

ROLE OF KOSHITA SHODHANOTTARA SANJIVINI VATI, PANCHANIMBA
GHANVATI AND MEDHYACHATUSHKA GHRITA PRATIMARSHA NASYA IN THE
MANAGEMENT OF STRESS INDUCED DIABETESDr. Vinod Kumar^{1*}, Dr. Fareeda Begum², Dr. Janaki Y. S.³¹Final Year Post Graduate Scholar, Dept. of Pg Studies in Kayachikitsa Taranath, Govt. Ayurvedic Medical College, Bellary, Karnataka, India.²Professor, Dept. of Pg Studies in Kayachikitsa Taranath, Govt. Ayurvedic Medical College, Bellary, Karnataka, India.³Professor and Head, Dept. of Pg Studies in Kayachikitsa Taranath, Govt. Ayurvedic Medical College, Bellary, Karnataka, India.***Corresponding Author: Dr. Vinod Kumar**Final Year Post Graduate Scholar, Dept. of Pg Studies in Kayachikitsa Taranath, Govt. Ayurvedic Medical College, Bellary, Karnataka, India. DOI: <https://doi.org/10.5281/zenodo.18428696>**How to cite this Article:** Dr. Vinod Kumar^{1*}, Dr. Fareeda Begum², Dr. Janaki Y. S.³ (2026). Role Of Koshta Shodhanottara Sanjivini Vati, Panchanimba Ghanvati And Medhyachatushka Ghrita Pratimarsha Nasya In The Management Of Stress Induced Diabetes. World Journal of Pharmaceutical and Medical Research, 12(2), 96–101.

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ABSTRACT

Hyperglycaemia refers to elevated blood glucose levels and is commonly linked to diabetes mellitus, a disorder of impaired carbohydrate metabolism caused by insulin deficiency or resistance. Stress acts as both causative and aggravating factor in diabetes. Diabetes is among the top global causes of death. Worldwide, 463 million people have type 2 diabetes, including 88 million in India, where prevalence is 11.3%. Of these, 45.6% are aware, 36.1% receive treatment, only 5.7% achieve glycaemic control, and nearly 25 million remain at risk. In Ayurveda, Madhumeha is described as *Vatapradhana Tridosaja Vyadhi* involving *Ama*, *Meda*, and *Kleda Dushti*, based on *Rakta Dushti* in *Vidhishonitiya Adhyaya*, corresponding to treatable hyperglycaemia. **Objectives:** to evaluate the combined efficacy of *Sanjivini vati*, *Panchanimba ghanvati with kadaradi Kashaya anupana* and *Medhyachatushka ghrita pratimarsha nasya* in the management of *Madhumeha*. To assess the efficacy of ongoing modern intervention in the management of hyperglycemia. And to compare the effects of both Groups. **Methods:** An open-labelled randomized controlled trial was conducted for 38 days on two groups. GroupA *Sanjivini vati*, *panchanimba ghanvati with Kadaradi Kashaya anupana* and *Medhyachatushka ghrita pratimarsha nasya* and GroupB ongoing modern intervention. Subjective and objective outcomes were assessed before and after treatment and analysed using contingency tables. **Results:** Group A Showed highly significant improvement in all subjective parameters ($P < 0.0001$) compared to Group B. **Conclusion:** The comprehensive treatment protocol showed highly significant improvement in both Objective and Subjective parameters. Multi model Ayurvedic interventions therefore offer enhanced therapeutic benefit in the management of *Madhumeha*.

