

Uroflowmetry-Guided Assessment of *Uttarabasti* procedure in Urethral Stricture: A Case Report

Vinod Kumar¹, Awadhesh Rathod², Satendra singh³, Vyasadeva Mahanta⁴, Yogesh Badwe⁵

¹PhD Scholar, Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi. (Email- vkb9016@gmail.com)

²PG Scholar, Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi. (Email- rathodawadh1996@gmail.com)

³PG Scholar, Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi. (Email- drsatendra148@gmail.com)

⁴Professor, Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi. (Email- drvysaiaa@gmail.com)

⁵Head & Professor, Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi. (Email- drvogesh.badwe@gmail.com)

*Corresponding author: Vinod Kumar

PhD Scholar, Department of Shalya Tantra, All India Institute of Ayurveda, New Delhi.
(Email- vkb9016@gmail.com)

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ABSTRACT:

Background: Urethral stricture is a common urological disorder characterized by narrowing of the urethral lumen due to fibrosis of the urethral epithelium and surrounding tissues, resulting in obstructive voiding dysfunction. Conventional treatment modalities such as urethral dilatation, direct vision internal urethrotomy (DVIU), and urethroplasty are associated with recurrence and procedure-related complications. In Ayurveda, urethral stricture can be correlated with *Mutramarga Sankocha*, a disorder affecting the *Mutravaha Srotas*. *Uttarabasti* is considered a principal para-surgical intervention for managing diseases of the lower urinary tract.

Case Presentation: A 27-year-old normotensive and non-diabetic male presented with complaints of thin urinary stream, poor urinary flow, intermittency, straining during micturition, post-void dribbling, and a sensation of incomplete bladder emptying for the previous three years. The patient had a history of nephrolithiasis treated by flush therapy three years earlier. There was no history of urethral trauma, catheterization, or previous urological surgery. Based on clinical findings and radiological evaluation, the condition was diagnosed as urethral stricture and correlated with *Mutramarga Sankocha* in Ayurveda.

Therapeutic Intervention: The patient was treated with *Uttarabasti* using *Dhanwantara Taila* and *Apamarga Kshara Taila* administered for seven consecutive days in two treatment sittings at an interval of one month. Internal Ayurvedic medications were prescribed concurrently as supportive therapy.

Result: Significant clinical improvement was observed following treatment. Uroflowmetry demonstrated increased voided volume (259.8 mL to 432.7 mL) and a marked reduction in post-void residual urine (200 mL to 120 mL; secondary PVR: 160 mL to 10 mL), indicating improved bladder emptying. The AUA Symptom Score improved from 19 to 12, accompanied by better quality-of-life perception. Retrograde urethrogram showed reduction in the severity of the posterior urethral stricture. No adverse events, complications, or recurrence were reported during six months of follow-up.

Conclusion: This case demonstrates the potential therapeutic role of *Uttarabasti* with *Dhanwantara Taila* and *Apamarga Kshara Taila* in the management of urethral stricture. The intervention appeared to be safe, minimally invasive, and clinically effective in improving urinary symptoms and preventing recurrence. Further well-designed clinical studies are warranted to establish its efficacy and mechanism of action in urethral stricture disease.

Keywords: *Dhanwantara Taila*, *Apamarga Kshara Taila*, *Mutramarga Sankocha*, *Mutravaha Srotas*, Urethral stricture, *Uttarabasti*.

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1. INTRODUCTION:

Urethral stricture is a pathological narrowing of the urethral lumen caused by fibrosis and scarring of the urethral epithelium and surrounding corpus spongiosum, resulting in obstructive voiding dysfunction and impaired urinary flow. The condition

commonly develops following injury to the urethral mucosa and periurethral tissues and may arise from idiopathic, iatrogenic, inflammatory, or traumatic etiologies. [1] Urethral stricture disease represents a significant urological burden and is among the common causes of lower urinary tract symptoms (LUTS) in

*Author for Correspondence: vkb9016@gmail.com

males. Approximately 70% of cases have an insidious onset, with a reported incidence ranging from 200 to 1,200 cases per 100,000 male population.^[2] The disease predominantly affects young and middle-aged men, particularly those between 25 and 40 years of age.^[3] Clinically, urethral stricture presents with decreased urinary stream caliber, hesitancy, intermittency, straining during micturition, post-void dribbling, incomplete bladder emptying, recurrent urinary tract infections, and, in severe cases, urinary retention. Diagnosis is established through a combination of clinical history, physical examination, urinalysis, Uroflowmetry, and radiological investigations such as retrograde urethrography, voiding cystourethrography, and cystoscopy.

