

EXPLORING THE AYURVEDIC ETIOPATHOGENESIS OF URINARY INCONTINENCE IN WOMEN: A CLASSICAL AND CONTEMPORARY REVIEW

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Abstract

Urinary Incontinence (UI) is a common and distressing condition characterized by involuntary leakage of urine, significantly affecting the physical, psychological, social, and hygienic wellbeing of women. A study conducted in 2022 reported that the overall prevalence of UI ranges from 8–45% among women worldwide, with prevalence increasing to nearly 30–40% in middle-aged women and approximately 50% in older women. Increased occupational stress, delayed voiding habits, childbirth, menopause, altered lifestyle, and pelvic floor weakness contribute to its rising incidence. Although UI is not described as an independent disease entity in Ayurveda, its symptomatology closely resembles conditions explained under *Mutra Vikara*, particularly *Mutrotsanga*, *Mootrateeta*, and *Mutravaha Srotodushti*.

This review article was compiled through an extensive literary study of classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and *Shabdakalpadhruma* along with contemporary medical literature on urinary incontinence. Relevant references pertaining to *Mutravaha Srotas*, *Apana Vata*, *Vega Dharana*, *Mutraghata*, *Mutrotsanga*, and continuous dribbling of urine were critically analyzed.

The review suggests that urinary incontinence can be understood as a manifestation of *Apana Vata Vaigunya* affecting Basti and *Mutravaha Srotas*, leading to disturbed urinary control and dribbling. Classical descriptions of *alpa-alpa mutrapravritti*, *satata mutrapatana*, and *mutravegavighata* provide a strong conceptual basis for understanding UI in Ayurvedic parlance. Hence, Ayurvedic principles offer a comprehensive framework for understanding the etiopathogenesis of urinary incontinence.

Keywords: Urinary Incontinence, Pelvic floor Dysfunction, Apana Vayu, Mutra Vikara, .

INTRODUCTION:

OVERVIEW OF URINARY INCONTINENCE

Urinary Incontinence is defined as the involuntary leakage of urine¹. It causes social, hygienic, psychological, and physical discomfort. It is one of the most common urogynaecological disorders affecting women worldwide and significantly impairs quality of life, emotional wellbeing, sleep, sexual health, and daily activities². Although it affects both sexes, women are more commonly affected due to pregnancy, childbirth, menopause, and pelvic floor weakness.

Urinary incontinence is broadly classified into³:

- Stress Urinary Incontinence (SUI): Involuntary leakage of urine during activities that increase intra-abdominal pressure such as coughing, sneezing, laughing, or lifting weight.
- Urge Urinary Incontinence (UII): Involuntary leakage of urine associated with a sudden compelling urge to void that is difficult to defer.
- Mixed Urinary Incontinence (MUI): Combination of both stress and urge urinary incontinence symptoms.
- Overflow Incontinence: Continuous dribbling of urine due to overdistension of the bladder caused by impaired bladder emptying or outlet obstruction.
- Functional Incontinence: Inability to reach the toilet in time due to physical, cognitive, or environmental limitations despite normal urinary tract function.

Among these, stress and urge urinary incontinence are the most commonly encountered forms in women.

EPIDEMIOLOGY AND RISK FACTORS

Urinary incontinence is a major global health concern with increasing prevalence among women. Studies report that nearly 423 million individuals worldwide experience some form of urinary incontinence⁴. The prevalence among women ranges from 8–45%, affecting approximately 30–40% of middle-aged women and nearly 50% of elderly women⁵. Studies also report female urinary incontinence prevalence ranging widely across populations and increasing with age⁶.

Important risk factors include:

- Pregnancy and repeated childbirth
- Menopause and aging
- Pelvic floor weakness
- Obesity
- Chronic constipation
- Sedentary lifestyle
- Delayed voiding habits
- Chronic cough
- Diabetes mellitus and neurological disorders

Despite its high prevalence, many women remain undiagnosed due to embarrassment and lack of awareness.

MODERN UNDERSTANDING AND MANAGEMENT

The pathophysiology of urinary incontinence involves pelvic floor weakness, urethral sphincter incompetence, detrusor overactivity, and altered bladder control mechanisms. Current treatment modalities include lifestyle modifications, bladder training, pelvic floor exercises, pharmacological therapy, pessaries, and surgical procedures such as sling surgeries. However, these approaches are often associated with recurrence, adverse effects, invasiveness, and high treatment costs.