KEYWORDS: *Madhumeha*, *Stress*, *Sanjivini vati*, *Hyperglycemia*, *Pratimarsha nasya*, *Medhyachatushka ghrita*, *Diabetes*.**INTRODUCTION**

Hyperglycemia^[1] is a condition characterized by high glucose concentration in the blood, often associated with diabetes mellitus. It is a disorder of abnormal carbohydrate metabolism caused by absolute or relative insulin deficiency or resistance. Diabetes is one of the ninth leading causes of death globally, which has increased attention toward Ayurveda due to unhealthy lifestyle patterns and metabolic errors. Worldwide, 463 million individuals are affected by Type 2 Diabetes

Mellitus (T2DM), including 88 million in India.^[2] Among these, 45.6% are aware of their disease, 36.1% are on treatment, and only 5.7% have achieved proper control, while nearly 25 million individuals are at risk of developing diabetes. The prevalence of diabetes in India is estimated at 11.3%. In Ayurveda, *Madhumeha*^[3] is described as a *Vatapradhana Tridoshaja Vyadhi*, involving *Ama*, *Meda*, and *Kleda Dushti* expressed on the platform of *Rakta Dushti* in the context of *Vidhishonitiya Adhyaya*. It closely resembles the clinical

presentation of hyperglycemia and represents the most treatable phase of the disorder.

Stress is an emotional or physical state of tension in which neurotransmitters and hormones such as dopamine, serotonin, epinephrine, glucagon, growth hormone, and cortisol play a significant role in influencing blood sugar levels. During stress, the body prepares itself by ensuring that adequate glucose or energy is readily available. Insulin levels fall, glucagon and epinephrine levels rise, and the liver releases more glucose into the bloodstream. Simultaneously, cortisol and growth hormone levels increase, making body tissues such as muscle and fat less sensitive to insulin. As a result, more glucose circulates in the blood, leading to a condition known as stress-induced hyperglycemia^[4], which can progress to stress-induced diabetes if prolonged. Chronic stress contributes to insulin resistance and poor glycemic control, thereby worsening diabetic conditions.

There are limitations to currently available oral hypoglycemic agents (OHAs), which primarily target glucose metabolism and improve insulin action but are less effective in stress-related hyperglycemia or stress-induced diabetes. Ayurveda offers holistic solutions through therapies that address both metabolic and psychological aspects. *Rasayana* and *Nasya* are among the simplest and most effective Ayurvedic procedures that can be practiced daily for stress reduction and metabolic balance. The modern concept of trans-nasal insulin delivery parallels the Ayurvedic *Nasya* method, highlighting potential for further research. *Sanjeevini Vati*^[5], containing *Vatsanabha*, *Ballataka*, *Vacha*, and *Triphala*, possesses hypoglycemic properties, with *Vacha* known for its anti-stress action. *Pancha Nimba Ghanavati*^[6] acts as a *Rasayana*, *Rakta Shodhaka*, *Dhatvagni Deepana*, *Pachana*, and *Kledahara*. *Kadaradi Kashaya*^[7] exhibits *Mehahara* and *Kledahara* effects useful in diabetes management. *Medhya Chatushka Ghrita*^[8] (*Guduchi*, *Madhyashsti*, *Mandookaparni*, and *Shankhapushpi*) demonstrates proven antistress, anti-inflammatory, and nootropic activities and, when administered through *Nasya*, enhances therapeutic efficacy. Both *Mandookaparni* and *Guduchi* also possess hypoglycemic activity. Hence, Ayurvedic interventions focusing on both stress reduction and glucose regulation may provide a comprehensive approach for the prevention and management of stress-induced diabetes and hyperglycemia.

So, with alternate hypothesis, *Sanjivini vati*, *panchanimba ghanavati* with *kadaradi Kashaya anupana* and *medhyachatushka ghrita pratimarsha nasya* (transnasal drug delicery) in Stress induced hyperglycemia is taken.

AIM AND OBJECTIVES

- To assess the combined efficacy of *Sanjivini vati* and *Panchanimba Ganavati* with *Kadaradi kashaya*

anupana and *Medhyachatushka ghrita Pratimarshanasya* in the management of Stress induced hyperglycaemia (*Madhumeha*).

- To assess the efficacy of ongoing modern intervention in the management of hyperglycemia.
- To compare the effect of GroupA over GroupB intervention in stress induced hyperglycaemia (*Madhumeha*).

MATERIALS AND METHODS

Study design

Prospective, Controlled Comparative open-label RCT study, where 80 patients of Stress induced hyperglycemia were randomly selected and assigned into two groups consisting of 40 patients in each. Group A patients were subjected to *Sanjivini vati* and *Panchanimba Ghanavati* with *Kadaradi kashaya anupana* and *Medhyachatushka ghrita Pratimarshanasya*. Group B received modern ongoing allopathic intervention.