In Ayurveda, disorders affecting urinary function are broadly described under the spectrum of *Mutraghata*. *Acharya Charaka* has discussed obstructive urinary disorders under the heading of *Mutraghata*, while *Acharya Sushruta* has elaborately classified twelve distinct types of *Mutraghata* based on their etiopathogenesis and clinical manifestations.^[4,5] Urethral stricture may be correlated with *Mutramarga Sankocha*, a pathological constriction of the urinary passage affecting the *Mutravaha Srotas*. The clinical features of *Mutramarga Sankocha*, such as obstructed urinary flow (*Mutrotsanga*), urinary retention (*Mutravarodha*), straining during micturition, and incomplete evacuation of urine, closely resemble those observed in urethral stricture disease. Furthermore, *Acharya Sushruta* has emphasized that the pathological obstruction in *Mutraghata* may occur anywhere along the urinary tract, extending from the urinary bladder to the external urethral meatus.^[5]

Contemporary management of urethral stricture includes urethral dilatation, optical internal urethrotomy, direct vision internal urethrotomy (DVIU), and open urethroplasty. Although these procedures provide symptomatic relief, recurrence remains a major clinical challenge, particularly following dilatation and urethrotomy. Complications such as urethral bleeding, false passage formation, urinary tract infection, and urethrocutaneous fistula may further compromise treatment outcomes.^[6] Therefore, there is a need for safe, minimally invasive, and cost-effective therapeutic alternatives that can address both the obstructive pathology and the tendency for recurrence. Among Ayurvedic interventions, *Uttarabasti* is considered one of the most effective para-surgical procedures for diseases of the *Mutravaha Srotas*. By delivering medicated formulations directly to the affected site, *Uttarabasti* facilitates local therapeutic action while simultaneously pacifying vitiated *Doshas*, particularly *Apana Vata*. The procedure is often administered in conjunction with appropriate *Shamana Chikitsa* to achieve sustained clinical benefits.^[7] The present case report describes the successful management of a urethral stricture in a 27-year-old normotensive and non-diabetic male who presented with a three-year history of thin urinary stream, reduced urinary flow, intermittency, straining during micturition, post-void

dribbling, and a sensation of incomplete bladder emptying. The patient had a previous history of nephrolithiasis managed by flush therapy three years earlier, without any history of urethral trauma, surgical intervention, or catheterization. He was treated with *Uttarabasti* using *Dhanwantara Taila* and *Apamarga Kshara Taila* administered in two treatment sittings of seven days each at a one-month interval, along with internal Ayurvedic medications. The clinical outcome observed in this case highlights the potential role of Ayurvedic management as a minimally invasive therapeutic approach for urethral stricture disease.

2. PATIENT INFORMATION:

A 27-year-old male mechanical engineer presented to the Shalya Tantra Outpatient Department with complaints of a thin urinary stream, reduced urinary flow, intermittency during micturition, straining to void, post-void dribbling, and a sensation of incomplete bladder emptying for the preceding three years. The symptoms had progressively worsened over time, significantly affecting his quality of life. The patient had a history of nephrolithiasis for which he underwent flush therapy three years prior to presentation. Following the procedure, he developed burning micturition and passage of slightly reddish-colored urine. Subsequently, he experienced progressive lower urinary tract symptoms, including decreased urinary stream caliber and difficulty in voiding. He consulted a urologist and was advised surgical intervention for urethral stricture. However, owing to concerns regarding surgery and the possibility of recurrence, he sought Ayurvedic management at our institution. There was no history of urethral trauma, urethral catheterization, endoscopic instrumentation, previous urological surgery, sexually transmitted infections, or recurrent urinary tract infections. The patient was normotensive, non-diabetic, and had no history of tuberculosis, bronchial asthma, epilepsy, drug allergy, or any other significant systemic illness. He denied tobacco use, alcohol consumption, and any other substance abuse. On detailed history, bowel habits were irregular with a sensation of incomplete evacuation. Appetite was normal, and the patient followed a vegetarian diet. Sleep was disturbed due to nocturia. General physical examination revealed stable vital parameters and no significant abnormalities. Systemic examination was unremarkable. Based on the clinical presentation, radiological findings, and uroflowmetric assessment, the condition was diagnosed as urethral stricture. From an Ayurvedic perspective, the disease was correlated with *Mutramarga Sankocha*, a disorder of the *Mutravaha Srotas* characterized by obstruction to the normal flow of urine due to vitiation of *Vata Dosha*.

