

Management of Neurogenic Bladder Disease through Ayurveda: A Case Report

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ABSTRACT

The normal function of the urinary bladder is to store and expel urine in coordinated, controlled fashion and is regulated by the central and peripheral nervous system. Neurogenic bladder is a term applied to urinary bladder malfunction due to neurologic dysfunction emanating from internal or external trauma to brain or spinal cord, D.M., infection, genetic nerve problem. Mainstay of treatment includes antibiotics, catheterization, and placement of an electric device to stimulate or slowdown bladder activity, surgery etc. In spite of advances in medical science, the prognosis of this condition is poor.

According to Ayurveda, Apana Vayu Dushti is responsible for malfunction of bladder and is corrected by Basti Chikitsa. A 56-year-old female with a history of hypotonic bladder since childhood presented with dependency on self-catheterization for six years. Following an integrative treatment protocol, the patient demonstrated improved micturition reflex and reduced catheter use. The study underscores the potential of combining traditional and modern therapies for effective management of neurogenic bladder conditions.

Keywords: Neurogenic bladder, hypotonic bladder, Ayurvedic treatment, Panchakarma, integrative medicine.

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INTRODUCTION

Neurogenic Bladder, also known as Neurogenic Lower Urinary Tract Dysfunction, is when a person lacks bladder control due to brain, spinal cord or nerve problems. Several muscles and nerves must work together for your bladder to hold urine until you are ready to empty. Nerve messages go back and forth between the brain and the muscles that control when the bladder empties. If these nerves are harmed by illness or injury, the muscles may not be able to tighten or relax at the right time. In people with neurogenic bladder, the nerves and muscles do not work together well. The bladder may not fill or empty in the right way. ⁽¹⁾

Millions of people have neurogenic bladder. This includes people with Multiple Sclerosis (MS), Parkinson's disease and spina bifida. It also could include people who have had a stroke, spinal cord injury, major pelvic surgery, diabetes or other illnesses. ⁽²⁾

The effects of a neurogenic bladder can be severe if they are not regularly monitored and not managed properly. These effects can include renal failure, recurrent urinary tract infections, and urolithiasis, which all continue to have a significant impact on the quality of life of these people. Damage to the nervous system is irreversible and is difficult to get a complete cure. Selecting the right bladder management approach is essential for their comfort and quality of life. In contemporary medicine, treatment for neurogenic bladder problems may involve surgical treatments to the bladder or urethra, internal medicines, intermittent catheterization, indwelling urine catheters, timed voiding, manual expression, and/or other therapies. Risk factors associated with these treatments are ascending urinary infections, upper urinary tract damage and kidney failure. ⁽³⁾

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There is no one-to-one correlation available in Ayurvedic classics with neurogenic bladder, but there are many conditions and some causative factors linked to etiopathology for such type of disease conditions described in many chapters in different texts. *Vatadosha* is the prime factor responsible for movement, motor and sensory activities of the body. Nervous system activity is primarily governed by *Vatadosha*, especially *Pranavata* and *Vyanavata*. *Apanavata* is responsible for *Mootranishkramana karma*. The treatments available for *Mootrarogas* in Ayurveda include *Adonabhipichu*, *Avagahasweda*, *Avapeedakasnehapana*, etc. However, these treatments show less significant effects. Basti is the best treatment mentioned for alleviating vitiated

Vatadosha. In *Mootramarga*, *Uttarabasti*, per urethral administration of medicine is recommended for urinary disorders. Direct administration of drugs to the target cell might be achieved by *Uttarabasti*. *Basti* (bladder) is the *Sthana* of *Vata dosha*. *Uttarabasti* does function like *Samana*, some *Acharya* consider it like *Anuvasana basti* as it does *Snehana* ^[4]. However, few authors consider it like *Niruhabasti* because it performs cleaning as well. *Bala* is a popular drug used in various formulations especially, *Vatarogas*. *Bala* is the main drug in *Dhanwantarataila*, a popular yoga indicated for all *Vatarogas* and *Mootraghata* ^[5]. *Taila (Sneha)* is the ultimate treatment for *Vata vaigunya*.