Source of patients

80 Patients of *Madhumeha* will be randomly selected (irrespective of caste) from OPD and IPD of Taranath government ayurvedic medical college and hospital Ballari. And District hospital Ballari.

CRITERIA FOR SELECTION OF CASES

INCLUSION CRITERIA

- Subjects presenting with clinical features of hyperglycaemia
- Subjects with FBS above 126mg/dl
- Subjects with PPBS above 160mg/dl
- Assessment through standard stress scale.^[9]
- Subjects of either sex between the age group of 30 to 75 years.

EXCLUSION CRITERIA

- Patients of Type I DM,
- patient in ICU, and emergency
- Pregnancy and Lactating women.
- Who doesn't provide written informed consent.

DIAGNOSTIC CRITERIA

SUBJECTIVE PARAMETERS

- Dourbalya (Fatigue/ weakness)
- Talukantha shosham/ Pipasa (polydipsia)
- Muhurmuhur mutra pravritti (Polyuria)
- Kara-pada Daha (Burning sensation in Hands & Feet)

OBJECTIVE PARAMETERS

- FBS
- PPBS
- STRESS SCALE
- HB%

• **INTERVENTION**

GROUP A - 40 PATIENT

• **Table no. 1: showing Intervention.**

1. Sanjivini vati	250 mg capsules twice a day
2. Panchanimba ghanavati	500mg capsules, two caps twice a day
Anupana	Kadaradi kashaya 20ml twice day with 40 ml water
Time of administration	Before food
Duration	36days
3. Kostashodhana with Nimbamrutadi eranda taila	50ml with sukoshna jala On 9 th day and 28 th day of the course
4. Pratimarshanasya with Medhyachatushka ghrita	2drops 2times a day
Duration	36 days

(Advised to stop all the oral medication and pratimarshanasya on the day of Kostashodhana)

Group: B (N=40) Patients of diabetes undergoing modern intervention.

In group A maximum number i.e 40 (100%) patients had *Dourbalya*, 34 (71.25%) patients had *Karapada daha*, 39(97.5%) patients had *Pipasa*, 39(97.5%) patients had *Mutratipravrutti*.

In group B maximum number i.e 34 (71.5%) patients had *Dourbalya*, 22 (55%) patients had *Karapada daha*, 23(57.5%) patients had *Pipasa*, 23(57.5%) patients had *Mutratipravrutti*.

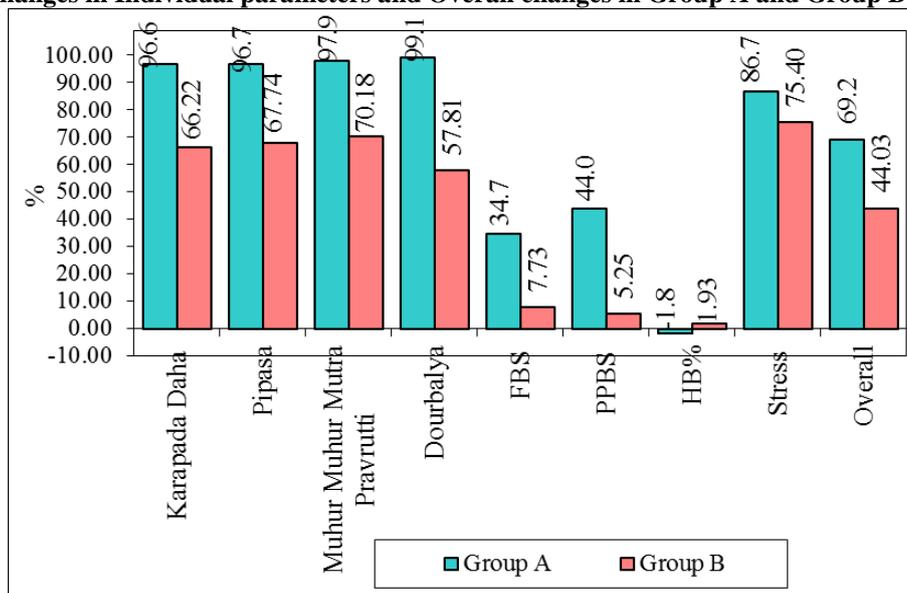
Table: Changes in Individual parameters and Overall changes in Group A and Group B.

