AYU

Clinical Research

A comparative study of *Vamana* and *Virechana Karma* in the management of *Sthula Pramehi* w.s.r. to Type-2 diabetes

Rajeev Kumar Pandey[1], N. N. Bhatt[2], T. M. Singhala[3], V. D. Shukla[4]

[1]Ph.D Scholar, Department of Panchakarma, National Institute of Ayurveda, Jaipur, Rajasthan, [2]Panchakarma Physician, Department of Panchakarma, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, [3]Pathologist, Singhala Laboratory, Jamnagar, [4]Professor and Head, Department Kaya Chikitsa, JS Ayurved Mahavidyalaya, Nadiad, Gujarat, India

Abstract

In the present study, *Vamana* and *Virechana* along with palliative treatment was given to patients of *Sthula Prameha* (Diabetes mellitus or DM). An attempt was made to compare and evaluate the role of *Shodhana* therapy (*Vamana* and *Virechana*). Total 47 patients of *Sthula Pramehi* were registered in this study, out of which 38 completed the treatment. The patients were divided into two groups, viz. *Vamana* with *Shamana* (Group A) and *Virechana* with *Shamana* (Group B). Eighteen patients completed the treatment in Group A and 20 in Group B. *Neem giloy satva* capsule was used as *Shamana* drug at a dose of 500 mg twice daily after meals for 30 days in both the groups. The efficacy of therapy was assessed based on relief in cardinal signs and symptoms and blood sugar, lipid profile and other biochemical parameters etc. The results showed that the *Vamana* provided better relief in signs and symptoms as well as on fasting blood sugar (FBS) and postprandial blood sugar (PPBS) in comparison to *Virechana*.

Key words: *Shamana, Shodhana, Sthula Pramehi, Vamana, Virechana*

Introduction

In *Ayurveda*, Acharya Charaka, has classified *Prameha* into two types, i.e. *Sthula Pramehi* and *Krisha Pramehi* or *Santarpanajanya* and *Apatarpanajanya Pramehi*. It can also be correlated with the classification given by Acharya Vagbhata, i.e. *Dhatu Kshayajanya* and *Avaranajanya Prameha*, respectively.

The factors which provoke the *Vata* directly cause *Apatarpanajanya Prameha* while the factors which provoke *Kapha* and *Pitta* cause *Santarpanajanya Prameha*. In *Avaranajanya Prameha*, *Kapha* is the predominant *Dosha*, while the important *Dushyas* are *Meda* and *Kleda*. In *Avaranajanya Samprapti*, vitiated *Kapha* and *Pitta* obstruct the path of *Vata*, causing its provocation. *Samshodhana* is the best treatment for the elimination of *Doshas*. Vagbhata has mentioned that *Doshas* should be eliminated through the nearest passage.[1] For the *Doshas* lying in the upper and lower parts of body, *Vamana* and *Virechana* are the appropriate *to eliminate* vitiated *Kapha* and *Pitta* respectively. So, in the present study, *Vamana* and *Virechana* have been selected.

Neem giloy satva has been selected for *Shamana* therapy in both

the groups after *Samsarjana Krama*, as mentioned in Bhaisajya Ratnavali, *Prameha Chikitsa Prakarana*.[2]

The efficacy of therapy is assessed based on relief in cardinal signs and symptoms and also blood sugar, lipid profile, and other biochemical parameters with *Deha Bala*, *Agni Bala*, and *Chitta Bala* as per Charaka.[3]

Aims and objectives
- To assess the effect of *Vamana* in the management of *Sthula Pramehi*.
- To assess the effect of *Virechana* in the management of *Sthula Pramehi*.
- To compare the effect of *Vamana* and *Virechana* in the management of *Sthula Pramehi*.

Materials and Methods

Patients with classical signs and symptoms of *Sthula Pramehi* (Type-2 Diabetes) were selected from the O.P.D. or I.P.D of Department of Panchakarma of I.P.G.T. and R.A., G.A.U., Jamnagar.

A special proforma including all the etiological factors of *Prameha* with *Dushti Laskhanas* of *Dosha*, *Dushya*, *Srotas*, etc. was made for assessing all the patients.

