

A RANDOMISED CONTROLLED CLINICAL TRIAL TO EVALUATE THE EFFICACY OF HARIDRADI YOGA BASTI IN PRAMEHA VIS-À-VIS TYPE-2 DIABETES MELLITUS**Pooja I. M. M.*¹, Sanjay Kumar M. D.², Anantha Desai³**¹PG Scholar Department of PG Studies in Kayachikitsa, Government Ayurveda Medical College, Mysore.²Professor, Department of PG Studies in Kayachikitsa, Government Ayurveda Medical College, Mysore.³Head of the Department of PG Studies in Kayachikitsa, Government Ayurveda Medical College, Mysore.***Corresponding Author: Pooja I.M.M.**

PG Scholar Department of PG Studies in Kayachikitsa, Government Ayurveda Medical College, Mysore.

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ABSTRACT

Background: *Prameha* is described in *Ayurveda* as a *Mutratripravruttha Vyadhi*, characterized by *Prabhuta Mutra* and *Avila Mutra*. It is considered a *Daruna Vyadhi* due to the involvement of *Tridosha*, affliction of *Basti*, *Mahamarmasthana* and its association with multiple *Upadravas*. The condition bears close resemblance to Type II Diabetes Mellitus described in modern medicine. *Ayurveda* offers a holistic approach through numerous classical formulations including *Kashaya*, *Ghrita*, *Vati* and *Gutika* described in the context of *Prameha Chikitsa*, aiming at restoring *Dosha*, *Dhatu*, and *Agni* balance. *Haridradi Taila* mentioned as *Pramehanam Vimshati Jayeth* in *Yogaratanakara* is taken up for study in the management of *Prameha vis-a-vis* Type II Diabetes mellitus.

Objectives: 1]To compare the efficacy of *Haridradi Taila* and *Haridradi Kashaya* in *Yoga Basti* and internal administration of *Haridradi Kashaya* in *Prameha*. 2]To evaluate the efficacy of *Haridradi Taila* and *Haridradi Kashaya* in *Yoga Basti* in *Prameha*. 3]To evaluate the efficacy of internal administration of *Haridradi Kashaya* in *Prameha*. **Method:** It was a controlled clinical study involving two groups, Group A and Group B each consisting of 20 patients. For Group A, *Yoga Basti* followed by internal administration of *Haridradi Kashaya* for next 30 days. Total duration 38 days. For Group B, internal administration of *Haridradi Kashaya* for 30 days. Total duration 30 days. **Result:** *Basti* therapy in Group A produced slight improvements in clinical symptoms such as *Kshudadhikya*, *Pipasadhikya*, and *Prabhutamutrata* along with remarkable changes in fasting urine sugar levels. However, FBS and PPBS showed comparatively lesser improvement. The overall therapeutic efficacy was significantly higher in Group A (37.14%) compared to Group B (15.03%). This indicates that the intervention in Group A resulted in a more comprehensive and effective management in *Prameha*. The present study establishes that *Haridradi Yoga Basti* provides marked efficacy in the management of *Prameha* compared to *Shamanoushadi*. *Haridradi Yoga Basti* not only produced relief in the cardinal symptoms such as *Prabhutamutrata*, *Kshudadhikya*, *Pipasadhikya* but also showed reduction in FUS and PPUS.

KEYWORDS: *Kleda*, *PrabhutaMutra*, *AbaddhaMeda*, *Bahudravashleshma*.**INTRODUCTION**

Prameha is a *Santarpanajanya Vyadhi* described in the *Brihatrayi* and is included among the *Astamahagada*, denoting its grave nature. This is attributed to the involvement of all three *Doṣhas*, multiple *Duṣhyas* (*Meda*, *Kleda*, *Rasa*, *Mamsa*, *Rakta*, *Shukra*, *Lasika* and *Oja*), affection of *Basti Mahamarma*, chronic and recurrent course (*Chirakaleena*, *Anushangi*), hereditary predisposition (*Kulaja Vikara*), multiple *Upadravas* and

difficulty in management.^[1,2] *Prameha* is characterized by excessive and abnormal urination, reflecting underlying metabolic derangement and is classified into 20 types—10 *Kaphaja*, 6 *Pittaja* and 4 *Vataja*—based on urinary features.^[3,4]