3. CLINICAL FINDINGS:

On general examination, the patient was hemodynamically stable with a pulse rate of 82 beats/min, respiratory rate of 20 breaths/min, and blood pressure of 110/80 mmHg. General physical examination revealed no evidence of pallor, icterus,

cyanosis, clubbing, pedal edema, or lymphadenopathy. Local examination of the external genitalia showed a normal foreskin, glans penis, and external urethral meatus without any visible deformity, discharge, or inflammation. Both testes and epididymis were palpable and non-tender. No scrotal swelling, inguinal lymphadenopathy, or other genitourinary abnormalities were detected. Systemic examination of the cardiovascular, respiratory, abdominal, and nervous systems was unremarkable.

4. DIAGNOSTIC ASSESSMENT:

The diagnosis was established based on clinical history, physical examination, laboratory investigations, uroflowmetry, and radiological evaluation. Symptom severity was assessed using the American Urological Association (AUA) Symptom Score and quality-of-life assessment. The baseline AUA score was 19, indicating moderate lower urinary tract symptoms. Routine urine examination, microscopic analysis, and urine culture-sensitivity testing were within normal limits. Ultrasonography of the kidneys, ureters, and bladder (USG-KUB) showed no significant abnormality. Uroflowmetry revealed impaired urinary flow with a voided volume of 259.8 mL, voiding time of 1.13 minutes, post-void residual (PVR) urine volume of 200 mL, and a second PVR of 160 mL, suggestive of bladder outlet obstruction and incomplete bladder emptying. The diagnosis was confirmed by retrograde urethrography (RGU), which demonstrated a diffuse partial stricture of the posterior urethra. Based on the clinical, uroflowmetric, and radiological findings, the condition was diagnosed as posterior urethral stricture and correlated with *Mutramarga Sankocha* in Ayurveda.

5. Therapeutic Intervention

The foundational objective of the devised therapeutic strategy was highly ambitious and two-fold in nature: to safely and mechanically dilate the stricture segment to rapidly restore luminal patency, while simultaneously utilizing advanced pharmacotherapy to alter the local tissue microenvironment, halting the fibrotic cascade and inducing profound tissue softening and collagen remodeling. To achieve this dual mechanism, *Uttarabasti* was selected as the primary, highly targeted intervention. This procedure utilized a meticulously calibrated, synergistic blend of two highly specific medicated Ayurvedic oils: *Dhanwantara Taila* and *Apamarga Kshara Taila*.

5.1. Pharmacological Formulation Details

The therapeutic instillate consisted of a precise, synergistic mixture of *Dhanwantara Taila* and *Apamarga Kshara Taila*, chosen for their highly specific, complementary pharmacodynamic profiles.

- ***Dhanwantara Taila*:** A classical, highly revered polyherbal formulation in Ayurvedic pharmacology, explicitly designed for its profound *Vata-pacifying* (neuromodulatory) and *Brimhana* (nourishing, tissue-

regenerating) properties. Formulated in a highly lipophilic base of sesame oil (*Tila Taila*), its primary active botanical agent is *Bala* (*Sida cordifolia*). This core ingredient is processed in combination with a massive array of over 40 distinct herbal decoctions and pastes, most notably including the *Dashamoola* (ten roots) group, *Shatavari* (*Asparagus racemosus*), and *Ashwagandha* (*Withania somnifera*) [Krishnan Vaidyan & Gopala Pillai, 2015]. *Dhanwantara Taila* possesses intense *Snigdha* (unctuous, lubricating) and *Sukshma* (subtle, deeply penetrating) qualities. These specific physiochemical properties make it an unparalleled vehicle for transmucosal absorption, allowing the active alkaloids and saponins to penetrate deep into the rigid fibrotic tissue, providing essential lubrication, reducing tissue rigidity, and actively restoring mechanical elasticity to the scarred urethral wall.

