It is applicable in every fact of human life, with its own unique. A principle in understanding any disease by either preventive or curative wedge is necessary. This may be the fact due to which this science is persisting through centuries beginning from time immemorial.[2]

Scientific and technological progress has made man highly sensitive and critical; there by giving rise to different types of health problems. The advancement of industrialization and communication is contributing towards sedentary life styles; in turn causing chronic non-communicable diseases like diabetes mellitus, etc. in fact it is the first life science, which identified diagnosed and managed diabetes. In spite of all sorts of advancement of science man is not able to stay himself in the boat of happy and healthy life. So it is disadvantage rather than an asset.

Madhumeha is a disease known to mankind since Vedic period and it is mentioned as one of the 20 obstinate urinary disorders. It is the present burning issue alarming the world. With synonym of 'Rich man'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.[3]

Madhumeha is a chronic metabolic disorder and the symptom appears in relation with *Mootravaha Samsthana*. Diabetes mellitus is a chronic metabolic endocrinal disorder, which has similar pathogenesis as the *Madhumeha*. Thus the comparison between *Madhumeha* and DM is justifiable.[4]

In Ancient treatise we find a vivid description

Of the disease solely attributed to metabolic derangement along with genetic predisposition. *Madhumeha* subtype of *Vataja Prameha* due to involvement of vital elements causes alarming health instability with higher prevalence. *Vata* is the conductor of healthy life and vitality supporter of all the embodied beings and sustains long life free of disorders.[5]

Susruta emphasized that *Vyanavata* and *Apanavata* vitiation cause *Sukra Dosha* and *Prameha*. *Vyanavata* because of its potential to perform the functions related to each and every body element and *Apanavata* due to its potential related with excretion. When we exploit *Madhumeha* we cannot deny their credibility in the pathogenesis. This superior consideration of *Susruta* proved to be essential before profound treatment modality.[6]

Changing life style, lack of exercise, fast foods, improper unbalanced diet, and sedentary life are showing upward trend in India. This has led to the emergence of Diabetes Mellitus in the region. Iatrogenic or genetic predisposition and degenerative changes proved fatal in diabetes mellitus.[7]

Purpose of the study

The prevalence of diabetes is approximately twice in the urban than in rural areas. It is suggested that the increase in the occurrence of this disease is possibly due to changing life style. Lack of exercise, fast foods, improper unbalanced diet, and sedentary life are showing upward trend in India. This has led to the emergence of diabetes mellitus in the region. In spite of using oral hypoglycemic agents and insulin modern medicine is least bother about the sedentary life style and improper diet, so struggling to provide better management to counteract the complications and to provide better health.

So many research works have been carried out in relation to *Shamana* treatment as mentioned in classics and their therapeutic effect is proved. Present research work is intended to evaluate the effect of herbal combinations used as different line of treatments.

Prevalence

Madhumeha has become a global problem in spite of much advancement in modern medicine.[8] The World Health Organization stated in 1998 that a 122 % rise in the number of adults with diabetes is projected by 2005, to reach 300 million adults

Worldwide. There are four reasons for this two-fold global increase: Firstly, we are living longer; over-nutrition and lack of exercise are prevalent; the disease being transmitted in a hereditary fashion; such transformations have taken place within the Indian population also. In India, it is estimated that 19 million cases occurred in 1995, rising to a projected 57 million by the year 2025 (1/6th of the world total). According to recent epidemiological studies there has been a 40% increase in diabetes prevalence amongst urban during the last five years.[9] Even the NIDDM a commonest form of DM is most common accounting for 85-99% of the patient depending on geography and ethnicity, occurs in adults, more so over 35 years of age.[10] The prevalence of NIDDM is on the rise more alarmingly in the developing nations, ranked 7th among leading cause of death. It has been rated 3rd when all its micro vascular, macro vascular, neuropathic complications is taken into account.[11] The cost of treating diabetes an associated complication exceeds \$ 100 billion per year.[12]

It has long been recognized that drugs represents only part of the management of *Madhumeha* and other intervention such as education, modification of diet and promotion of physical health play a crucial role. If the dietary control and exercise programmes do not improve the condition then the medication is added. Many of patients won't have patience for long term therapies, complicated therapies like exercise etc.[13] The OHA viz, Sulfonylurea, Bigunides have associated with adverse effect like nausea, vomiting, lactic acidosis, hypersensitivity etc. After long term administration their action declines, up to 50% patients of NIDDM initially treated with OHA ultimately need insulin. Hence we find no satisfactory remedies for *Madhumeha* in contemporary medical science.