Diabetes mellitus is a chronic metabolic disorder marked by persistent hyperglycaemia due to impaired glucose regulation. It represents a major global health challenge,

particularly type 2 diabetes, which is rapidly increasing in low and middle income countries.^[5] In 2021, an estimated 529 million people worldwide were affected.^[6] In India, about 77 million adults have type 2 diabetes with nearly 25 million in a prediabetic state.^[7] Sedentary lifestyle and excessive intake of calorie dense foods leading to obesity are key etiological factors in type 2 diabetes and closely resemble the *Santarpanajanya Hetus of Prameha*, allowing a clear clinicopathological correlation.

Contemporary management of diabetes includes lifestyle modification, dietary regulation, psycho-social support and pharmacotherapy such as oral antihyperglycaemic agents and insulin to maintain glycaemic control.^[8] However, long-term dependence on these therapies often leads patients to seek safer and holistic alternatives. *Ayurveda* advocates *Shodhana, Shamana*, dietary regulation and lifestyle measures in the management of *Prameha*. *Haridradi Taila*, described in *Yogaratanakara* under *Prameha Chikitsa* as “*Pramehanam Vimshati Jayeth*”^[9] contains *Haridra, Kushta, Pippali, Ashwagandha, Lashuna, Go Ksheera* and *Tila Taila*. Owing to its *Pramehahara, Medo-Kaphahara, Ushna* and *Laghu* properties, it aids in the breakdown of disease pathogenesis with *Haridra* regarded as a potent *Pramehahara* drug. Although several studies have evaluated therapies for *Prameha*, research focusing on *Basti* in its management is limited. Hence, based on classical references and available pharmacological evidence, the present study was undertaken.

OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To compare the efficacy of *Haridradi Taila* and *Haridradi Kashaya* in *Yoga Basti* and internal administration of *Haridradi Kashaya* in *Prameha*.
2. To evaluate the efficacy of *Haridradi Taila* and *Haridradi Kashaya* in *Yoga Basti* in *Prameha*.
3. To evaluate the efficacy of internal administration of *Haridradi Kashaya* in *Prameha*.

MATERIALS AND METHODS

Materials: Materials used for present clinical study are as follows: *Haridradi Taila, Haridradi Kwatha Churna, Haridradi Kashaya*.

Source of the data: Subjects were selected from OPD & IPD of Government Ayurveda Medical College and Hospital, Mysuru and Government Hi-Tech Panchakarma Hospital, Mysuru.

Source of the drug: *Haridradi Taila, Haridradi Kwatha Churna, Haridradi Kashaya* these were specifically prepared and procured from GMP Certified Pharmacy, Agnivesha Rasashala, Puttur.

Method of collection of the data

Study design: A double arm open labelled controlled clinical trial with pre, mid and post-test design.

Grouping- Subjects were assigned into two groups viz. Group A and Group B using random sampling technique.

Sample size: Total sample size consisting minimum of 40 subjects. Each group consisting minimum of 20 subjects.

Duration of the intervention

For Group A

Yoga Basti 8 days

Internal administration of *Haridradi Kashaya* for next 30 days

Total duration of study-38 days.

For Group B

Internal administration of *Haridradi Kashaya* for 30 days

Total duration of study-30 days.

Inclusion criteria

1. Subjects of all gender and age group between 30-50 years were included.
2. Subjects with FBS within 126-170 mg/dl and PPBS within 200-250mg/dl were included.
3. Subjects with HbA1c 6.5%-8% were included.
4. Both fresh and treated cases are included
5. Fresh and treated cases include-
 - i. Freshly detected and untreated cases of type 2 Diabetes Mellitus.
 - ii. Established and treated cases of type 2 Diabetes Mellitus within duration of 1 year who voluntarily discontinue the on-going treatment. Flush out period of 7days will be given before the case is taken.

