

A REVIEW STUDY ON THE COMPARISON OF *SHITAMEHA* IN AYURVEDA AND MODERN MEDICAL CONCEPT

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Article Received on 14 May 2026,

Article Revised on 06 June 2026,

Article Published on 16 June 2026,

<https://doi.org/10.5281/zenodo.20695918>

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How to cite this Article: Dr. Roshani R. Tambe¹, Dr. Sachin Banarase², Dr. Bhushan Raghuvanshi³ (2026). A Review Study On The Comparison Of Shitameha In Ayurveda And Modern Medical Concept. World Journal of Pharmaceutical Research, 15(12), 387–393.

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ABSTRACT

Prameha is a significant disorder in Ayurveda, mentioned in ancient texts with details on its causes, symptoms, and treatment. Classified as one of the eight major diseases (*Ashtamahagada*), it is linked to metabolic conditions. Ayurveda describes 20 types of *Prameha*, with *Shitameha* being a specific type marked by the passage of cold, excessive, and watery urine. The aim this review article is to study the concept of *Shitameha* and its correlation with modern medical concepts such as Diabetes Mellitus, Diabetes Insipidus, Chronic Kidney Disease (CKD), and Hypothyroidism. As this is a fundamental literary study, the *Samhitas* and modern medical textbooks are analyzed for a comprehensive understanding of *Shitameha* and its clinical correlations. The study suggests a strong correlation between the Ayurvedic perspective of *Shitameha* (characterized by coldness and

polyuria) and modern conditions involving metabolic slowdown or impaired urine concentration. This study concludes that *Shitameha* can be correlated with modern diseases like Diabetes Insipidus, CKD, and Hypothyroidism-related metabolic dysfunction.

KEYWORDS: *Shitameha*, *Prameha*, Diabetes Insipidus, Chronic Kidney Disease, Hypothyroidism.

INTRODUCTION

Ayurveda is an ancient medical science. It describes diabetes under the name of *Prameha*. According to the World Health Organization, Diabetes Mellitus is defined as a metabolic disorder with diverse causes, characterized primarily by chronic hyperglycemia. This condition involves significant disruptions in the metabolism of carbohydrates, fats, and proteins, arise from deficiencies in insulin secretion, impaired insulin action, or a combination of both.^[1] As of 2024–2026, approximately 589 million to 830 million adults (aged 20-79) globally are living with diabetes, representing about 1 in 9 adults. This number is projected to rise to over 853 million by 2050.^[2]

Prameha has been known to the Indian system of medicine since time immemorial. Its inclusion in the eight major diseases (*Ashtamahagada*) indicates the significance and gravity attributed to it.^[3] While many recent authors correlate *Prameha* generally with Diabetes Mellitus, the specific subtypes offer a broader diagnostic framework.

In Ayurveda, there are 20 forms of *Prameha*: 10 are caused by *Kapha*, 6 result from *Pitta*, and 4 are caused by *Vata*.^[4] *Shitameha* is a subtype of *Kaphaj Prameha* characterized by the passage of cold (Shita), excessive, and watery urine.^[5] This signifies a serious metabolic disorder associated with *Kapha* and *Vata dosha* imbalance, indicating reduced digestive fire (*Agnimandya*) and impaired metabolism.

AIM: - To Study the concept of *Shitameha* & its correlation with modern medical concept.

MATERIALS AND METHOD: - All the *Samhitas* required for the fundamental literary study with available editions are as follows.

- 1) *Charaka Samhita*
- 2) *Sushrut Samhita*
- 3) *Ashtanga Hridaya*
- 4) Textbooks of Medicine
- 5) Textbooks of Pathology

The research databases from various search engines, journals, Ayurvedic *Samhita* and commentaries, and books were referred to for recent information. Critical analysis of available literature was done.

TYPE OF STUDY: - Literature review study.

OBSERVATIONS AND RESULTS

Shitamaha is one of the 20 types of *Prameha* (urinary disorders) described in Ayurveda ⁽⁴⁾. It is characterized by the passage of cold urine, which signifies a serious metabolic disorder associated with *Kapha dosha* imbalance.^[5] This condition indicates reduced heat (*Agni*) in the body, impaired metabolism, and excessive fluid retention. In modern medicine, *Shitamaha* can be correlated with Diabetes Mellitus with Polyuria, Chronic Kidney Disease (CKD), Diabetes Insipidus, or Hypothyroidism-related metabolic dysfunction.