About Concept

The word *Madhumeha* in terms of 'Diabetes Mellitus' it is the present burning issue alarming the world. With synonym of Rich man's disease,' *Madhumeha* is a chronic metabolic disorder and the symptom appears in relation with a *Mootravaha Samsthana*. Diabetes mellitus is a chronic metabolic endocrinal disorder, which has similar pathogenesis as the *Madhumeha*. Thus, the comparison between *Madhumeha* and DM is justifiable.[14]

The present study was designed as 'Evaluation of the efficacy of *Akulyadi Yoga*'. Medicinal plants since time immemorial have been

Used virtually in all cultures as a source of medicine. Several herbs have been described in *Ayurvedic* treasure of therapeutics, which have a beneficial effect in the management of *Madhumeha*. *Akulyadi Yoga* is one such a combination which acts as *Mootra Sangraheeya* and also reduces the high blood glucose.[15]

As the *Madhumeha* is *Kapha Vata Pradhana Vyadhi*, *Akulyadi Yoga* seems to be very effective. It contains *Akuli*, *Amalaki* and *Haridra*. All these drugs are *Kapha* and *Vata Shamana* property with *Ushna Virya*. Thus, in the present study an attempt is made to "Evaluation of the efficacy of *Akulyadi Yoga*", with a view to find out a therapeutically efficacious, safer, cost effective and easily available drugs.

Materials and Methods

Criteria for selecting drugs

The above mentioned *Akulyadi Yoga*, which is taken from the *Yogaratanakara Pramehadhikara*. It is considered to undertake in equal quantity of the *Akulyadi Yoga* ingredients as said in the text.

Method of Research design

The trail is Simple Random sampling technique clinical study. In this Patients were taken in randomized selection.

Posology of Trial drug

Internally: 3000 mg / 24hrs in divided two doses or 50mg /Kg body weight distributed in equal doses

Anupana of Trial drug

Madhodaka is undertaken as it is stipulated for the medicine.

Study duration of Trial drug

Akulyadi Yoga Simple Random sampling technique clinical study was conducted for 21 days. The medicine was dispensed for 7 days to all patients and advised to report for every 7 days interval, noted the nature, frequency and other symptoms of their disease during their visits.

Follow up of Trial drug

Akulyadi Yoga trail offered a further follow up 21 days.

Source of data of Trial drug

The data was collected from the patients suffering from *Madhumeha* in the OPD of Post-Graduation and Research Center DGM Ayurvedic Medical College, Gadag. The method of the present study consists of following headings.

01. Selection of the patient
02. Examination of the patient
03. Criteria of assessment

Selection of the patient

Patients of *Madhumeha* fulfilling the criteria of diagnosis were selected in the present study. Patients were distributed based on preset inclusion and exclusion criteria. Patients were excluded, as they are discontinuous at the treatment or unable to fulfill the study design.

Inclusion criteria

- All patients other than that of exclusive criteria are included
- Age of patients between 25-65 years
- Irrespective of gender
- Non-insulin dependent diabetes mellitus
- Patient having clinical features of *Madhumeha*
- *Prabhoota Mootrata*
- *Avila Mootrata*
- *Dourbalya*
- *Shareera Bhaarahani*
- *Janghamamsagraha*
- *Karapada Daha*
- *Pipasa*
- *Kshudhadhikyata*

Exclusion criteria

- Insulin dependent D.M Vis-à-vis *Madhumeha*
- Patients who develop complication with other systemic disease
- Juvenile diabetes
- Malnutrition D.M
- Gestational D.M

Observations and Results

To compare the effectiveness of a drug before and after the treatment the statistical analysis paired t-test, by assuming that the drug

Is not responsible for changes in the reading before and after the treatment. The conclusion drawn is as highly significant if $P < 0.05$.

