



# Efficacy of Virechana followed by Nyagrodadichurnain the Management of Sthulamadhumeha

Meera K.J. and Pujar P. Muralidhar  
SDMC Ayurveda Hassan, INDIA

Available online at: [www.isca.in](http://www.isca.in), [www.isca.me](http://www.isca.me)

Received 7<sup>th</sup> October 2013, revised 10<sup>th</sup> October 2013, accepted 24<sup>th</sup> October 2013

## Abstract

*The present study is designed to assess the efficacy of Virechana, one of the detoxification treatment procedures of Ayurveda followed by administration of oral herbal medicine in Sthula Madhumeha with special reference to Noninsulin Dependent Diabetes Mellitus (NIDDM). The prevalence of the disease Diabetes Mellitus is increasing all over the world. Shodana (Detoxification procedure) followed by shaman (Oral medication) is the treatment measure for Sthula Madhumeha as explained in Ayurvedic text books. Thus the present study was undertaken to assess the effective management from classical Ayurvedic point of view i.e., Virechana followed by Nyagrodadi Churna in the management of Sthula Madhumeha. The screening of the patients between the age group of 30 to 50 years was done randomly and finally 30 patients who fulfilled all necessary criteria were registered for the study after taking a written consent for the clinical test. The registered patients were assessed for both subjective and biochemical parameters before and after treatment schedule. The study showed significant reduction in blood sugar level ( $P < 0.001$ , ANOVA) after the treatment.*

**Keywords:** Sthula madhumeha, virechana, shamana detoxification, NIDDM.

## Introduction

Diabetes mellitus (DM) is a clinical syndrome which is defined as a disorder of metabolism of carbohydrate, protein and fat characterised by presence of sugar in the urine along with increased blood sugar level as a consequence of insulin deficiency and/or insulin resistance<sup>1</sup>. Prevalence of DM is rising day by day. An estimated 366 million people, corresponding to 8.13% of the world's adult population, lived with DM in 2011. The number is expected to grow to 552 million by 2030, corresponding to 7.8% of the adult population. 80% of the current cases of DM occur in low and middle income countries. With an estimated 90 million people living with DM, China has the world's largest DM population, followed by India with 61.3 million. DM is one of the major causes of premature illness and death worldwide. Non-communicable diseases including DM account for 60% of all deaths worldwide. The largest age group currently affected by DM is between 40-59 years<sup>2</sup>.

A detailed explanation of disease DM is available in Ayurvedic text book in the name of the disease Madhumeha. Madhumeha is a disease in which patient passes urine like honey and the whole body becomes sweet<sup>3</sup>.

The two main classification of DM are type-1 and type-2. Type-1 DM is the result of complete or near total insulin deficiency. Type-2 DM is characterized by variable degree of insulin resistance, impaired insulin secretion and increased hepatic glucose production and abnormal fat metabolism. Obesity, particularly visceral or central is very common. In the early

stages glucose tolerance remains near within normal limit due to the compensation of pancreatic beta cells by increasing insulin output. As insulin resistance and compensatory hyperinsulinemia progress, the Pancreatic islets in certain individuals are unable to sustain the hyperinsulinemic state leading to elevation of postprandial blood sugar, a further decline in insulin secretion and an increase in hepatic glucose production lead to fasting hyperglycemia, ultimately leading to beta cell failure. Distinct genetic and metabolic defects in insulin resistance and/or secretion leading to a common phenotype of hyperglycemic in type 2 DM and have important potential therapeutic implications now that the pharmacologic agents are available to target specific metabolic derangements<sup>4-5</sup>.

There are two types of Madhumeha. In first type the patient will be very lean, with low Body Mass Index (BMI), very weak, irritable, usually the cause is hereditary and is named as Krishnamadhumehi<sup>6-8</sup>. The second type is basically due to altered life style. Here the patient looks obese with increased BMI, with a tendency for excessive eating and sedentary life style and is named as Sthulamadhumehi, usually the cause is metabolic derangement, which can be correlated to type 2 DM (NIDDM).