Parameters	Changes from	Group A	Group B
Karapada Daha	BT-AFU	96.59	66.22
Pipasa	BT-AFU	96.70	67.74
Muhur Muhur Mutra Pravrutti	BT-AFU	97.85	70.18
Dourbalya	BT-AFU	99.12	57.81
FBS	BT-AFU	34.72	7.73
PPBS	BT-AFU	44.04	5.25
HB%	BT-AT	-1.80	1.93
Stress	BT-AT	86.72	75.40
Overall		69.24	44.03

On comparison, Both Group A and Group B showed statistically highly significant improvement in all subjective and objective parameters. group A Showed

69.24 %, and Group B Showed 44.03% in both Objective and Subjective parameters. over all group A is better when compared with group B.

GRAPH NO: Changes in Individual parameters and Overall changes in Group A and Group B



DISCUSSION

Ayurveda is a scientific system developed through continuous clinical observation and validation, with repeatedly assessed and standardized principles. The discussion emphasizes identifying the possible *Karanas* responsible for the observed *Karya*, supported by *Tarkas*, to understand the pathology of stress-induced hyperglycemia and variations in different parameters. Madhumeha is described as a Vata-predominant *Tridoshaja Vyadhi* resulting from imbalance of *Meda*, *Kleda*, and accumulation of *Ama*. This imbalance leads to systemic dysfunction, particularly *Rakta Dushti*, indicating deranged metabolism and chronic hyperglycemia.

Etiologically, *Dhatukshaya* and *Avarana* play significant roles in disease progression, and if untreated, the condition may become *Krichra Sadhya* or progress to *Asadhya*. Psychological stress, known in modern medicine to cause insulin resistance and glucose imbalance, is also well recognized in Ayurveda. Chronic stress disturbs the *Manovaha Srotas*, aggravates *Vata* and *Pitta*, weakens *Agni*, and promotes *Ama* formation. This psychosomatic mechanism significantly contributes to stress-induced Madhumeha, accelerating disease onset and severity.

SANJIVINI VATI

is primarily *Ama Pachana yoga*. For the trail it is prepared with seven Bhavanas of Gomutra and one Bhavana of Adraka Swarasa, exhibits potent *Ama Pachana*, *Agni Deepana*, and *Kapha-Meda hara* actions. The Gomutra Bhavana enhances its *Shodhana* and metabolic corrective properties, while Adraka Swarasa improves bioavailability and aids in *Srotoshodhana*. The formulation contains *Bhallataka*, which is known for its *Teekshna*, *Ushna*, and *Lekhana* properties, helping in the breakdown of *Meda dhatu* and improving cellular metabolism. *Vatsanabha*, though used in purified form, acts as a powerful *Agni Deepana* and *Srotoshodhaka*, and is believed to stimulate insulin secretion and enhance nervous system function. It also contains *guduchi* acts as *rasayana* and *triphala* acts as *meha hara*. Together, these ingredients work synergistically to correct *Agni*, reduce *Ama*, enhance insulin activity, and clear obstructions in *Medovaha* and *Udakavaha Srotas*. Thus, Sanjivani Vati acts at multiple levels digestive, metabolic, endocrine, and neurological making it a holistic and effective intervention in *Madhumeha*.

PANCHANIMBA GHANAVATI

Nimbapancha Ghana Vati, is a concentrated extract-based formulation prepared from all five parts of *Nimba* (*patra*, *twak*, *mula*, *pushpa*, and *phala*), plays a vital role in the management of *Madhumeha* due to its broad-spectrum therapeutic properties. Traditionally, *Nimba* is indicated in *Rakta Dushti*, *Kushtha*, and *Prameha*, aligning well with the pathogenesis of diabetes in Ayurveda. Modern studies have highlighted the presence of active compounds such as *nimbin*, *nimbidin*, and

azadirachtin, which show anti-diabetic, antioxidant, and insulin-sensitizing effects. thus, making it a valuable addition in the holistic management of *Madhumeha*.