The following table provides a comparative analysis of *Shitamaha* and Modern Medical concepts

Table No. 1: Comparison between *Shitamaha* vs. Modern Medical Concepts.

Feature	Ayurveda (<i>Shitamaha</i>)	Modern Medicine (Diabetes Mellitus, Diabetes Insipidus, CKD, Hypothyroidism)
Definition	<ul style="list-style-type: none"> - Urination of cold, excessive, and watery urine.^[6] - A <i>Kapha</i> dominant <i>Prameha</i> affecting metabolism. - Indicates low digestive fire (<i>Agnimandya</i>) and impaired <i>Medo Dhatu</i> (fat metabolism).^[7] 	<ul style="list-style-type: none"> - Diabetes Mellitus (DM)^[17]: High blood sugar levels lead to polyuria (excess urination), dehydration, and metabolic imbalance. - Diabetes Insipidus (DI).^[18] Deficiency of antidiuretic hormone (ADH) results in excessive urine output (cold, dilute urine). - Chronic Kidney Disease (CKD).^[19]: Kidney dysfunction leads to inability to concentrate urine, causing frequent urination. - Hypothyroidism^[20]: Metabolic slowdown results in low body temperature, lethargy, and slow digestion (<i>Kapha</i> dominance).
Causes	<ul style="list-style-type: none"> - <i>Kapha dosha</i> imbalance. - Weak digestive fire (<i>Agnimandya</i>) leading to poor metabolism. - Excess intake of cold, heavy, unctuous, and sweet foods.^[8] - Sedentary lifestyle, obesity, and excessive fluid intake.^[8] - Weak kidney and bladder function (<i>Mutravaha Srotas dushti</i>).^[8] 	<ul style="list-style-type: none"> - Diabetes Mellitus (T1DM & T2DM)^[17]: High blood sugar damages kidney filtration, leading to excess urination. - Diabetes Insipidus^[18]: Deficiency of vasopressin (ADH) leads to excessive water loss, producing cold urine. - CKD^[19]: Impaired kidney function leads to diluted, excessive urine output. - Hypothyroidism^[20]: Reduced metabolism leads to low body temperature, fluid retention, and sluggish excretion.
Symptoms	<ul style="list-style-type: none"> - Cold, excessive, and watery urine (polyuria).^[6] - Frequent urination, excessive thirst 	<ul style="list-style-type: none"> - Diabetes Mellitus^[17]: Polyuria, polydipsia, blurred vision, fatigue. - Diabetes Insipidus^[18]: Excessive urination

	(polydipsia). - Cold body temperature, sluggish digestion. - Lethargy, weight gain (<i>Kapha</i> dominance).	(dilute, cold urine), dehydration. - CKD ^[19] : Increased urination, swelling (edema), fatigue. - Hypothyroidism ^[20] : Cold intolerance, slow metabolism, weight gain, sluggish digestion.
Pathophysiology	- <i>Kapha</i> imbalance weakens <i>Agnimandya</i> (digestive fire), leading to improper fat metabolism (<i>Medo Dhatu</i> dysfunction). ^[7] - Kidney and urinary system dysfunction (<i>Mutravaha Srotas dushti</i>) leads to excessive, cold urine production. ^[7]	- Diabetes Mellitus ^[17] : High glucose levels affect kidney filtration, causing polyuria and dehydration. - Diabetes Insipidus ^[18] : Deficiency of ADH causes uncontrolled loss of fluids, leading to dilute, cold urine. - CKD ^[19] : Damaged nephrons fail to concentrate urine, producing excessive, watery urine. - Hypothyroidism ^[20] : Reduced metabolic rate causes low body temperature, slow kidney function, and water retention.
Treatment Approach	- <i>Kapha</i> pacifying diet and lifestyle modifications. - <i>Panchakarma</i> [<i>Virechana</i> (therapeutic purgation), <i>Basti</i> (medicated enema)] for detoxification. ^[9] - Herbal remedies to restore metabolism and kidney health.	- Diabetes Mellitus ^[17] : Blood sugar control (Metformin, Insulin, SGLT2 inhibitors). - Diabetes Insipidus ^[18] : ADH replacement therapy (Desmopressin). - CKD ^[19] : Low-protein diet, dialysis, electrolyte balance. - Hypothyroidism ^[20] : Thyroid hormone therapy (Levothyroxine).
Herbal Remedies	- <i>Shilajit</i> (<i>Asphaltum punjabianum</i>) ^[10] , <i>Gokshura</i> (<i>Tribulus terrestris</i>) ^[11] , <i>Punarnava</i> (<i>Boerhavia diffusa</i>) ^[12] (kidney & urinary health). - <i>Triphala</i> , <i>Haridra</i> ^[13] (<i>Curcuma longa</i>), <i>Pippali</i> (<i>Piper longum</i>) ^[14] (digestion and metabolism). - <i>Ashwagandha</i> (<i>Withania somnifera</i>) ^[15] , <i>Guduchi</i> (<i>Tinospora cordifolia</i>) ^[16] (immune-boosting and energy-restoring).	- Diabetes medications, ADH therapy, low-protein diet, dialysis for CKD.