Exclusion criteria

1. Subjects with history of diabetes mellitus associated with complications like diabetic nephropathy, retinopathy, infectious wounds, gangrene and foot ulcers were excluded.
2. Subjects with diabetes mellitus who are on insulin treatment excluded.
3. Subjects with other systemic disorders which interfere with intervention were excluded.
4. Pregnant and lactating women were excluded.
5. Subjects who are unfit for *Basti chikitsa* were excluded.
6. Subjects with BMI less than 18.5 and greater than 30 excluded.

Diagnostic Criteria

Based on WHO guidelines for diagnosis of Diabetes mellitus which includes:

HbA1c greater than or equal to 6.5%.

Fasting blood sugar levels greater than or equal to 126mg/dl.

Post prandial blood sugar level greater than or equal to 200mg/dl.

ASSESSMENT CRITERIA**Primary assessment parameters**

HbA1c, FBS, PPBS and urine sugar fasting and postprandial were assessed.

Secondary assessment parameters

Clinical signs and symptoms in symptomatic patients of *Prameha* were assessed using grading score through questionnaire.

The following parameters were considered, graded and scores was given**1. Prabhuta Mutrata (day time)**

Frequency of micturition -3-5 times/day-0
 Frequency of micturition -6-8 times/day - 1
 Frequency of micturition-9-11 times/day-2
 Frequency of micturition more than 11 times/day-3

2. Prabhuta Mutrata (night time)

Does not wake up for micturition - 0
 Wakes up once for micturition -1
 Wakes up twice for micturition-2
 Wakes up more than 2 times for micturition-3

3. Kshudadhikya (polyphagia)

Feels hunger at next Annakala only-0
 Feels hunger for once in between Annakala-1
 Feels hunger for more than twice in between Annakala-2
 Feels hunger always-3

4. Pipasaadhikya (polydipsia)

Frequency of consumption of water due to thirst-4-6 times/day-0
 Frequency of consumption of water due to thirst 7-9 times/day-1
 Frequency of consumption of water due to thirst 10-12times/day-2
 Frequency of consumption of water due to thirst more than 12times/day-3

5. Karapada Daha (burning sensation of hand and feet)

No burning sensation in feet and or hands-0
 Mild burning sensation in feet and or hands - 1
 Moderate burning sensation in feet and or hands-2
 Severe burning sensation in feet and or hands -3

Assessment schedule

For Group A-FBS, PPBS and urine sugar fasting and postprandial were assessed on 0th day, 9thday, 39th day. HbA1c was assessed on 10th day and 39th day

For Group B-FBS, PPBS and urine sugar fasting and postprandial were assessed on 0th day and 31 days. HbA1c was assessed on 0th day and 31 days.

STATISTICAL METHODS

The results were compared and analysed statistically by using the following statistical methods:

Descriptive statistics-Mean, median, standard deviation, frequency, percentile.

Inferential statistics Mann-Whitney U test, Wilcoxon matched pairs test.

All the statistical methods were done by using SPSS for windows.

Intervention**Group-A Haridradi Taila Yogabasti**

15 Anuvasana Basti + 3 Niruha Basti
 The ingredients are as follows:
 Anuvasana Basti-Haridradi Taila-72 ml
 Niruha Basti- Makshika-96 ml
 Saindava Lavana-6gm
 Haridradi Taila-72ml
 Kalka-Puto Yavanyadi Kalka-48gm
 Haridradi Kwatha-192ml
 Gomutra Arka-96ml
 Total quantity 510ml

Internal administration of 25ml of *Haridradi Kashaya* with equal quantity of warm water in two equally divided doses during morning and night before food.

Group-B

Internal administration of 25ml of *Haridradi Kashaya* with equal quantity of warm water in two equally divided doses during morning and night before food.