- ***Apamarga Kshara Taila*:** An intensely specialized, alkaline medicated oil derived from the calcined ashes (*Kshara*) of the *Apamarga* plant (*Achyranthes aspera*), processed within a sesame oil base. It is pharmacologically recognized and deployed for its aggressive *Ksharana* (chemical debridement), *Lekhana* (scraping), and *Chedana* (excision) properties. When applied directly to pathological, fibrotic tissue, it induces a highly controlled, localized, and microscopic chemical necrosis of the abnormal scar tissue. This action fundamentally breaks down the rigid, disorganized collagenous matrix of the stricture without harming the surrounding healthy, compliant mucosa, addressing the root anatomical cause of the obstruction.

5.2. Pre-Procedural Preparation (*Purva Karma*)

Prior to the initiation of any physical intervention, comprehensive and highly detailed written informed consent was obtained directly from the patient. The intricate mechanics of the *Uttarabasti* procedure, the anticipated clinical trajectory, the expected benefits, and all potential procedural risks including transient dysuria or minimal mucosal bleeding were thoroughly communicated and understood.

The *Purva Karma* (pre-operative) phase involved meticulous patient preparation designed to maximize the efficacy of the drug delivery. The patient was explicitly instructed to empty his bladder to the absolute best of his ability immediately prior to ascending the procedure table. This critical step prevents the dilution of the highly concentrated, instilled medicaments with residual urine, ensuring maximum drug-to-mucosa contact time. Baseline vital parameters were recorded to ensure complete hemodynamic stability prior to instrumentation. The surgical procedural suite was prepared, and all required sterile instruments including specialized antiseptic solutions, sterile fenestrated surgical drapes, 2% Xylocaine (lidocaine) jelly for local anesthesia, varying French (Fr) sizes of sterile infant feeding tubes, and the pre-warmed medicated oils were systematically and aseptically arranged on a sterile surgical trolley.



Figure:1: Required instruments collection

5.3. Procedural Execution (*Pradhana Karma*)

The patient was positioned in the standard supine position on the procedural table. Strict, uncompromising aseptic surgical protocols were observed; the external genitalia, glans penis, and the surrounding perineal region were thoroughly painted with broad-spectrum antiseptic solutions and meticulously isolated using sterile fenestrated drapes.

To facilitate completely atraumatic entry and provide profound local topical anesthesia to the highly sensitive urethral mucosa, 2% Xylocaine jelly was gently instilled directly into the external urethral meatus. A mandatory contact time of 5 minutes was observed to allow for maximum anesthetic effect. Following the confirmation of adequate anesthesia, the penis was held firmly at a right angle (orthogonal to the body) to physiologically straighten the natural anatomical curve of the anterior urethra. A sterile, highly pliable infant feeding tube beginning with a very narrow 6 Fr size was cautiously and incrementally introduced into the urethral meatus. Guided purely by tactile feedback, the tube was advanced gently until it successfully traversed the dense strictured segment located in the posterior urethra.

Once the catheter was confirmed to be accurately positioned proximal to the stricture, the

pharmacological blend was administered via a sterile syringe securely attached to the distal end of the feeding tube. In the first treatment sitting, the precisely measured dosage consisted of 30 mL of *Dhanwantara Taila* combined intimately with 5 mL of *Apamarga Kshara Taila*. The oils were pushed with very slow, sustained, and highly controlled pressure to ensure an even, circumferential distribution along the entire urethral mucosa. To effectively mitigate any reflexive spasms of the external urethral sphincter, the patient was verbally guided to perform deep, slow diaphragmatic breathing throughout the duration of the instillation.