Previously the onset of the disease was noted at the age of 40 year and above, but now due to utter negligence in health rules, plenty of DM cases are noticing in still early age group only. Many times it will be an asymptomatic one also. The therapeutic approach in conventional medicine includes management by diet, exercise and administration of oral hypoglycemic drugs. Virechana one of the detoxification

procedures of Ayurveda followed by administration of oral medication is the treatment measure for Sthulamadhumeha as explained in ayurvedic text book<sup>6-8</sup>. Hence it was planned to conduct a clinical study to evaluate the efficacy of Virechana followed by Nyagrodaadi Churna<sup>9</sup> in Sthulamadhumeha.

### Material and Methods

The present study included patients, various investigations and selected drug.

**Criteria for selection:** Screening of the patients between the age group of 30 to 50 years was done randomly and finally patients having classical signs and symptoms of NIDDM, of either Sex, with the primary diagnosis of NIDDM, with BMI above 30 and those who gave a written consent for the clinical trial were registered for the study.

**Exclusive criteria:** The patients of Insulin dependent Diabetes Mellitus (IDDM), Patients of secondary DM, NIDDM Patients with BMI less than 30, NIDDM patients with severe blood glucose level (Fasting Blood Sugar (FBS)-Above 220 mg/dl And Post Prandial Blood Sugar (PPBS)-Above 280 mg/dl), NIDDM patients with complications like Nephropathy, Neuropathy etc. and NIDDM patients who are unfit for Virechana procedure are all excluded from the study.

**Plan of study:** All the selected patients were made to undergo first Detoxification procedure Virechana and then Nyagrodadi Churna was given as oral medication at a dose of 5 gms two times. The total study duration was 90 days.

**Criteria for assessment:** After completion of the treatment, the results were assessed by adopting following criteria: i. Before and after assessment of signs and symptoms of the disease on the basis of the symptom score. ii. Before and after assessment of biochemical investigations which includes FBS, Fasting Urine Sugar (FUS), PPBS, Post Prandial Urine Sugar (PPUS), Total Cholesterol, Serum Triglyceride and Glycosylated hemoglobin.

### Results and Discussion

**Demographic profile:** Table-1 reveals that a majority of the patients in this study, i.e., 63.3% belongs to the age group of 45-50 years. These findings were similar with the recent statistical data, which shows that the onset of Type II DM after 40s is most common. A majority of patients i.e., 56.7% were living in urban areas. This data is similar with recent report (2000) that the prevalence is more in urban than in rural. 83.3% of the patients were having family history of DM, which shows that hereditary predisposition is more important in DM. A majority of patients i.e., 63.3% were non vegetarians, which shows intake of heavy food is one of the major cause in the onset of the disease.

**Table-1**  
**Demographic profile**

Demographic character	Number of patients	Percentage
<b>Age in years</b>		
30-35	3	10.0
36-40	1	3.3
41-45	7	23.3
46-50	19	63.3
<b>Gender</b>		
Male	15	50
Female	15	50
<b>Food habits</b>		
Vegetarian	11	36.7
Non-vegetarian	19	63.3
<b>Occupation</b>		
Sedentary work	08	26.60
Physical work	12	40.00
Mental work	10	33.40
<b>Habitat</b>		
Urban	17	56.7
Rural	13	43.3
<b>Family history</b>		
Present	25	83.3
Absent	5	16.7

**Effect of therapies:** The table-2 shows statistically highly significant relief in all the criteria except in FUS which shows significance at 5%. The table-3 and figure 1 and 2 shows statistically highly significant relief in total effect of all the criteria both in subjective and objective criteria. Good percentage relief is noticed in all the criteria except in increased sweating which shows only 29% relief. This observation indicates that Virechana followed by administration of NC has got good effect in regularizing metabolism, Insulin secretion and Insulin resistance.