The patients were thoroughly questioned and examined on the basis of the proforma, and modern investigations like fasting

Address for correspondence: Dr. Rajeev Kumar Pandey,
Plot no. A-64, Maa Bhawar Bhawan, Bramhapuri
(Near Samrat Gate), Jaipur-302002, Rajasthan, India.
E-mail: pandey.drrajeev@gmail.com

blood sugar (FBS), postprandial blood sugar (PPBS), lipid profile, etc. were carried out to confirm the diagnosis.

Inclusion criteria

- Patients having classical signs and symptoms of the disease according to *Ayurveda* as well as modern science.
- Patients of *Prameha* having body mass index (BMI) 25–35 kg/m².
- Patients of non-insulin dependent Diabetes mellitus (NIDDM) with blood sugar levels: FBS 126–220 mg/dl or PPBS 180–300 mg/dl.
- Patients in the age group of 20–60 years.
- Patients otherwise healthy and fit for *Vamana* and *Virechana Karma* as per the Ayurvedic classics.

Exclusion criteria

- Age <20 years and >60 years.
- Patients of *Prameha* having BMI <25 and >35 kg/m² and disease chronicity for >10 years.
- Patients of Type-1 Diabetes or the patients of Type-2 Diabetes taking insulin.
- Patients having complications of Diabetes like nephropathy, retinopathy, diabetic foot, carbuncles, etc.
- Patients having Diabetes in association with other endocrinopathies like pheochromocytoma, acromegaly, Cushing's syndrome, hyperthyroidism, etc.
- Patients having drug- or chemical-induced Type-2 Diabetes, such as glucocorticoid or thyroid hormone induced, etc.
- Patients with genetic syndromes associated with Type-2 Diabetes, such as Down's syndrome, Klinefelter's syndrome, Turner's syndrome, etc.
- Patients with complications such as any cardiovascular diseases, renal diseases, carcinoma or any other disease effecting multiple body systems and pregnant women, etc.

Plan of study

Patients having classical signs and symptoms of *Sthula Pramehi* and known cases of Type-2 Diabetes were selected for the study after confirming the same by investigations. All the patients were randomly divided into two groups:

Group A: *Vamana Karma* followed by *Shamana*

Vamana followed by *Samsarjana Karma* and administration of *Neem giloy satva* capsule 500 mg/each capsule, was given to the patients, 1 capsule twice daily for 30 days.

Group B: *Virechana karma* followed by *Shamana*

Virechana followed by *Samsarjana Karma* and administration of *Neem giloy satva* capsule, keeping the same dose.

Criteria for assessment

Assessment was done on improvement in signs and symptoms with the help of suitable scoring method.

Criteria for the assessment of overall effect of the therapies

Total effect of the therapy was assessed considering the overall improvement in signs and symptoms. For this purpose, the following categories were maintained.

1. Complete remission: 100% relief in the signs and symptoms.
2. Marked relief: ≥75% relief in the signs and symptoms.
3. Moderate relief: ≥50–74% in the signs and symptoms.
4. Mild relief: 26–50% relief in the signs and symptoms.
5. No relief: <25% relief in the signs and symptoms were considered as unchanged.

Scoring pattern was adopted for signs and symptoms.[4]

Statistical analysis

Paired "*t*" test was used for statistical analysis in *Vamana* as well as *Virechana* groups. For comparison between the both groups, unpaired "*t*" test was used.

Observations and Results

46% patients were in the age group of 51–60 years, 52% were females and 100% were married. 85% patients of this series were vegetarians and 97% were addicted to tea or coffee. 53% confirmed the family history of *Prameha* and maximum chronicity was 1–3 years (53%). 38% were having *Kapha-Pittaja Sharirika* and 53% were having *Tamah Pradhan Manasika Prakriti*. All the patients had BMI between 25 and 35, and 41% were having *Madhyama Jarana Shakti* and 40% patients were having *Krura Koshtha*. Among the chief complaints of *Prameha*, maximum number of patients were having *Prabhuta Mutrata* (95%), *Trishna dhikya* (93%), *Kshudha dhikya* (82%), *Kara-Pada Suptata* (42%), *Pindikodveshatan* (83%), and *Avila Mutrata* (76%). Also, among the associated signs and symptoms of *Prameha*, maximum number of patients were having *Maithune Ashakti* (82%), followed by *Nidra-tandra* (63%), *Alasya* (71%), *Swedatipravriti* (44%) and *Sheeta Priyata* (19%). Maximum *Matra* of *Triphala Siddha Tila Taila* for *Samyak Snehana* was found to be 800–1050 ml for 39% patients. 71% patients showed *Uttam Shuddhi* in group A, while 83% patients showed *Maddhyama Shuddhi* in group B.