OBSERVATIONS

In the present study it was observed that *Prameha* was common in the age group of 46-50[72.50%], females[55%] were more affected than males[45%], it had higher incidence in people with home makers[47.50%]. Incidence was more in middle class population (57.50%) and in people with mixed diet (82.50%), irregular dietary habits such as intake junk foods[75%]. Improper lifestyle habits such as lack of exercise (45%), habit of day sleep [75%]. Psychological influences like stress and anger could have played a role in precipitating the disease. Most patients in the study were newly treated cases with a history of diabetes mellitus of 1–2 years duration.

RESULTS

A total of 40 subjects were enrolled in the study and results were analyzed from all 40 participants who completed it.

Result on Prabhuta Mutrata(Daytime)

Statistically significant reduction in frequency of micturition in day time was observed in both group A with $p= 0.000$ and group B with $p= 0.00$. There was no statistically significant difference in the frequency of micturition in day time between the two groups $p=0.5979$. This suggests a notably better outcome in Group A.

Result on Prabhuta Mutrata(Night time)

Statistically significant reduction in frequency of micturition in night time was observed in both. Group A with $p=0.001$ and group B with $p=0.017$. There was no statistically significant difference in the frequency of micturition in night time between the two groups $p=0.1478$. It indicates better symptom control in Group A.

Result on Kshudadhikhya

significant reduction in *Kshudadhikhya* was observed in Group A $p=0.043$ and no change was observed in group B with $p=1.000$. In between the groups, non-significant result was obtained with $p=0.1806$. This highlights a substantial therapeutic effect of the intervention in Group A on *Kshudadhikya*.

Result on Pipasadhikhya

Borderline statistical significant reduction in *Pipasadhikhya* was observed in Group A $p=0.067$ and no significant reduction was observed in Group B with $p=0.179$. In between the groups, non-significant result was obtained with $p=0.597$ suggesting better relief of *Pipasadhikya* in Group A.

Result on Karapadadaha

Significant reduction in *Karapadadaha* was observed in both. Groups A $p=0.001$ and Group B with $p=0.011$. In between the groups, non-significant result was obtained with $p=0.1806$ again reflecting a greater efficacy of Group A treatment.

Result on Fasting blood sugar (FBS)

No Significant reduction in FBS was observed in both Group A with $p=0.459$ and Group B with $p=0.736$. No significant difference was observed in between the groups with $p=0.304$ suggesting a better glycaemic control in fasting state in Group A.

Result on Post prandial blood sugar (PPBS)

Significant reduction in PPBS was observed in both group with $p=0.000$ and Group B with $p=0.047$. No statistical significant difference was observed in between the groups with $p=0.065$ suggesting a better glycaemic control in postprandial state in Group A.

Individual and overall effect in Group A and Group B.

Parameters	Group A in %	Group B in %
<i>Prabhuthamutrata</i> in day time	88.24	72.22
<i>Prabhuthamutrata</i> in night time	51.85	28.57
<i>Kshudadhikya</i>	50.00	0.00
<i>Pipasadhikya</i>	36.36	18.18
<i>Karapadadaha</i>	40.63	20.00
Fasting blood sugar	3.56	0.22
Postprandial blood sugar	12.55	4.86
Fasting urine sugar	50.00	0.00
Postprandial urine sugar	37.14	5.93
HbA1c	1.04	0.33
Overall effect	37.14	15.03

Result on Fasting urine sugar (FUS)

No Significant reduction in FUS was observed in Group A with $p=0.345$ and no change was seen in Group B with $p=1.000$. No statistical significant difference was observed in between the groups with $p=0.924$, it suggests 50% improvement in fasting urine sugar levels in group A.

Result on Postprandial urine sugar (PPUS)

No Significant reduction in PPUS was observed in group A with $p=0.123$ and group B with $p=0.465$. However, on comparing the effect in between the groups, no significant difference was obtained with $p=0.223$. Group A showed better improvements in Postprandial urine sugar compared to group B.