KADARADI KASHAYA

Kadaradi Kashaya is indicated in madhumeha told in Ashtanga sangraha, 14th chapter madhumeha chikitsa. The formulation contains ingredients like Kadara, Khadira, Guggulu. exhibits a comprehensive therapeutic effect in the management of *Madhumeha*. The formulation targets the root pathology by correcting *Agni mandya*, *Doṣha* imbalance, and *Dhatu dushti*, particularly *Meda Dhatu*. *Khadira* and *Kadara*, possessing *Kashaya* and *Tikta Rasa*, *shita Virya*, and *Laghu-Rukṣa Guṇa*, perform *Kleda Shoshana*, *Srotoshodhana*, and *Medohara Karma*. These actions help eliminate excess *Kapha* and *Meda*, thereby relieving *Margavarodha*. *Guggulu*, a well-known *Medoghna* and *Mehaghna* drug, further potentiates the formulation by enhancing insulin metabolism, improving *Dhatvagni*, and balancing *Vata-Kapha Doṣa*. Its *Tikta-Katu Rasa*, *Ushna Virya*, and *Snigdha-Laghu Guṇa* facilitate *Ama Pachana*, detoxification, and tissue regeneration. Additionally, the *Kashaya Rasa* and *Rukṣa Guṇa* exert a mild *Sthambhaka* effect, aiding in the reduction of *Bahumutrata*.

From a modern pharmacological standpoint, *Kadaradi Kashaya* contains bioactive constituents like guggulsterones, β -sitosterol, catechins, and flavonoids, which demonstrate hypoglycemic, hypolipidemic, insulin-sensitizing, and antioxidant activities. These compounds act synergistically to reduce insulin resistance, suppress hepatic gluconeogenesis, regulate lipid profiles, and protect pancreatic β -cells from oxidative stress, thus addressing key mechanisms in the pathogenesis of Type 2 diabetes. *Kadaradi Kashaya* provides a multi-targeted and holistic therapeutic approach for effective long-term management of *Madhumeha*.

MEDHYACHATUSHKA GHRITA

Medhya Chatushka Ghrita is a polyherbal ghrita formulation comprising four classical *Medhya Rasayana* drugs, namely *Guduchi*, *Yashtimadhu*, *Mandukaparni*, and *Shankhapushpi* as mentioned in the third *Paada* of the *Rasayana* chapter in *Charaka Samhita*. These herbs possess proven *Medhya* (nootropic), *Rasayana* (rejuvenative), antioxidant, and adaptogenic properties. *Guduchi* improves cognition by enhancing acetylcholine synthesis and protecting neurons through trace elements like zinc and copper. *Yashtimadhu* boosts cerebral circulation, stabilizes blood glucose, and counters oxidative damage. *Mandukaparni* promotes dendritic growth, supports synaptic plasticity, and inhibits acetylcholinesterase, thus improving memory and neuroprotection. *Shankhapushpi* regulates stress hormones (cortisol, adrenaline) and acts as a potent anxiolytic and antidepressant.

When processed into *Ghrita* form, the lipophilic base facilitates deeper tissue penetration and enhanced bioavailability of phytochemicals, particularly when administered via *Pratimarsha Nasya* (transnasal route). The administration allows direct access to the brain through the olfactory pathway, supporting rapid action on the central nervous system. In the context of stress-induced hyperglycemia, where neuro endocrine dysregulation elevates cortisol and impairs insulin function, *Medhya Chatushka Ghrita* modulates the hypothalamic-pituitary-adrenal (HPA) axis, reduces oxidative stress, and supports glycaemic stability. Its adaptogenic and anti-anxiety properties help prevent further metabolic derangement due to chronic stress, making it a holistic and effective approach in the integrative management of *Madhumeha* with underlying psychological triggers.