### Conclusion

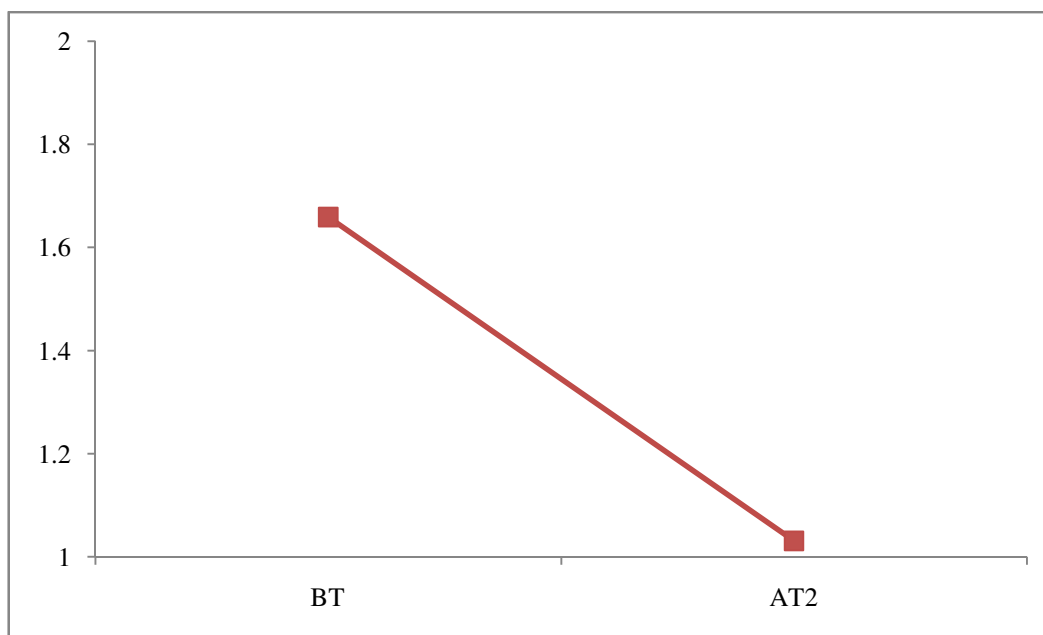
Statistical analysis reveals significant improvement in all the parameters. This indicates that the adopted treatment measures helped in maintaining blood sugar level. It is also noticed that there is no adverse effect of the therapy. Thus it can be concluded as it is an effective and safe treatment method in maintaining blood sugar level.

**Table-2**  
**Effect of Therapies**

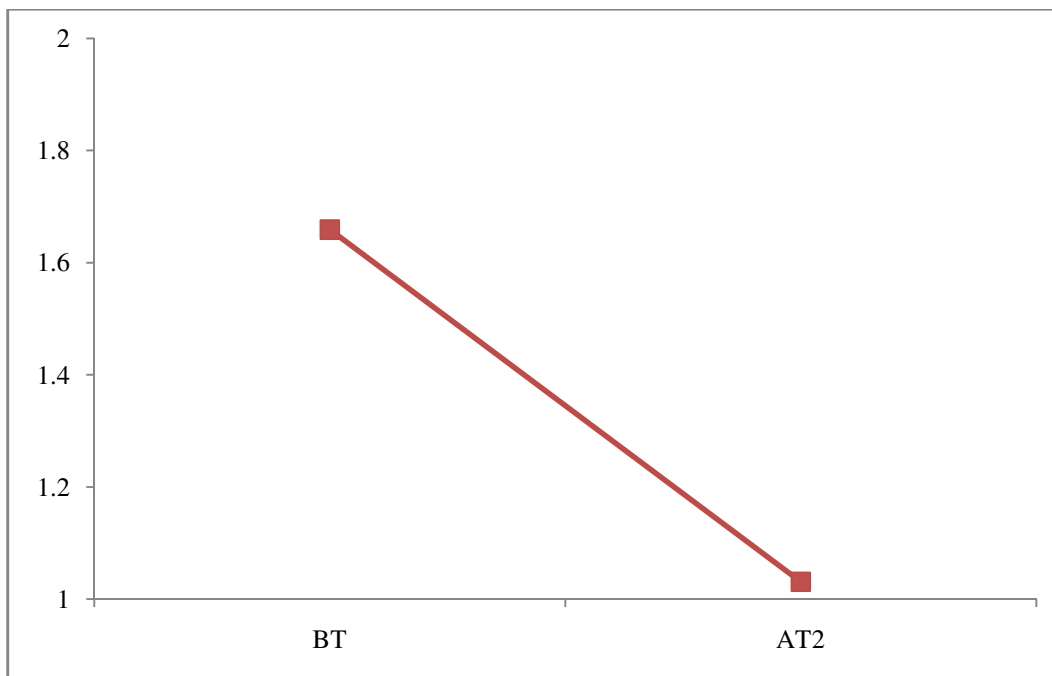
SL No	Subjective Criteria	Mean		% of relief	SD	SE	T	P	Remarks
		BT	A T						
1	Frequency of Urination	2.40	1	58%	0.675	0.123	11.366	0.000	HS at 1%
2	Quantity of Urination	2.10	1	52%	0.711	0.129	8.462	0.000	HS at 1%
3	Polyphagia	1.80	1.03	43%	0.774	0.141	5.426	0.000	HS at 1%
4	Polydipsia	1.70	1	41%	0.702	0.128	5.460	0.000	HS at 1%
5	Increased sweating	1.40	1	29%	0.724	0.132	3.026	0.005	HS at 1%
6	General weakness	1.600	1.067	33%	0.819	0.150	3.565	0.001	HS at 1%
7	Increased sleep	2.033	1.067	48%	0.765	0.140	6.922	0.000	HS at 1%
SL No	Objective Criteria	Mean		% of relief	SD	SE	T	P	Remarks
		BT	A T						
1	B M I	31.806	30.938	3%	0.696	0.127	6.827	0.000	HS at 1%
2	F U S	0.183	0.017	91%	0.330	0.060	2.763	0.010	S at 5%
3	P P U S	0.800	0.100	88%	0.566	0.103	6.770	0.000	HS at 1%
4	F B S	145.967	108.633	26%	27.255	4.976	7.503	0.000	HS at 1%
5	P P B S	220.667	160.767	27%	23.125	4.222	14.187	0.000	HS at 1%
6	T. Cholesterol	212.267	192.467	9%	25.517	4.659	4.250	0.000	HS at 1%
7	S. Triglycerides	158.567	142.867	10%	15.870	2.898	5.418	0.000	HS at 1%
8	HbA1C	7.773	7.223	7%	0.637	0.116	4.728	0.000	HS at 1%