Result on HbA1c

No Significant reduction in HbA1c, group A with $p=0.060$ and group B with $p=0.918$. In between the groups, significant difference was obtained with $p=0.043$. Demonstrating a more effective long-term glycaemic control in Group A.

Effect of Haridradi Yoga Basti in group A

Parameters	% Changes
<i>Prabhuthamutrata</i> in day time	17.65%
<i>Prabhuthamutrata</i> in night time	7.41%
<i>Kshudadhikya</i>	20%
<i>Pipasadhikya</i>	18.18%
<i>Karapadadaha</i>	6.25%
Fasting blood sugar	4.80%
Postprandial blood sugar	8.08%
Fasting urine sugar	80%
Postprandial urine sugar	20%

Overall Effect

The overall therapeutic efficacy was significantly **higher in Group A (37.14%)** compared to **Group B (15.03%)**. This indicates that the intervention in Group A resulted in a more comprehensive and effective management in *Prameha*.

DISCUSSION

Probable mode of action of drugs of *Haridradi Taila* and *Haridradi Kashaya*

Haridradi Taila is mentioned in Yogaratnakara Prameha Chikitsa Adhyaya as "*Prameham Vimshati Jayaeth*". *Haridradi Taila* contains *Haridra*, *Kushta*, *Pippali*, *Lashuna* and *Ashwagandha*, *Ksheera* and *Tila Taila* and *Haridradi Kashaya* contains *Haridra*, *Kushta*, *Pippali*, *Lashuna* and *Ashwagandha*.

Haridra with *Tikta-Katu Rasa*, *Ruksha*, *Laghu*, *Tikshna Guna*, *Ushna Veerya* and *Katu Vipaka*, is *Kapha-Pitta Shamaka* and *Agrya* for Prameha. Its *Sukshma* and *Lekhana* properties help in *Mutra Sangrahana* and reduction of *Meda* and *Kleda*. Curcumin enhances AMPK activation, insulin sensitivity and glucose uptake, while turmeric volatile oils inhibit α -glucosidase and α -amylase.^[10] *Curcuma longa* extracts stimulate insulin secretion and improve glucose utilization, along with *Medohara* and antihyperlipidaemic effects.

Pippali has *Katu Rasa*, *Laghu Tikshna Guna*, *Ushna Veerya*, *Medakaphahara*, *Vata-Kaphahara*, *Deepana*, *Pachana* and *Prameha Hara Karma*. By virtue of these properties, it improves digestion and metabolism and prevents ama. Piperine, one of the constituents of piper longum increases insulin secretion, improves glucose tolerance.

Kushta having *Tikta*, *Katu Rasa*, *Laghu*, *Ruksha*, *Tikshna Guna*, *Ushna Veerya*, *Katu Vipaka* and one among *Lekhaneeya Gana* Gravya. Scrapes excess *Meda*, enhances *Dhathvagni*, regulates metabolism.

Lashuna, endowed with *Katu*, *Tikta*, *Kashaya Rasa*, *Tikshna Guna*, *Ushna Veerya* and *Katu Vipaka*, exhibits *Medohara*, *Rasayana*, *Kapha-Medohara* and *Srotoshodhana* actions and enhances *Agni*. Its active constituents such as allicin, allyl propyl disulfide and S-allyl cysteine sulfoxide exert antihyperglycaemic effects by improving insulin secretion, increasing insulin sensitivity and reducing hepatic insulin inactivation.^[11]

Ashwagandha (*Withania somnifera*), possessing *Katu*, *Tikta*, *Kashaya Rasa*, *Laghu Guna*, *Ushna Virya* and *Katu Vipaka*, acts as *Vata-Kaphahara*. Experimental studies have demonstrated that its aqueous extract normalizes hyperglycaemia in NIDDM models by improving insulin sensitivity, preventing rise in insulin resistance (HOMA-R) and enhancing insulin sensitivity index (K_ITT).^[12]

Tila Taila having *Tikta* *Kashaya Rasa*, *Sukshma Guna*, *Ushna Veerya*, *Vata-Kaphahara*.