Crucially, this procedure was not a static, one-time drug delivery; it was a dynamic process incorporating progressive mechanical dilation. Over the seven consecutive days comprising each treatment sitting, the external caliber of the infant feeding tube was systematically and carefully increased, graduating stepwise from the initial narrow 6 Fr size up to a much wider 10 Fr size. This methodology provided a highly controlled, graduated mechanical expansion and micro-tearing of the fibrotic ring, operating in simultaneous, perfect synergy with the tissue-softening and anti-fibrotic oils being instilled.



Figure:2: Aseptic precaution



Figure:3: Sterile draped

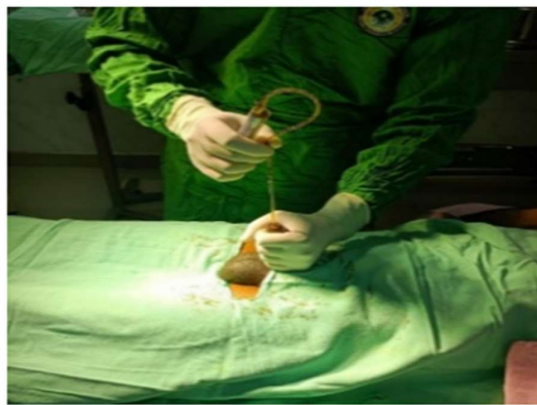


Figure:4: Uttarabasti procedure

5.4. Post-Procedural Care (*Paschat Karma*)

Following the complete instillation of the medicated oils and the gentle, atraumatic withdrawal of the feeding tube, the patient's vital signs were immediately reassessed and recorded to ensure stability. To absolutely maximize the mucosal contact time of the instilled medicated oils, prevent immediate expulsion, and facilitate deep, transmucosal tissue penetration, the patient was explicitly instructed to remain resting in the supine position and to voluntarily, consciously retain his urine for a strict minimum of 30 minutes post-procedure. Furthermore, he was heavily counseled to consciously avoid any undue abdominal straining during his subsequent micturition to prevent harmful retrograde pressure on the newly dilated and chemically treated delicate tissues.

5.6. Concurrent Oral Pharmacotherapy

To comprehensively address the systemic inflammatory pathways and support the localized actions of the *Uttarabasti*, highly specific oral Ayurvedic medications were prescribed concurrently, to be taken throughout both the active treatment sittings and the interim healing period.

1. **Kanchanara Guggulu:** Administered at a standardized dosage of 500 mg, taken twice daily, post-prandially, with lukewarm water. *Kanchanara Guggulu* is a classical formulation globally renowned for its profound *Lekhana* (scraping), *Kapha-Meda Shamaka* (lipid and fluid-modulating), and *Granthi-hara* (anti-

tumor, anti-fibrotic, and anti-nodular) properties. By actively modulating systemic lipid metabolism and possessing profound, deep-tissue anti-inflammatory capabilities, it acts on a systemic level to halt abnormal tissue proliferation, assisting in reducing the excessive fibrotic tissue mass and scar formation within the distant urethral mucosa.

2. **Trinapanchamoola Kwatha:** Administered at a dosage of 40 mL, taken twice daily, post-prandially, with lukewarm water. This classical herbal decoction functions as a highly potent, potassium-sparing functions as a highly potent, potassium-sparing *Mutrala* (diuretic) and *Pittashamaka* (cooling/anti-inflammatory) agent [Vagbhata, 2016]. Its primary therapeutic role in this specific regimen was to significantly increase total systemic urine output. This induced a continuous physiological "hydro-dilation" and regular, forceful flushing of the urethral lumen, preventing stasis and microbial colonization, while its cooling properties simultaneously worked to rapidly soothe and alleviate any inflammatory dysuria or burning sensations that may have been transiently provoked by the alkaline *Uttarabasti* procedure [Namde et al., 2021].

Timeline

The entire therapeutic intervention was meticulously structured into two distinct, active procedural sittings, intentionally separated by a one-month interim period during which only the oral medications were maintained.

Table 1: Comprehensive chronological timeline delineating the diagnostic and therapeutic interventions.

