

## A CASE STUDY ON VIRECHANA IN STHUL MADHUMEHA AND ITS IMPACT ON HOMA IR

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Article Received on  
20 September 2020,

Revised on 11 October 2020,  
Accepted on 01 Nov. 2020

DOI: 10.20959/wjpr202014-18123

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### ABSTRACT

**Background:** Diabetes Mellitus refers to a group of common metabolic disorders that share the phenotype of hyperglycemia. Several distinct types of DM are caused by a complex interaction of genetics and environmental factors. Depending on the etiology of the DM factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose utilization, and increased glucose production. Diabetes closely resembles with *Madhumeha (Prameha)*, which has been discussed in Ayurved since antiquity. Charak has given exhaustive description of the *Prameha* which ultimately progresses towards *Madhumeha*. Charak classified *Madhumeha* in two types with

respect to management viz *Sthula* and *Krish*. *Madhumeha* is a *Santarpanjanya Vyadhi*. According to Vagbhat, *Madhumeha* is caused due to two causes i.e. *Margavrodh* and *Dhatukshaya*. According to Charak depending on *Bala*; *Brimhan Chikitsa* is advised in *Krish Madhumehi* while *Shodhana* is indicated in *Sthul Madhumehi*. *Shodhan Chikitsa* i.e. *Virechana* and *Nidanparivarjan* to stabilize the increased *Kapha* and *Kleda* is indicated. Observations and results obtained were encouraging and assessed on different parameters which are presented in full paper.

**KEYWORDS:** *Sthul Madhumeha, Pachana, Pancha-Tikta Ghrita, Virechana, HOMA-IR.*

### INTRODUCTION

Diabetes Mellitus is a clinical syndrome characterized by increase in plasma glucose level called as Hyperglycemia, resulting from defects in insulin secretion, insulin action and both. Diabetes have mainly two types, Type 1 and Type 2 diabetes. Type 1 diabetes is generally considered to result from autoimmune destruction of insulin producing cell (Beta cells) in the

pancreas, leading to marked insulin deficiency, whereas Type 2 diabetes is characterized by reduced sensitivity to the action of insulin and an inability to produce sufficient insulin to overcome this insulin resistance. Hyperglycemia causes both acute and long-term problems. chronic hyperglycemia is responsible for Diabetes specific microvascular complication affecting the eyes (retinopathy), kidneys(nephropathy) and feet(neuropathy).<sup>[1]</sup>

According to Ayurveda Diabetes is compared with *Madhumeha*. Vagbhat describe two types of *Madhumeh*, one of them is because of *Dhatukshay* and other one is due to *Avarana*.<sup>[2]</sup> If *Kaphaj* and *Pittaj prameh* is not treated properly for prolonged period, will turned into *Madhumeh* such type of *Samprapti* is possible if excessive *Santarpan* is there. On the basis of treatment *Sthul Pramehi* and *Krish Pramehi* are classified.<sup>[3]</sup> *Apatarpan* to *Sthul Pramehi* in the form of *Shodhan* and *Brihana* to *Krish Pramehi* have been indicated. *Virechana* is one of *Shodhan* treatment for *Sthul Pramehi*.<sup>[4]</sup>

## CASE REPORT

A 57-year-old female patient, having following complaints, came in OPD and was admitted in IPD Department of Kayachikitsa, Government Ayurved College, Nagpur.

### Chief Complaints

*Sharirbharvridhi*

*Sharir Gauravata*

*Ati-Sveda Pravritti*

*Ubhaya Padatal Daha*

*Daurbalya*

*Ubhay Janusandhishula Asamyak Dourbalyanubhuti*

Since last 4 years

Aggravates in last 1 month

### History of Present Illness

Patient was having gradual increase in above symptoms since last 4 years, but symptoms aggravated in last 1 month, patient came to Kayachikitsa OPD for treatment and was admitted in Government Ayurved College and Hospital, Nagpur for management.

### Past History

1. H/O Hypertension for last 10 year.
2. H/O Diabetes mellitus for last 4 years.
3. H/O chikungunya before 12 years.

4. No history of any other major illness.

### Present Medicinal History

1. Tab. TENEGLIM-M (Tenegliptin 20mg + Metformin 500mg) 1BD
2. Tab. AMLODIPINE 5mg 1 OD

### Past Surgical History

H/O: Hysterectomy done 12 year ago

### Investigations: 28/11/2019

1. CBC: WNL, 2. BSL: Fasting-141 mg/dl, PP-242 mg/dl, 3. HBA1C-5.5
4. KFT: Blood Urea – 15.4 mg/dl, Serum creatinine – 0.94mg/dl, Uric acid -8.4mg/d
5. Urine Routine: WNL, 6. ECG-V5, V6 T inversion lateral wall ischemia

### Management

Initially *Pachan Kvatha*: 40 ml BD *Vyanodane* was given as a *Pachak* for 10 days.<sup>[5]</sup>

*Snehapana- Panchtikghrita* for 7 Days in *Vardhaman Matra*, was administered till *Samyak Sneha Sidhhi Lakshana*.<sup>[6]</sup>

*Abhyanga-Svedana*: 3 days after *Snehapan*

*Virechan Karma*<sup>[7]</sup>: After three rest days, (during these three rest days dominantly liquid and easily digestible diet was advised) *Virechana* was administered on fourth day after *Samyak* Symptoms of *Snehapana*, with the help of following drugs, in the morning, at about 7 am along with *Shita Jala Icchabhedi Rasa* 250 mg 1tab stat. (8.00am), *Shitajalapan Muhurmuhu* and *Mridvika Phanta Muhurmuhu*