AYURVEDIC UNDERSTANDING OF URINARY INCONTINENCE

Although urinary incontinence is not described as a separate disease entity in Ayurveda, its symptomatology can be understood under the spectrum of *Mutra Vikara*, particularly:

- *Mutravaha Srotodushti*
- *Mutrotsanga*
- *Mootrateeta*
- Certain forms of *Mutraghata*

Ayurveda considers *Apana Vata* as the primary regulator of normal micturition. Derangement of *Apana Vata* along with vitiation of *Mutravaha Srotas* and *Basti* may result in disturbed urinary control, dribbling, frequent urination, or involuntary leakage.

Charaka Samhita describes the manifestations of *Mutravaha Srotodushti* as:

- अतिसृष्टम् (excessive urination)
- अतिबद्धम् (obstructed urination)
- अल्पाल्पम् (dribbling urination)
- अभीक्षणम् (frequent urination)

Sushruta Samhita and *Ashtanga Hridaya* explain *Mootrateeta* and *Mutrotsanga* occurring due to *Mutra Vega Dharana* and *Apana Vata Dushti*, presenting with repeated scanty urination and disturbed urinary flow. Further, *Shabdakalpadhruma* mentions “सततमूत्रपतन”, indicating continuous dribbling of urine.

Thus, Ayurvedic principles provide a comprehensive conceptual basis for understanding urinary incontinence in women.

MATERIALS AND METHODS

The present study is a narrative literary review undertaken to understand Urinary Incontinence from an Ayurvedic perspective with special emphasis on its correlation with *Mutra Vikara* in women. Classical Ayurvedic literature including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and *Shabdakalpadhruma* were critically reviewed to collect references related to *Mutravaha Srotas*, *Apana Vata*, *Mutra Vega Dharana*, *Mutraghata*, *Mutrotsanga*, *Mootrateeta*, and conditions associated with dribbling or involuntary passage of urine.

Relevant Sanskrit references, commentaries, and interpretations pertaining to urinary disturbances in women were compiled and analysed systematically. Modern medical literature including textbooks, review articles, and published

epidemiological studies on urinary incontinence were also reviewed to understand its classification, prevalence, etiological factors, pathophysiology, and existing management approaches.

The collected data were comparatively analysed to establish a conceptual Ayurvedic understanding of urinary incontinence and its possible correlation with various *Mutra Vikaras* based on symptomatology, *Nidana*, *Dosha* involvement, and *Samprapti*.

DISCUSSION:

URINARY INCONTINENCE – MODERN PERSPECTIVE

Urinary Incontinence is a multifactorial disorder characterized by involuntary leakage of urine resulting from impairment in bladder storage, sphincteric control, pelvic floor support, or neurological regulation of micturition⁷. It is increasingly recognized as an important public health concern among women due to its significant impact on physical, psychological, social, and sexual wellbeing.

Normal continence depends upon proper coordination between:

- Detrusor muscle activity
- Urethral sphincter competence
- Pelvic floor musculature
- Neurological control mechanisms
- Adequate bladder capacity and compliance

Any disturbance in these mechanisms can lead to urinary incontinence.

Stress urinary incontinence primarily occurs due to pelvic floor weakness, urethral hypermobility, and intrinsic sphincter deficiency⁸. Pregnancy, repeated vaginal deliveries, obesity, menopause, chronic cough, constipation, and aging weaken pelvic supportive structures and reduce urethral resistance, causing leakage during increased intra-abdominal pressure such as coughing, sneezing, or lifting weights⁹.

Urge urinary incontinence results from involuntary detrusor contractions causing urgency and leakage. Neurological disorders, diabetes mellitus, bladder irritation, and age-related neurogenic changes commonly contribute to this condition¹⁰. Mixed urinary incontinence represents coexistence of stress and urges components, while overflow incontinence occurs secondary to impaired bladder emptying and overdistension.

Despite several available treatment modalities including bladder training, pelvic floor rehabilitation, pharmacotherapy, pessaries, and surgery, long-term management remains challenging due to recurrence, adverse effects, economic burden, and reduced patient compliance. These limitations necessitate exploration of holistic approaches such as Ayurveda for better understanding and management.