Date	Clinical Event	Course of Treatment	Dosages & Routes
17/12/2022	Initial Outpatient Department (OPD) Visit	Comprehensive clinical evaluation, diagnostic assessment, and review of investigations.	Advised <i>Uttarabasti</i> procedure; obtained written informed consent.
24/12/2022 to 30/12/2022	1st Sitting of <i>Uttarabasti</i> (7 consecutive days)	Transurethral instillation of <i>Dhanwantara Taila</i> and <i>Apamarga Kshara Taila</i> . Concurrent oral medications initiated.	Transurethral: <i>Dhanwantara Taila</i> 30 mL + <i>Apamarga Kshara Taila</i> 5 mL. Oral: <i>Kanchanara Guggulu</i> 500 mg BD; <i>Trinapanchamoola Kwatha</i> 40 mL BD.
31/12/2022 to 27/01/2023	Interim Healing Period (28 days)	Suspension of active <i>Uttarabasti</i> . Uninterrupted continuation of oral Ayurvedic pharmacotherapy.	Oral: <i>Kanchanara Guggulu</i> 500 mg BD; <i>Trinapanchamoola Kwatha</i> 40 mL BD.
28/01/2023 to	2nd Sitting of	Second intensive phase of transurethral	Transurethral: <i>Dhanwantara</i>

03/02/2023	Uttarabasti (7 consecutive days)	instillation. Gradual catheter sizing continued up to 10 Fr.	<i>Taila</i> 40 mL + <i>Apamarga Kshara Taila</i> 10 mL. Oral: <i>Kanchanara Guggulu</i> 500 mg BD; <i>Trinapanchamoola Kwatha</i> 40 mL BD.
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7. Follow-up and Outcomes

Clinical outcomes and therapeutic efficacy were meticulously and objectively evaluated utilizing the exact same tripartite approach established during the initial diagnostic baseline phase: quantitative Uroflowmetry, high-resolution radiological imaging, and validated subjective symptom scoring. To ensure the durability of the intervention and actively monitor for any insidious stricture recurrence, the patient was subjected to continuous, rigorous clinical follow-up for a period of six months post-intervention.

7.1. Uroflowmetry Parameter Shifts

The most compelling, undeniable evidence of the intervention's profound success is firmly rooted in the objective, mathematically derived uroflowmetry data. Prior to the initiation of treatment, the fluid dynamics of the patient's urinary flow were severely, almost critically, compromised by the rigid fibrotic bottleneck in the posterior urethra. Following the successful completion of the second *Uttarabasti* sitting, a dramatic, near-total physiological normalization of voiding parameters was observed.

The total voided volume a key indicator of bladder capacity and the ability to empty—exhibited a massive, statistically significant surge, increasing from a highly

restricted baseline of 259.8 mL to a robust 432.7 mL. While the absolute voiding time remained largely unchanged (registering at 1.13 minutes pre-procedure versus 1.09 minutes post-procedure), the mechanical efficiency of the voiding process was completely transformed. The most critical urodynamic metric for assessing outlet obstruction the post-void residual (PVR) urine volume demonstrated a sharp, precipitous decline. The primary PVR dropped dramatically from a dangerous baseline of 200 mL down to 120 mL. Even more significantly, the secondary PVR measurement (which reflects the true, stubborn baseline of untreatable urine retention) plummeted from 160 mL down to a clinically insignificant 10 mL.

This near-total, highly efficient evacuation of the bladder unequivocally indicates that the severe bladder outlet obstruction had been fundamentally and mechanically relieved. The structural and anatomical remodeling achieved by the combined, synergistic mechanical and pharmacological therapy finally allowed the detrusor muscle to easily overcome the outflow resistance, successfully re-establishing entirely normal lower urinary tract fluid dynamics and safeguarding the bladder from eventual muscular decompensation.

Table 2: Comparative analysis of objective uroflowmetry metrics and subjective quality of life assessment parameters.