All these multidisciplinary properties of the above mentioned 4 drugs might be the reason for their significant effects in stress management.

PRATIMARSHA NASYA

The nasal route (*Nasa hi Shiraso Dwaram*) provides direct access to the brain via the olfactory and trigeminal nerve pathways, bypassing the blood-brain barrier. This makes nasal administration particularly effective for central nervous system disorders, including those originating from stress-related hippocampal dysfunction.

In the present study, *Medhya Chatushka Ghrita* was administered as *Pratimarsha Nasya* 2 drops per nostril, twice daily. This mode of administration is especially suitable for long-term use without adverse effects, and aligns with classical guidelines for promoting *Medha*, *Smriti*, and *Dhriti*, qualities linked to hippocampal function. By modulating the HPA axis, reducing oxidative stress, enhancing neurotransmitter activity (especially acetylcholine), and promoting dendritic growth. Thus, *Pratimarsha Nasya* with *Medhya Chatushka Ghrita* serves as a bridge between Ayurvedic tradition and neuropharmacological science, offering a targeted, minimally invasive, and effective method to regulate neuroendocrine imbalance, reduce stress burden, and support glucose metabolism in patients with *Madhumeha* complicated by chronic stress.

KOSTA SHODHANA

Koshtha Shodhana, particularly in the form of *Sadyo Virechana* using *Nimbamrutadi eranda taila*, offers a targeted intervention for *Madhumeha* by directly addressing gastrointestinal, hepatic, and systemic metabolic dysfunctions. This mild purgation technique provides immediate yet controlled elimination of *vitiated Pitta* and *Kapha Dosha*, which play a central role in the pathophysiology of *Madhumeha*, it is easy to administer and procedure can be done in a day.

Pharmacodynamically, *Eranda Taila* is *Ushna*, *Snigdha*, and *Sara* in nature, exhibiting potent purgative and anti-

inflammatory activity. and prevents excessive dehydration or irritation of the gut mucosa, making it suitable for patients with chronic metabolic disorders. The formulation facilitates the expulsion of accumulated metabolic toxins (*Ama*) and liquefied *Kapha* from the gastrointestinal tract, thereby initiating a systemic reset of *Agni* and metabolic pathways.

From a modern biomedical standpoint, *Koshtha Shodhana* enhances gastrointestinal motility, modulates the gut–liver axis, and stimulates biliary secretion, all of which are essential for optimal glucose and lipid metabolism. The liver, being the chief site of gluconeogenesis and enzymatic conversion, responds favourably to this intervention through reduced hepatic glucose output, improved insulin receptor sensitivity, and modulation of pro-inflammatory cytokines (such as *TNF- α* and *IL-6*), which are often elevated in insulin resistance.

Clinically, *Sadyo Virechana* with *Nimbamrutadi eranda taila* serves as a preparatory yet curative measure, either as an initial cleansing before internal medication (*Shamana*) or as a standalone therapy for early-stage or uncomplicated *Madhumeha*. Its repeatability, safety, and ability to produce prompt metabolic changes make it a valuable intervention in both inpatient and outpatient settings.

CONCLUSION

- Stress induced hyperglycaemia is abnormal carbohydrate metabolic disorder characterised by high blood glucose in the blood due to absolute or relative insulin deficiency. And it worsened by psychological or mental stress due to elevated levels of stress hormones.
- Ayurvedic intervention has shown better results compared to modern interventions, especially in patients who are recently diagnosed with diabetes and stress and are not on medication. These patients have responded well in clinical trials. However, patients with chronic diabetes who have been on long-term medication have shown relatively less improvement.
- Nowadays, many patients are attending the *Kayachikitsa* OPD seeking better outcomes in the management of diabetes.
- On comparison, of group A *Sanjivini vati* for *ama pachana*, *Panchanimba ghanvati* as *rasayana* in *madhumeha*, *Kadaradi Kashaya* as *anupana* and *Medhyachatushka ghrita Pratimarsha nasya*, and is better than group B i.e., on going allopathic interventions in all subjective parameters and objective parameters.

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