In group A, *Prabhuta Mutrata*, *Aavilmutrata*, *Kshudhadhikya*, *Trishnadhikya*, *Pindikodwestanam*, and *Nisha Mutrata* (nocturia) remained controlled with highly significant results both after *Samsarjana* and *Shamana*, while complaints like *Daurbalya*, *Nidra-tandra*, and *Alasya* showed highly significant results after *Samsarjana* but showed significant results after *Shamana*. *Kara-Pada Tala Daha* and *Klaibya* were significantly controlled after *Samsarjana* and the control was highly significant after *Shamana*. *Kara-Pada Suptata* was significant in both the conditions. Insignificant results were seen in *Gala Talu Shosha* on both the occasions. FBS both after *Samsarjana* and after *Shamana* was highly significant, whereas PPBS showed highly significant difference after *Samsarjana* but was significant after *Shamana*.

After *Samsarjana*, 6% patients showed marked relief, 61% had moderate relief, 23% showed mild relief and 11% had no relief in their chief and associated complaints. Here, 22% patients had controlled FBS while 17% patients had marked difference in PPBS. After *Shamana*, 50% patients showed marked relief in their complaints while 34% had moderate relief in their complaints. Again, FBS of 11% patients showed moderate difference and PPBS of 16% patients was under control.

In group B, highly significant relief was obtained in *Prabhutmutrata*, *Aavilmutrata*, *Trishnadhikya*, *Kara pada tala*

daha, *Nisha Mutrata*, *Atisweda* and *Pindikodwestana*, while *Nidra-Tandra* and *Alasya* showed a highly significant result after *Samsarjana* but only mild relief was observed after *Shamana*. *Gala talu Shosha* was equally significant after *Virechana* and *Shamana*. In *Klaibya* relief was significant after *Vamana*, whereas it was highly significant after *Shamana*. FBS showed highly significant result both after *Samsarjana* and *Shamana* ($P<0.001$). PPBS, however, showed significant role both after *Samsarjana* and *Shamana* ($P<0.02$).

After *Samsarjana*, 30% patients had moderate relief while 60% had mild relief in their chief and associated complaints. After *Shamana*, 70% had moderate relief while 15% had mild relief. After *Samsarjana*, FBS of 40% and PPBS of 20% patients was under control, while after *Shamana* FBS of 30% and PPBS of 20% patients was controlled [Tables 1-3 and Figures 1-3].

Discussion

Madhumeha (Diabetes) has turned out to be the biggest "silent killer" in today's world. As per the estimate of WHO in its report, at least 171 million people presently suffer from diabetes and this number is expected to rise to 366 million by the year 2030. In spite of tremendous advancement in the modern system of medicine, i.e. oral hypoglycemic agent and insulin, still an ideal drug which can cure Diabetes is not available. It is mandatory to give *Deepana-Pachana* drug before *Aabhyantara*
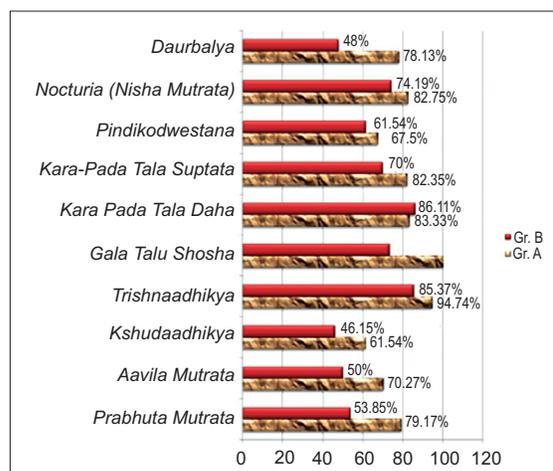