**Table-3**  
**Total effect of Therapy**

SL No	Improvements	Mean		SD	SE	t value	P value
		BT	AT				
1	Subjective criteria	1.659	1.031	0.319	0.058	10.792	0.000
2	Objective criteria	2.467	1.933	0.295	0.054	9.892	0.000



**Figure-1**  
**Total effect on the subjective criteria**



**Figure-2**  
**Total effect on the objective criteria**

## References

1. Shah Siddharth N., Diabetology, Association of Physicians of India, Mumbai, APItextbook of medicine, 18<sup>th</sup> Chapter, **8**, 1042-1081 (2008)
2. Sarah Wild, Gojka Roglic, Anders Green etal, Global prevalence of diabetes, *Diabetes care*, **27(5)**, 1050 (2004)
3. Vagbhata, Astangahridaya, Nidanasthana, 10<sup>th</sup> Chapter, 18<sup>th</sup>sloka, Yadunandana Upadyaya, editor, Chaukhamba Sanskrit sansthan, **8**, 255 (1978)
4. Fauci, Braunwald, Kasperloscalzo, Harrison's internal medicine, 17<sup>th</sup> edition, Volume II, 2275-2290 (2008)
5. Chakraborty Monali, An Insight into the Aetiology of Tropical Chronic Pancreatitis and Fibrocalculous Pancreatic Diabetes, *I.R.J.Med.Sci.*, **1(2)**, 5-14 (2013)
6. Agnivesha, Charakacharya, Chakrapanidutta, Pramehachikithsitam, Charaka Samhita with Ayurveda deepikacommentary, Chikithsasthna 6<sup>th</sup> chapter, Vaidya
7. Jadavaji Trikamji Acharya, editor, Choukhambasurabharatiprakashana, 444-450 (2008)
8. Vagbhatacharya, Arunadatta, Hemadri, Pramehachikithsitam, Astangahridaya with Sarvangasundara and Ayurvedarasayana commentary, Chikithsasthana 12<sup>th</sup> chapter, Pandit, Hari Sadasiva Shastri Paradakara Bhashagacharya, editor, Choukhambaabharati Prakashana, 678-681 (2007)
9. Sushrutacharya, Dulhanacharya, Pramehachikithsitam, Sushrutasamhita with Nibandhasangraha commentary, chikithsasthana 11<sup>th</sup>chapter, Narayan Ram Acharya, Editor, Choukhamba Surabharati Prakashana, 451-454 (2008)
10. Chakrapanidutta, pramehachikithsa, Chakradutta, 35<sup>th</sup> chapter, P V Sharma, editor, Chaukhanbha publishers, 303 (2002)