Considering the properties and actions of individual drugs, it can be considered that drugs used in *Haridradi Taila* and *Kashaya* is having *Tikta*, *Kashaya* *Katu Rasa* with *Laghu Ruksha Guna* and *Ushna Veerya*. In Prameha, increased *Kleda* leading to *Prabhuta Mutrata* is the key

pathological feature. Drugs possessing *Tikta*, *Kashaya* and *Katu Rasa* perform *Kleda Shoshana*, *Lekhana* and reduce *Meda* and related *Dhatus*, while *Laghu*, *Ruksha Guna* and *Ushna Veerya* facilitate *Kapha Shamana*. Their *Rasayana* property helps alleviate *Dourbalya* and improve *Bala*. Most of these drugs are directly indicated in Prameha.

Probable mode of action of *Basti* in Prameha

In Prameha, *Kapha-Pradhana Tridoshajavyadhi* with increased *Kleda* and *Meda* leads to *Prabhuta Mutrata* and *Pipasa*. *Tikta* and *Kashaya* drugs in *Basti* exhibit *Kapha-Meda-Kleda Shoshana* and, by reducing *Bahudravata* in *Basti*, decrease excessive urination and thirst. Being a *Dhatvagnimandyajanita* metabolic disorder, Prameha benefits from drugs with *Deepana-Pachana*, *Katu Rasa* and *Ushna Veerya*, which correct digestive and metabolic dysfunctions. *Basti* facilitates *Malashodhana*, removes vitiated *Kapha* and *Pitta*, clears *Vata Avarana*, and strengthens *Srotas*, thereby halting disease progression and reducing complications. Rectal administration of *Haridradi Yoga Basti* bypasses hepatic metabolism, enhancing bioavailability and providing multifactorial antidiabetic effects—including improved insulin secretion, enhanced sensitivity, reduced glucose production, organ protection from oxidative stress, and correction of metabolic disturbances in Prameha.

DISCUSSION ON ASSESSMENT PARAMETERS

Discussion on *Prabhutamutrata* in daytime and night time

Group A showed a significant reduction in *Prabhutamutrata* in daytime with an improvement rate of 88.24%, 72.22% in Group B. Improvement in *Prabhutamutrata* at night time was observed to be 51.85% in Group A, 28.57% in Group B. *Haridradi Taila* and *Kashaya* contain drugs predominantly having *Katu*, *Tikta* and *Kashaya Rasa* with *Ruksha Guna* and *Ushna Veerya*, which reduce *Kleda*. *Tikta Rasa* causes *Kleda Upashoshana*, *Kashaya Rasa* utilizes excess *Kleda* and *Ruksha Guna* decreases moisture. These properties help in reducing *Bahu Drava Sleshma* and *Kleda* and along with the anti-diabetic action of the drugs lead to a reduction in *Prabhuta Mutrata* during day and night.

Discussion on *Kshudadhikya*

50.00% improvement was reported in Group A, whereas Group B showed 0.00% change. Impaired *Agni* leads to *Kapha Meda* vitiation and *Avarana* of *Vata*, causing *Atiagnisandhukshana* and *Kshudhadhikya*. In NIDDM, reduced glucose utilization by muscles increases energy demand, manifesting as excessive hunger. The *Deepana-Pachana* and *Vatashamaka* properties of *Haridradi Taila* and *Kashaya* correct *Agni* and *Meda Vriddhi*, resulting in reduction of *Kshudhadhikya* and indicating *Samyak Yoga* of *Basti* therapy.