Figure 1: Percentage relief on chief complaint – After completion of treatment

Table 1: Comparative effects of both *Karma* (*Vamana* and *Virechana*) on the chief complaints in patients of *Sthula Pramehi* (by unpaired "*t*" test)

Chief complaints	Mean±SEM		% Change	Df N_1+N_2-2	"*t*" Group B	P
	Group A	Group B				
Prabhuta Mutrata	2.11 ± 0.21	1.4 ± 0.74	33.65	36	2.65	<0.02
Aavila Mutrata	1.53 ± 0.26	0.87 ± 0.13	43.14	30	2.19	<0.05
Kshudaadhikya	1.33 ± 0.24	1.0 ± 0.19	24.81	34	1.07	>0.05
Trishnaadhikya	2.0 ± 0.9	1.75 ± 0.75	12.5	36	1.04	>0.05
Gala Talu Shosha	1.33 ± 0.33	1.25 ± 0.31	6.2	9	0.15	>0.05
Kara Pada Tala Daha	1.54 ± 0.18	1.94 ± 0.17	−25.57↑	27	1.59	>0.05
Kara-Pada Tala Suptata	1.56 ± 0.29	1.0 ± 0.31	35.9	16	1.29	>0.05
Pindikodwestana	1.5 ± 0.99	1.4 ± 0.62	6.67	33	0.32	>0.05
Nocturia (*Nisha Mutrata*)	1.33 ± 0.16	1.15 ± 0.21	13.53	35	0.68	>0.05
Daurbalya	1.47 ± 0.21	0.92 ± 0.24	37.41	28	1.71	>0.05

↑ – Increase

Table 2: Comparative effects of both *Karma* (*Vamana* and *Virechana*) on the associated symptoms in patients of *Sthula Pramehi* (by unpaired "*t*" test)

Associated symptoms	Mean±SEM		% Change	df N_1+N_2-2	"t" Group B	P
	Group A	Group B				
Nidra-Tandra	0.47 ± 0.17	0.79 ± 0.16	−68.1↑	28	1.33	>0.05
Alashya	1.17 ± 0.27	1.0 ± 0.15	14.53	20	0.51	>0.05
Atisweda	1.17 ± 0.31	1.93 ± 0.22	−64.96↑	18	1.93	>0.05
Klaibya	0.77 ± 0.16	0.63 ± 0.11	18.2	34	0.69	>0.05

↑ – Increase

Table 3: Comparative effects of both *Karma* (*Vamana* and *Virechana*) on blood sugar level in patients of *Sthula Pramehi* (by unpaired "*t*" test)

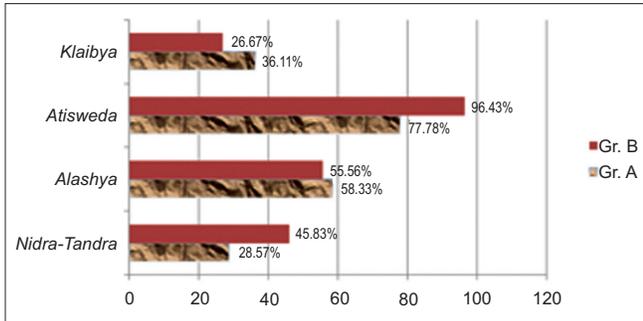| Blood sugar	Mean±SEM		% Change Group B	df N_1+N_2-2	"*t*" Group B	P
	Group A	Group B				
FBS	35.61 ± 11.97	32.1 ± 10.74	9.86	36	0.22	>0.05
PPBS	57.89 ± 23.7	40.8 ± 14.92	29.52	36	0.62	>0.05

Figure 2: % Relief on associated symptoms – After completion of treatment
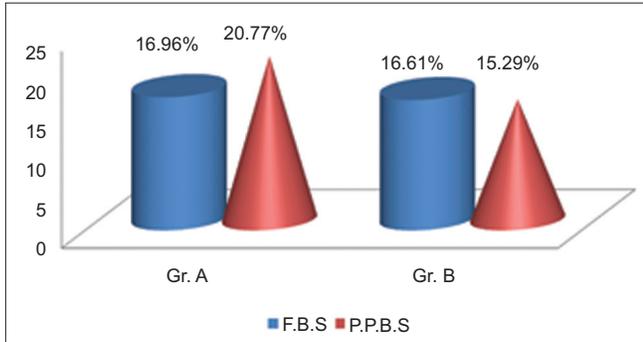