AYURVEDIC UNDERSTANDING OF URINARY INCONTINENCE

Although urinary incontinence is not described as a distinct disease entity in Ayurveda, its clinical manifestations can be interpreted under the broad spectrum of *Mutra Vikara*, particularly:

- *Mutravaha Srotodushti*

- *Mutrotsanga*
- *Mootrateeta*
- Certain forms of *Mutraghata*

The Ayurvedic understanding primarily revolves around:

- *Apana Vata Vaigunya*
- *Basti Dushti*
- *Mutravaha Srotodushti*
- *Vega Dharana*
- *Dhatu Kshaya*

Among the *Tridoshas*, *Apana Vata* plays the most crucial role in regulation of normal micturition. Any derangement in its physiological functioning may result in abnormal urinary flow, dribbling, retention, frequency, urgency, or involuntary leakage.

MUTRAVAHA SROTAS AND ITS RELEVANCE

Charaka Samhita describes the roots of *Mutravaha Srotas* as *Basti* and *Vankshana*:

“मूत्रवहानां स्रोतसां बस्तिर्मूलं वङ्कणौ च, प्रदुष्टानां तु खल्वेषामिदं विशेषविज्ञानं भवति; तद्यथा- अतिसृष्टमतिबद्धं प्रकुपितमल्पाल्पमभीक्षणं वा बहलं सशूलं मूत्रयन्तं दृष्ट्वा मूत्रवहान्यस्य स्रोतांसि प्रदुष्टानीति विद्यात्”¹¹

Further, vitiation of *Mutravaha Srotas* presents with:

- अतिसृष्टम् (excessive urination)
- अतिबद्धम् (obstructed urination)
- अल्पाल्पम् (dribbling urination)
- अभीक्षणम् (frequent urination)
- सशूलम् (painful urination)

These symptoms remarkably resemble various manifestations of urinary incontinence and lower urinary tract dysfunction. Particularly, “अल्पाल्पं मूत्रयन्तम्” and “अभीक्षणं मूत्रयन्तम्” closely correlate with dribbling, urgency, and frequent urination seen in urge and overflow incontinence.

The concept of *Mutravaha Srotodushti* also highlights the importance of functional integrity of *Basti* and urinary channels, which parallels the modern understanding of bladder dysfunction and pelvic floor abnormalities.

ROLE OF APANA VATA

Apana Vata governs:

“अपानोऽपानगः श्रोणिबस्तिमेद्वोरुगोचरः शुक्रार्तवशकृन्मूत्रगर्भनिष्क्रमणक्रियः॥”

- *Mutra Pravritti*
- *Purisha Visarjana*
- *Artava Pravritti*
- *Garbha Nishkramana*

In women, repeated childbirth, menopause, aging, excessive physical strain, suppression of natural urges, and *Dhatu Kshaya* contribute to *Apana Vata Vaigunya*. This disturbed *Apana Vata* loses its ability to maintain proper bladder control and pelvic support, resulting in involuntary urine leakage.

The predominance of *Vata* in old age further explains the increased prevalence of urinary incontinence among elderly women.

MUTRA VEGA DHARANA AND UI

One of the most important etiological concepts relevant to urinary incontinence is *Mutra Vega Dharana* (suppression of urge for micturition).

Sushruta Samhita explains:

“वेगं सन्धार्य मूत्रस्य यो भूयः स्रष्टुमिच्छति | तस्य नाभ्येति यदि वा कथञ्चित्सम्प्रवर्तते ॥
प्रवाहतो मन्दरुजमल्पमल्पं पुनः पुनः | मूत्रातीतं तु तं विद्यान्मूत्रवेगविघातजम् ॥”¹³

Suppression of urinary urge leads to disturbed urinary flow, repeated scanty urination, and discomfort due to vitiation of *Vata* affecting *Basti*.

Similarly, *Ashtanga Hridaya* states:

“मूत्रं तु विधृतं चिरम् ।
न निरेति विबद्धं वा मूत्रातीतं तदल्परुक् ॥”¹⁴

indicating prolonged retention of urine resulting in obstructed or abnormal urination.

In contemporary lifestyle, women frequently delay voiding because of occupational commitments, travel, lack of sanitation facilities, and social circumstances. Such repeated suppression may contribute to functional bladder disturbances and pelvic floor dysfunction, which can eventually manifest as urinary incontinence.

MUTROTSANGA AND MOOTRATEETA AS CLOSEST CORRELATIONS

Among the *Mutra Vikaras*, *Mutrotsanga* and *Mootrateeta* show the closest resemblance to urinary incontinence.

Charaka Samhita defines *Mootrateeta* as:

‘मेहमानस्य मन्दं वा मूत्रातीतः स उच्यते।’¹⁵

This condition involves impaired or delayed urinary flow.