Assessment Parameter	Baseline (Pre-Procedure)	Post-Procedure (After 2nd Sitting)
Voided Volume	259.8 mL	432.7 mL
Voiding Time	1.13 minutes	1.09 minutes
Post-Void Residual (PVR) 1	200 mL	120 mL
Secondary PVR 2	160 mL	10 mL
AUA Symptom Score	19 (Moderate-Severe)	12 (Moderate-Mild)
Quality of Life Perception	Mostly dissatisfied	Improved

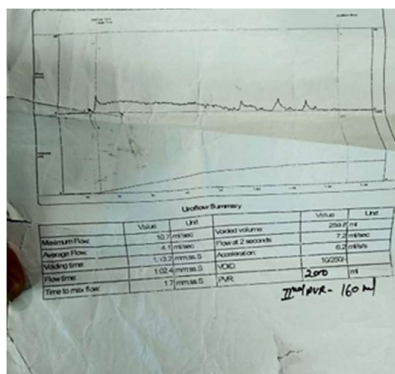


Figure 5: Uroflowmetry: Before treatment

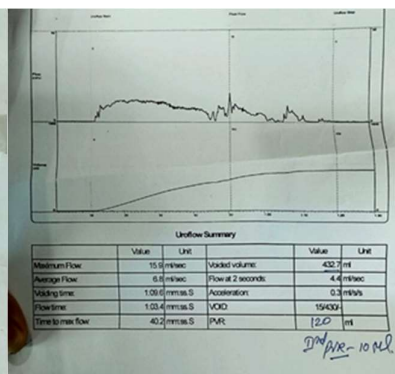


Figure 6: Uroflowmetry: After treatment

7.2. Symptom Score Trajectory

The patient's subjective, lived experience flawlessly mirrored the objective clinical data generated by the machines. The American Urological Association (AUA) Symptom Score was tracked meticulously at baseline, immediately following the first sitting, and after the conclusion of the second sitting.

Table 3: Granular, step-wise progression of the individual AUA Symptom Score domains throughout the treatment phases.

IPSS / AUA Parameters	Baseline	After 1st Sitting	After 2nd Sitting
Incomplete Emptying	4	3	2
Frequency	3	2	3
Intermittency	2	2	2
Urgency	2	1	1
Weak Stream	3	2	2
Nocturia	3	2	1
Straining	2	2	1
Total Score	19	14	12

The progressive, steady reduction in the total AUA score from a high of 19 down to 12 represents a highly significant, clinically meaningful improvement in morbidity. As detailed in the sub-parameters, the most profound reliefs were experienced in the highly distressing domains of incomplete emptying, urinary urgency, sleep-depriving nocturia, and the physical exhaustion of continuous straining. Correspondingly, the patient's self-reported, subjective Quality of Life metric shifted entirely from "mostly dissatisfied" to a highly positive, satisfied perception of his overall urinary health.

8. Discussion

Mutraghata, as described in Ayurvedic classics, is predominantly a *Vata* disorder characterized by obstruction to the normal flow of urine. The physiological process of micturition is governed by *Apana Vayu* therefore, its vitiation results in various forms of *Mutravikara* (urinary disorders), including *Mutraghata*.^[8] Urethral stricture can be correlated with *Mutramarga Sankocha*, wherein trauma, recurrent infection, inflammation, and subsequent fibrosis of the urethral mucosa lead to narrowing of the urethral lumen. From an Ayurvedic perspective, trauma to the urinary tract aggravates the *Chala, Ruksha*, and *Khara gunas* of *Vata Dosha*, resulting in constriction and functional obstruction of the *Mutramarga*.^[9] Considering the central role of *Vata* in the pathogenesis, the principal therapeutic objective is *Vata Shamana* and restoration of the normal function of *Apana Vayu*. *Uttarabasti* is regarded as one of the most effective therapeutic procedures for disorders of the lower urinary tract because it delivers medicated formulations directly to the affected site. Classical Ayurvedic literature recommends several medicated oils for the management of *Mutravikaras*. Among these, *Dhanwantara Taila* and *Apamarga Taila* are particularly valued for their *Vata-Kapha* pacifying properties and their therapeutic utility in conditions involving obstruction, fibrosis, and tissue degeneration.^[10,11,12] The addition of *Saindhava Lavana* to the medicated oil further enhances therapeutic efficacy. *Saindhava* possesses *Anulomaka* and *Vyavayi* properties, facilitating deeper tissue penetration and rapid systemic distribution of the medicament. These

attributes may improve mucosal absorption and increase the bioavailability of the administered oil within the lower urinary tract.^[13]