Statistical analysis of Akulyadi Yoga

Parameter	Mean	SD	SE	t value	P value	Remark
Dourbalya	2.45	1.145	0.256	9.57	<0.001	HS
Shareera Bharahani	1.1	1.165	0.260	4.23	<0.001	HS
Janghamamsa Graham	0.95	1.05	0.234	4.059	<0.001	HS
Karapada Daha	1.4	0.94	0.21	6.666	<0.001	HS
Pipasa	2.2	1.281	0.286	7.69	<0.001	HS
Kshudhadhikyata	2.05	1.356	0.303	6.76	<0.001	HS
Prabhoota Mootrata	3.2	0.894	0.2	16.0	<0.001	HS
Avila Mootrata	0.5	0.606	0.135	3.703	<0.001	HS
FBS	48.605	30.41	6.80	7.147	<0.001	HS
PPBS	117.18	46.42	10.38	11.289	<0.001	HS
FUS	0.325	0.293	0.0656	4.954	<0.001	HS
PPUS	0.63	0.476	0.1066	5.9099	<0.001	HS

Among the subjective parameters *Dourbalya*, *Pipasa*, *Kshudhadhikyata* shows more highly significant than other parameters (Comparing p values) the parameters *Shareera Bharahani* and *Jangamamsa Graha* are having almost equal effect before and after the treatment (by comparing t-values). The parameters *Dourbalya* having more net mean effect whereas the parameter *Jangamamsa Graha* is having less mean effect (comparing mean value) the variation in the parameter *Karapada Daha* is less, where as in the parameter *Kshudhadhikyata* is more.

Among all the objective parameters all the parameters show significant but, in the parameter, *Prabhoota Mootrata*, PPBS, FBS are shows more highly significant (comparing p-values). The parameters PPBS are having more net mean effect with more variation where as in FUS having less mean effect will less variation (comparing mean and variations).

Among the subjective parameters the percentage improvement is in between 82% to 92%, which means that the percentage of improvement lies between these two values. Where as in the objective parameter the more percentage improvement in the *Prabhoota Mootrata* (94.1%) and where as in the parameter PPBS is least percentage improvement (14.312%).

Discussion

The drugs selected for the trial mainly having *Tikta*, *Kasaya*, *Katu Rasa*, *Usna Veerya* and *Laghu*, *Ruksha Guna*, *Katu Vipaka*

And *Kaphavatahara* properties and each one is indicated in *Prameha Chikitsa*. Thus, *Usna Veerya* and *Tikta Kasaya Rasa* helps to normalize the function of *Jathragni* and *Dhatwagni*. That in turn helps to form the *Dhatu*s in proper proportion with *Saimyak* qualities. *Laghu Ruksa Guna* helps for the *Sosan* of *Bahudrava Shlesma* and reduction of vitiated *Meda Kleda*.

Thus, once these factors get normalized in the body, they in turn make clear the *Path* of *Vata* which stops the depletion of vital *Dhatu*s and restore normal physiology. Thus, disease *Madhumeha* get Alleviate.

The result of the *Akulyadi Yoga* declared is representing the efficiency of the drug with its embedded qualities, is 11 (55%) Regulated, 1 (5%) palliative and 8 (40%) patients responded in the trial. The conclusion drawn statistically for the present trial is as highly significant as $P < 0.05$.

Conclusion

Margavarana Janya Madhumeha & Dhatukshaya Janya Madhumeha are the two forms of the disease. *Apathya Nimittaja Madhumeha & Sahaja Madhumeha* are the two independent forms of presentations, coming under the above classification respectively. *Sadhyasadhyata* of *Madhumeha* is directly dependent upon *Dhatu Apakarshana & Vata Anubandha Anubadhyatva & Sahaja Karana*. The *Kaphaja, Pittaja & Vataja Pramehas* are nothing but the range of varied symptomatology of *Madhumeha* manifesting depending upon association of favorable *Nidanas* for the respective *Dosha* during the course of the illness. *Sahaja Madhumeha* can manifest in the *Balya Avastha* also & *Apathya Nimittaja Madhumeha* manifests in the *Madhyama to Vriddha Avastha*. *Madhumeha* with *Kapha Pradhana Lakshana* and *Anati Dushta Dhatu* is *Sadhya* in the sense that it is *Sadhya* until under continuous medication; otherwise, it recurs justifying the term *Anushangi* meaning *Punarbhavi*. Diet and exercise help only in patients who comply fully and compliance is the toughest part in the management of *Madhumeha*. The significant improvement which was seen in subjective and objective symptoms. The result of the *Akulyadi Yoga* declared is representing the efficiency of the drug with its embedded qualities, is 11 (55%) Regulated, 1 (5%) palliative and 8 (40%) patients responded in the trial. The conclusion drawn statistically for the present trial is as highly significant as $P < 0.05$.

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