(T1DM-Type 1 Diabetes Mellitus, T2DM- Type 2 Diabetes Mellitus, CKD- Chronic Kidney Disease, SGLT2 inhibitors- sodium-glucose cotransporter 2 inhibitors.)

DISCUSSION

Shitameha, as described in Ayurvedic texts, is characterized by urine that is physically cold to the touch and excessive in volume. It is traditionally understood to result from an imbalance in *Kapha doshas*, leading to the improper processing of *Medo Dhatu* (fat) and a weakening of the *Mutravaha Srotas* (urinary system).

In modern medical science, these presentations resonate with several distinct conditions.

Diabetes Mellitus (DM): Ayurveda states that nearly all forms of *Prameha* begin with digestive insufficiency. Modern medicine sees this through the lens of Insulin Resistance and Metabolic Syndrome, where the body's inability to process glucose leads to systemic complications, including the osmotic diuresis seen in Diabetes Mellitus. While often linked to *Madhumeha*, the polyuria and metabolic imbalance of uncontrolled diabetes can also present features of *Shitameha*.

Diabetes Insipidus (DI): The deficiency of Antidiuretic Hormone (ADH) leads to the excretion of large volumes of very dilute, "cold" urine, mirroring the primary symptom of *Shitameha*.

Chronic Kidney Disease (CKD): In Chronic Kidney Disease (CKD), damaged nephrons lose their ability to maintain the medullary osmotic gradient. This leads to polyuria where the urine is not properly processed, closely resembling the "unprocessed" nature of urine in *Shitameha*. As kidneys lose the ability to concentrate urine, patients often experience polyuria with dilute urine, reflecting the "watery" nature described in Ayurveda.

Hypothyroidism: The systemic "coldness" and sluggish metabolism (*Agnimandya*) in hypothyroidism lead to fluid retention and slow excretion, aligning with the *Kapha*-dominant aspect of *Shitameha*.

The comparison highlights the integrative potential of both systems. While modern medicine offers vital replacement and hormonal therapies (like Levothyroxine or Desmopressin), Ayurveda provides a framework for metabolic "re-kindling".

The use of *Panchakarma* (*Vamana*, *Virechana*) is discussed as a means to clear the *Strotas* (channels) of metabolic waste (*Aam*). Herbal interventions like *Shilajit* and *Punarnava* are evaluated for their potential to support renal health and restore metabolic balance.

CONCLUSION

From this review study, it is clear that *Shitameha* in Ayurveda correlates with Diabetes Mellitus (polyuria), Diabetes Insipidus (cold, excessive urination), Chronic Kidney Disease (CKD), and Hypothyroidism in modern medicine.

Ayurveda attributes it to *Kapha* imbalance, weak digestion (*Agnimandya*), and kidney dysfunction, while modern medicine links it to hormonal imbalances, metabolic disorders, and kidney dysfunction.

Both Ayurveda and modern medicine emphasize dietary regulation, hydration, and specific treatments to manage excessive and cold urination.

Uncontrolled *Shitamaha* can lead to chronic metabolic disorders, kidney damage, and systemic health complications.

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