The therapeutic action of *Dhanwantara Taila* can be attributed to its *Snigdha* and *Sukshma* properties, which provide lubrication to the urethral passage, reduce tissue rigidity, and improve elasticity of the affected tissues. These effects may facilitate gradual dilatation of the narrowed lumen and improve urinary flow. *Apamarga Taila*, owing to the presence of *Kshara*, exhibits a potential scraping (*Lekhana*) and deobstruent action. This may contribute to the reduction of fibrotic tissue and scar formation within the urethra, thereby addressing one of the key pathological factors responsible for stricture formation.^[14] *Madhu* (honey) was incorporated as an adjuvant due to its well-documented *Shodhana* and *Ropana* properties. These actions promote wound cleansing, tissue repair, and mucosal healing, which are particularly beneficial in patients with urethral trauma and chronic inflammation.^[15] Recurrent urinary tract infections are known to induce chronic inflammatory changes and replacement of normal urethral epithelium by fibrous tissue, ultimately leading to stricture formation. Therefore, interventions capable of reducing fibrosis while enhancing tissue healing are likely to improve long-term outcomes. The efficacy of *Uttarabasti* may also be explained through its local pharmacodynamics effects. The lower urinary tract possesses a rich vascular and mucosal network capable of absorbing lipid-based formulations. The medicated oils administered through *Uttarabasti* are believed to penetrate the mucosal layers, improve tissue nutrition, enhance elasticity, and facilitate regeneration of damaged tissues.^[16] The unctuous nature of the oils softens fibrotic tissues, increases flexibility of the urethral wall, and may reduce the severity of luminal narrowing. Consequently, *Uttarabasti* not only addresses the symptoms of obstruction but may also modify the underlying pathological process responsible for recurrence.^[17] From a procedural perspective, *Uttarabasti* combines the benefits of mechanical dilatation and pharmacological intervention. Similar to conventional urethral dilatation employed in modern urology, the use of a sterile feeding tube or catheter provides controlled mechanical expansion of the

stricture segment. Simultaneously, the medicated oils exert local therapeutic effects, potentially reducing inflammation, fibrosis, and the likelihood of restenosis. This dual mechanism may explain the favorable clinical response observed in the present case.

Adjunctive internal medications further support the treatment outcome. *Kanchanara Guggulu*, known for its *Kapha-Meda Shamaka*, *Lekhana*, and *Granthi-hara* properties, may help in reducing excessive fibrotic tissue and scar formation within the urethral mucosa.^[18,19] Similarly, *Trinapanchamoola Kwatha* possesses *Mutrala* and *Pittashamaka* actions, which help alleviate dysuria, burning micturition, and urinary obstruction while promoting smooth urinary flow.^[20,21]

9. CONCLUSION:

This case report demonstrates the potential clinical utility of *Uttarabasti* with *Dhanwantara Taila* and *Apamarga Ksharataila* in the management of urethral stricture. The patient exhibited significant improvement in urinary symptoms, uroflowmetry parameters, post-void residual urine volume, radiological findings, and quality-of-life measures following two sittings of *Uttarabasti* administered at monthly intervals.

The observed outcomes suggest that this intervention may facilitate restoration of urethral patency and improvement in urinary flow dynamics. The procedure was well tolerated, minimally invasive, and associated with favorable functional outcomes without the need for surgical intervention during the study period. These findings indicate that *Uttarabasti* with *Dhanwantara Taila* and *Apamarga Kshara taila* may represent a promising Ayurvedic para-surgical approach for selected patients with urethral stricture. However, as this report is limited to a single case, larger prospective studies with long-term follow-up are required to establish its safety, efficacy, reproducibility, and comparative effectiveness relative to conventional treatment modalities.

10. Declaration of patient consent:

Authors certify that they have taken patient consent form, where the patient has given his consent for reporting the case along with the images and other clinical information in the journal. The patient understood that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

11. Financial support and sponsorship: Nil.

12. Conflicts of interest: There are no conflicts of interest.

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