Discussion on *Pipasadhikya*

Group A demonstrated a 36.36% improvement in *Pipasadhikya*, which was double that of Group B

18.18%. Excessive urination leads to increased thirst due to *Pitta Vriddhi* and *Teekshnagni*. The *Tikta*, *Madhura* and *Kashaya Rasa* of *Ashwagandha*, *Haridra*, *Lashuna* and *Kushta* along with the *Trishnanighanana* effect of *Ksheera* in *Haridradi Taila*, help pacify this condition. By reducing *Prabhuta Mutrata*, *Haridradi Taila* and *Kashaya* also reduce *Pipasa*, as hydration is maintained with decreased urinary frequency

Discussion on Karapadadaha

Improvement in *Karapadadaha* was 40.63% in Group A, while Group B showed a 20.00% improvement. *Karapadataladaha* is a neurological complication of diabetes described as a *Purvarupa* of *Prameha* and reflects poor glycemic control. Correction of hyperglycemia by the hypoglycemic action of *Haridra*, *Kushta*, *Lashuna*, *Ashwagandha* and *Pipali* along with the *Nadibalya* properties of *Pipali*, *Ashwagandha*, *Lashuna* and *Tilataila*, helps in reducing *Karapadatala Daha*.

Discussion Fasting Blood Sugar and Postprandial Blood Sugar

Group A showed a 3.56% reduction in fasting blood sugar levels and 0.22% in Group B. Postprandial blood sugar levels improved by 12.55% in Group A, 4.86% reduction seen in Group B. Improved *Agni* reduces insulin resistance and hepatic glucose output, leading to lower fasting blood glucose. *Haridra*, *Pipali* and *Lashuna* enhance glucose utilization and insulin secretion, while the antioxidant *Rasayana* action of *Haridra*, *Kushta*, *Pipali*, *Ashwagandha* and *Lashuna* prevents insulin resistance and β -cell dysfunction, thereby controlling blood sugar levels.

Discussion on Fasting Urine Sugar and Postprandial Urine Sugar

A marked difference was seen in the reduction of fasting urine sugar 50.00% improvement in Group A, with 0.00% change in Group B. In postprandial urine sugar Group A showed 37.14% improvement, whereas Group B showed only 5.93% improvement. *Prameha* is a *Tridoshaja Vyadhi* with *Bahudrava Shleshma* as the predominant *Dosha*. *Vata*, especially *Vyana* and *Apana Vata*, plays a key role in circulation, excretion and metabolic regulation. *Basti* therapy enhances *Agni*, normalizes *Rasavaha*, *Medovaha* and *Mutravaha Srotas*, eliminates metabolic waste and brings about *Samprapti Vighatana* due to the *Pramehaghna* properties of the *Basti Dravya*.

DISCUSSION ON OVERALL ASSESSMENT

The overall therapeutic efficacy was significantly higher in Group A (37.14%) compared to Group B (15.03%). Group A showed significantly superior clinical and metabolic outcomes compared to Group B. Marked improvement was observed in *Prameha* symptoms *Prabhutamutrata*, *Kshudadhikya*, *Pipasadhikya* and *Karapadadaha* along with better glycemic control (FBS, PPBS, HbA1c and urine sugar). The higher overall

efficacy in Group A reflects the *Pramehaghna*, *Deepana-Pachana*, *Kledashoshana*, *Rasayana* and *Nadibalya* actions of *Haridradi Taila* and *Kashaya* demonstrating their effectiveness in restoring *Agni*, improving insulin sensitivity and achieving comprehensive metabolic regulation.

CONCLUSION

Prameha, resembling Type II Diabetes Mellitus, is characterized by *Bahudrava Shleshma* and *Bahu Meda* leading to *Medavaha* and *Mutravaha Srotodushti*, presenting with *Prabhutamutrata*, *Kshudadhikya*, *Pipasadhikya*, and *Karapadadaha*. The study demonstrates that *Haridradi Yoga Basti*, along with *Shamanoushadi*, provides superior relief in these symptoms and reduces fasting and postprandial urine sugar. Overall therapeutic efficacy was higher in the *Basti* group (37.14%) compared to the *Shamana* group (15.03%), indicating more comprehensive management of *Prameha*.

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