Review of Literature

Year	Author(s)	Focus of Paper	Key Points	Conclusion
2024	Athira V. Kottoor, Sunil John Thykkattil	Role of Uttarabasti in Neurogenic Urinary Incontinence	Evaluates <i>Uttarabasti</i> (medicated oil enema into the urethra/bladder) for NB. Highlights its role in pacifying <i>Vata Dosha</i> and restoring neuromuscular coordination in the urinary channel ² .	<i>Uttarabasti</i> is a potent Ayurvedic intervention for managing neurogenic urinary incontinence and retention, offering a holistic alternative to conventional therapies ² .
2022	José Carlos Truzzi et al.	Neurogenic bladder – concepts and treatment recommendations	Reviews current treatment guidelines for NB based on public health system protocols. Discusses the impact of filling and emptying symptoms on quality of life ¹ .	Effective management requires a multidisciplinary approach to address urinary tract symptoms and prevent complications like renal damage ¹ .
2022	Tanmay Adhikari, Ajitkumar S Wahane	Conceptual Study on Mutraghata Management	Explores <i>Mutraghata</i> (urinary retention) as a prevalent <i>Vatadosha</i> illness. Details <i>Nidana</i> (etiology), <i>Sam prapti</i> (pathogenesis), and <i>Chikitsa</i> (treatment) from classical texts ³ .	A thorough understanding of <i>Nidana Panchaka</i> is essential for accurate diagnosis and effective management of <i>Mutraghata</i> in clinical practice ³ .
2023	Srikumar Venkataraman et al.	Management of neurogenic bladder in traumatic spinal cord injury	Addresses NB in spinal cord injury (SCI) patients in India, noting high morbidity from UTIs and renal stones. Highlights socioeconomic challenges in management ⁴ .	Inadequate management leads to significant complications; early intervention and patient education are critical for improving outcomes in low-income groups ⁴ .
2022	Samayak J Kumar, Dalia A Biswas	Anatomical Aspects and Management Approach	Reviews the neural control of the bladder, including the pontine micturition center and vesical plexus. Discusses the brain's role in urgency and	Understanding the anatomical and neural pathways is crucial for developing targeted management strategies for NB ⁵ .

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			leakage ⁵ .	
2022	Nathalie Elisabeth Perez et al.	NB Physiology, Pathogenesis, and Management after SCI	Reviews normal anatomy and pathophysiology secondary to SCI, including autonomic dysreflexia. Emphasizes the loss of supraspinal coordination ⁶ .	Unchecked disturbances in autonomic and somatic systems can be life-threatening; personalized management is essential ⁶ .
2024	Jukur Rajesh et al.	Role of Panchakarma in Gridhrasi with Peroneal Neuropathy	Assesses efficacy of Ayurvedic <i>Shodhan</i> (purification) and <i>Shaman</i> (palliative) <i>Chikitsa</i> in <i>Gridhrasi</i> (sciatica/neuropathy). While focused on neuropathy, it highlights <i>Vata</i> management relevant to NB ⁷ .	Ayurvedic management including <i>Panchakarma</i> shows promise in treating <i>Vata Vyadhi</i> , suggesting potential applicability to neurogenic conditions ⁷ .
2025	Jiayu Hao et al.	NB pathophysiology, assessment and management after lumbar diseases	Examines NB resulting from lumbar spine diseases. Discusses the correlation between lumbar pathology and bladder dysfunction ⁸ .	Early assessment and targeted management of lumbar diseases can mitigate NB progression and improve patient outcomes ⁸ .
2025	Krishna Deshpande, Prabhanshu Gupta	Comprehensive Analysis of Kaala in Nidana Panchak	Analyzes <i>Kaala</i> (time/season) as a factor in <i>Nidana Panchak</i> (diagnostic framework). Emphasizes its role in early diagnosis and distinguishing disease stages ⁹ .	Incorporating <i>Kaala</i> into diagnostic mechanisms enhances the accuracy of Ayurvedic diagnosis and therapy planning ⁹ .
2024	Sanjay Kosankar, Pankaj Thawari	Ayurvedic Diagnosis Through Nidana	Details the five elements of <i>Nidana Panchaka</i> : <i>Nidana</i> , <i>Purvarupa</i> , <i>Rupa</i> , <i>Upashaya</i> , and <i>Samprapti</i> . Highlights its critical role in understanding disease mechanisms ¹⁰ .	A comprehensive diagnosis using <i>Nidana Panchaka</i> is fundamental for effective Ayurvedic treatment protocols ¹⁰ .
2019	Elizabeth Lucas	Medical Management of NB for Children and Adults	Reviews medical management goals: protection of the upper urinary tract and promotion of continence. Discusses medications and clean intermittent catheterization (CIC) ¹¹ .	Successful management involves a combination of medications and CIC, tailored to individual patient needs across all ages ¹¹ .
2024	Deepam badonya et al.	Role of Chikitsa Sutrani to Formulation a Treatment Protocol	Bridges ancient Ayurvedic <i>Chikitsa Sutras</i> with modern medical practices. Explores integration of therapeutic principles into contemporary protocols ¹² .	Integrating Ayurvedic guidelines into modern protocols can enhance therapeutic efficacy and foster a holistic healthcare approach ¹² .