*Shuddhi: Madhyam, Antiki – Kaphanta Laingiki – Daurbalya, Udarlaghavata, Madhyam Shudhi, Sansarjana Kram*: 5 days

### Shaman Chikitsa

*Phaltrikadi Kvath* 20 ml BD<sup>[8]</sup> and *Gandharv-Haritaki Churn* 10 gm HS with *Koshna Jal*

## OBSERVATIONS AND RESULTS

**Table 1: Table Showing Effect of Therapy on Blood Sugar Level.**

Date	28/11/19(BT)	19/12/19(MT)	16/1/19(AT)
<b>Fasting</b>	141 mg/dl	146 mg/dl	113 mg/dl
<b>post-Prandial</b>	242 mg/dl	181 mg/dl	170 mg/dl

**Table 2: Table Showing Effect of Therapy on Serum Insulin Levels and HOMA-IR.<sup>[9]</sup>**

Date	28/11/2019(BT)	19/12/2019(AT)
Serum Insulin	37.42	26.47
HOMO-IR	15.60	11.04

**Table 3: Table Showing Effect of Therapy on BMI and W:H Ratio.**

Date	Ht	Wt	BMI	Waist	Hip	W:H Ratio
28/11/19	156 cm	73 kg	30	112 cm	117 cm	0.96
19/12/19	156 cm	70 kg	28.8	106 cm	112 cm	0.94
16/01/20	156 cm	68 kg	27.3	104 cm	111 cm	0.93

**Table 4: Table Showing Effect of Therapy on Specific Gravity.**

Date	28/11/2019	19/11/2019
Specific Gravity	1.031	1.009

**Table 5: Table showing Effect of Therapy on Signs and Symptoms.<sup>[10]</sup>**

	<i>Lakshana</i>	BT	AT
1	<i>Unexplained Weight gain:</i>	3	3
2	<i>Shithilangata</i>	3	3
3	<i>Kshudhaativridhhi</i>	3	2
4	<i>Fatigue</i>	3	2
5	<i>Shayyasana, Svapna, Sukhe-Rati</i>	2	1
6	<i>Kara-Pada Suptata</i>	1	1
7	<i>Dantaadinam Malaadhyatvam</i>	3	2
8	<i>Kara- Pada Daha</i>	2	1
9	<i>Pipasativridhhi</i>	3	2
10	<i>Swedatipravritti</i>	3	2
11	<i>Shitpriyatvam</i>	3	2
12	<i>Madhurasyata</i>	2	1

## DISCUSSION

Diabetes mellitus is a burning issue and the present modern treatment is only helping in controlling the blood sugar level rather than effect on underlying pathology. Type 2 diabetes occurs due to peripheral insulin resistance and more hepatic glucose production. There is defect in insulin signaling. Obesity is major cause of insulin resistance. Intra-abdominal central adipose tissue is metabolically active and release large quantities of free fatty acid which may induce insulin resistance because they compete with glucose as a fuel supply for oxidation in peripheral tissue such as muscle. Insulin resistance impairs glucose utilization by insulin sensitive tissues and increase hepatic glucose output, both these effects contribute to the hyperglycemia.<sup>[11]</sup>

According to our ancient literature *Madhumeha* is *Kapha Pradhan Tridoshaj Vyadhi* with *Rasa* and *Medo Dushti* predominantly. The main pathogenesis occurs due to the *Kapha Vridhhi* and may be due to the *Strotovarodh (Avritatva)* and *Prakopa* of *Vata*. *Madhumeha* also includes symptoms of *Meda* and *Kapha-Vridhi*.<sup>[12]</sup> *Rukshan Pachan Kvath* was used for *Dipana Pachana*, it enhances the *Agni* and helps in correcting the elevated *Kapha* and *Meda*. *Virechana* is one of the best treatment for vitiated *Pitta*, *Kapha* and *Dushta Meda*. Cell membrane is free to allow the entry of lipid soluble substance. According to *Ayurved Ghrita* has *Yogavahi* and *Sanskaranuvartana* property<sup>[13]</sup> Here *Panchatikta Ghrita for Snehapana* is used which is *Tikta Rasatmak* acting as *Kaphashamak*.<sup>[14]</sup>

*Madhumeha* is a *Strotovarodh Pradhan Vyadhi*, so here *Virechan* will help for *Stroto Vishodhan*, also helps in normalizing the *Pratiloma Gati* of *Vayu*. *Virechana* drugs due to its *Ushna*, *Tikshna* and *Sukshma Guna* reaches to heart by virtue of their *Rasa*, *Virya* and *Vipaka* and circulates all over the body.<sup>[15]</sup> They liquefy the morbid *Doshas* and bring them up to the *Adho-Amashaya*. From here the morbid *Dosha* through anal route are expelled out called *Virechan*. Due to *Virechana Vridha Kapha Shodhan* and stabilizes elevated *Dusht Meda*, *Rasa*, *Kleda*, *Mutra* and *Sveda*. In this way this treatment might have been useful to break down the *Samprapti* of *Sthula Prameha*. This decreases the obesity and the insulin resistance i.e reduces HOMA-IR levels. Hence *Virechana* is beneficial in management of *Sthula Prameha*.

## CONCLUSION

In this case study, there are reduction in objective parameters. These Ayurvedic concepts in management of diabetes are having fruitful effects; but it is only a case study so that the end conclusion about management could not be drawn. Hence the study should be carried out on large sample to establish the results.

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