Similarly, *Sushruta Samhita* explains repeated scanty urination and dribbling due to *Vata* derangement.

The symptom complex includes:

- Repeated passage of urine
- Scanty dribbling
- Disturbed flow
- Incomplete evacuation
- *Vata* predominance

These features resemble:

- Overflow incontinence
- Post-void dribbling
- Neurogenic bladder dysfunction
- Mixed urinary incontinence

SATATA MUTRAPATANA AND CONTINUOUS DRIBBLING

Shabdakalpadhruma mentions:

‘मूत्रस्य पतनमस्मात् पुरीषनिरोधकरणादस्य सततमूत्रपतनात् तथात्वम् ।’¹⁶

indicating continuous involuntary passage or dribbling of urine.

This reference is highly significant because it directly resembles the fundamental symptom of urinary incontinence. The text also associates the condition with disturbed pelvic physiological mechanisms and *Vata* dysfunction.

This provides a strong lexical and conceptual basis for interpreting urinary incontinence within the Ayurvedic framework.

FEMALE PREDISPOSITION IN AYURVEDIC PERSPECTIVE

Ayurveda provides indirect explanations for increased susceptibility of women to urinary disorders.

PREGNANCY AND CHILD BIRTH

Repeated pregnancies and vaginal deliveries weaken pelvic musculature and supporting structures. This can be interpreted as:

- *Mamsa Dhatu Kshaya*
- *Snayu Shaithilya*
- *Apana Vata Dushti*

MENOPAUSE AND AGING

Menopause leads to *Dhatu Kshaya* and *Vata* Predominance, reducing tissue strength and bladder support.

CHRONIC CONSTIPATION

Constipation increases intra-abdominal pressure and disturbs *Apana Vata*, indirectly aggravating urinary symptoms.

SEDENTARY LIFESTYLE

Reduced physical activity contributes to *Agnimandya*, *Meda Vriddhi*, and *Srotorodha*, predisposing women to pelvic floor dysfunction.

INTEGRATIVE INTERPRETATION

From a modern perspective, urinary incontinence is primarily viewed as a disorder of:

- Pelvic floor mechanics
- Sphincteric incompetence
- Neuromuscular dysfunction
- Bladder instability

Whereas Ayurveda interprets the same through:

- *Apana Vata Vaigunya*
- *Mutravaha Srotodushti*
- *Basti Dushti*
- *Vega Dharana*
- *Dhatu Kshaya*

Although direct one-to-one disease correlation is not possible, the symptomatology and pathophysiological understanding of urinary incontinence closely resemble the descriptions of *Mutrotsanga*, *Mootrateeta*, and *Mutravaha Srotodushti* mentioned in Ayurvedic classics.

Thus, Ayurvedic principles provide a holistic conceptual framework for understanding urinary incontinence in women and may offer promising therapeutic approaches aimed at correcting the underlying *Vata* imbalance and strengthening pelvic support mechanisms.

CONCLUSION:

Urinary Incontinence is a common and distressing urogynaecological condition that significantly affects the quality of life of women. Despite advancements in modern management, recurrence, adverse effects, economic burden, and reduced long-term compliance continue to remain major challenges.

Although urinary incontinence is not described as a distinct disease entity in Ayurveda, the present review establishes that its symptomatology can be understood under the spectrum of *Mutra Vikara*, particularly *Mutravaha Srotodushti*, *Mutrotsanga*, *Mootrateeta*, and certain forms of *Mutraghata*. Classical references from *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and *Raja Nighantu* demonstrate close similarities between descriptions of disturbed urinary flow, *alpa-alpa mutrapravritti*, *satata mutrapatana*, and the clinical manifestations of urinary incontinence. The review also highlights the central role of *Apana Vata Vaigunya*, *Basti Dushti*, *Vega Dharana*, and *Dhatu Kshaya* in its etiopathogenesis.

Ayurveda provides a holistic conceptual framework for understanding urinary incontinence by addressing both urinary symptoms and underlying lifestyle-related factors affecting pelvic floor and bladder function. Further clinical and interdisciplinary studies are needed to establish standardized Ayurvedic diagnostic parameters and evaluate the efficacy of Ayurvedic treatment modalities including *Panchakarma*, *Basti Chikitsa*, pelvic floor strengthening therapies, and herbal interventions. Integrative research combining modern diagnostic tools with Ayurvedic principles may help develop effective and evidence-based holistic management approaches for urinary incontinence in women.

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