Figure 3: Effect on blood sugar levels – After completion of treatment

Snehapan because their inherent properties of *Amapachana* and increasing the quantum of *Agni*.[5] *Amapachana* helps to reduce the *Picchilta* of morbid matter so that they can be easily dislodged; that's why *Trikatu Churna* has been selected as it has *Deepan-Pachana* as well as *Pramehaghna* properties.

47% of registered patients belonged to the age group of 51–60 years. This data favor the view of modern science that Type-2 Diabetes is primarily a disease of middle and old age, but obese population may get it at an earlier age.[6]

53% of patients had a positive family history and also chronicity of 1–3 years, as *Prameha* is an *Aanushangi* as well as *Beej doshaj Vyadhi*. So, it mostly affects middle-aged people; living a sedentary life and a positive family history plays a major role in its development.

During the study it was observed that, *Vamana Karma* is effective in pacifying symptoms like *Prabhuta Mutrata* and *Avila Mutrata*. Because both symptoms are mainly due to *Kapha Prakopa* and *Abadha Meda*, and for this *Vamana* is the choice of treatment.

In symptoms such as *Kara Pada Tala Daha*, *Atisweda* and *Nidra-Tandra*, *Virechana* showed good relief though the result was insignificant. It is because *Kara Pada Tala Daha* and *Atisweda* are *Pitta* predominant features and *Virechana* is best for *Pitta*. *Nidra-Tandra* is a *Kapha* predominant symptom, but in *Prameha*, *Sthan-Sanshraya* of *Kapha* is in *Basti Pradesha*. So, this symptom is also relieved by *Virechana*.

It seems that *Vamana* by reducing *Kapha* and *Meda* helps to minimizing insulin resistance, while *Virechana* by lowering the hepatic glucose production helps to control blood sugar.

Conclusion

Vamana works well on *Kapha* dominant *Lakshana* like *Prabhuta Mutrata*, and *Aavil Mutrata*, while *Virechana* subsides *Pitta* dominant *Lakshana* like *Kara Pada Tala Daha* and *Atisweda*. Symptoms like *Kara-pada Suptata*, *Kshudadhikya*, *Trishnaadhikya*, *Gala Talu Shosha* and *Pindikodwestana* are significantly controlled by both *Vamana* and *Virechana*.

Though both the procedures relieve the symptoms, it is *Vamana* that provides more relief than *Virechana*. *Vamana* reduces the levels of FBS, PPBS in comparison to *Virechana*.

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हिन्दी सारांश

स्थूल प्रमेही की चिकित्सा में वमन एवं विरेचन कर्म का तुलनात्मक अध्ययन

राजीव पाण्डेय, एन. एन. भट्ट, टी. एम. सिंघाला, वी. डी. शुक्ला

प्रस्तुत अध्ययन में कुले ३८ रोगियों ने चिकित्साक्रम पूर्ण किया। इन रोगियों को दो वर्गों में विभाजित किया गया। वर्ग 'अ' में १८ रोगियों तथा वर्ग 'ख' में २० रोगियों को क्रमशः वमन एवं विरेचन के पश्चात शामक औषधि निम्ब गिलोय सत्त्व ५०० मि.ग्रा. मात्रा में दिन में दो बार ३० दिनों तक दिया गया। दोनो चिकित्सा उपक्रमों का प्रभाव प्रमेह के मुख्य लक्षणों में मिली राहत एवं रक्तगत शर्करा, रक्तगत मेद और अन्य जैवरासायनिक घटकों के प्रमाण पर निश्चित किया गया। चिकित्सोपरांत वमनकर्म द्वारा प्रमेह के मुख्य लक्षणों एवं रक्तगत शर्करा (अभुक्त एवं भोजन पश्चात) में मिली राहत, विरेचन कर्म की तुलना में अधिक प्रभावी पायी गई।