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2019	Elie El Helou et al.	Use of mirabegron in neurogenic bladder	Systematic review evaluating mirabegron (beta-3 agonist) in NB patients. Assesses efficacy based on clinical and urodynamic parameters ¹³ .	Mirabegron shows promise as an effective treatment for NB, particularly for patients intolerant to antimuscarinics ¹³ .
2019	Amy Nemirovsky et al.	Combination Therapy for Bladder Dysfunction in NDO	Reviews combination therapy for urinary urge incontinence in NB. Notes limitations of current gold-standard medications like anti-muscarinics ¹⁴ .	Combining therapies may offer better outcomes for urinary urge incontinence in NB patients, addressing side effects and limited efficacy ¹⁴ .
2020	Uttam K. Mete, Charles R. Powell	Review of Current NB Best Practices and International Guidelines	Critically evaluates current guidelines, noting contrasting recommendations. Highlights novel techniques like mirabegron and electromotive onabotulinumtoxin ¹⁵ .	Current guidelines need updating to incorporate novel therapeutic agents and techniques developed in recent years ¹⁵ .
2023	ZengGang Wei et al.	Effectiveness and safety of sacral neuromodulation for NB	Assesses sacral neuromodulation (SNM) for NB. Notes that research is still exploratory, with unclear effectiveness and safety profiles ¹⁶ .	SNM is a minimally invasive option, but further research is needed to establish its definitive role in NB management ¹⁶ .
2022	Zoe Blumenthal et al.	Recently Described Innovative Reconstruction in NB	Reviews novel lower urinary tract reconstruction methods, including bladder augmentation and artificial urinary sphincter ¹⁷ .	Emerging techniques and experimental therapies offer new hope for severe NB cases where conventional treatments fail ¹⁷ .
2025	Santosh Kumar et al.	Comparative study of Kati Basti and Kati Pichu in Gridhrasi	Compares <i>Kati Basti</i> and <i>Kati Pichu</i> with <i>Astakatvar Taila</i> for <i>Gridhrasi</i> (sciatica). Highlights <i>Vata</i> pacification and pain relief ¹⁸ .	Both <i>Kati Basti</i> and <i>Kati Pichu</i> are effective in managing <i>Gridhrasi</i> , supporting the use of localized <i>Panchakarma</i> for neurological conditions ¹⁸ .
2024	Adina Ionelia Manaila et al.	Efficiency of Rehabilitation Therapy in NB	Systematic review of rehabilitation therapy efficiency in NB patients. Discusses various rehabilitative interventions ¹⁹ .	Rehabilitation therapy plays a crucial role in improving bladder function and quality of life in NB patients ¹⁹ .
2024	Yangyang Jiang et al.	Transcutaneous Electrical Stimulation for NB after SCI	Systematic review and meta-analysis of transcutaneous electrical stimulation for NB post-SCI. Evaluates its efficacy in improving bladder parameters ²⁰ .	Transcutaneous electrical stimulation is a promising non-invasive therapy for NB after SCI, showing significant improvements in bladder function ²⁰ .
2019	Peter Bragge et al.	Systematic review of CPGs for NB management after SCI	Identifies and evaluates quality of clinical practice guidelines (CPGs) for NB management post-SCI. Notes variations in guideline quality ²¹ .	High-quality, evidence-based CPGs are essential for standardizing NB management and improving patient outcomes after SCI ²¹ .

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2024	Sanjeev Rastogi	Chronic urine retention due to NB in a young woman treated through Ayurveda	Case report of a young woman with chronic urine retention due to NB treated with Ayurvedic interventions. Details the treatment protocol and outcomes ²² .	Ayurvedic treatment can effectively manage chronic urine retention in NB, offering a viable alternative to conventional therapies ²² .
2017	Sanjeev Rastogi	Low-Pressure, Low-Flow Voiding Dysfunction in an Elderly Male Treated Through Ayurveda	Case report of an elderly male with low-pressure, low-flow voiding dysfunction treated with Ayurveda. Highlights the role of <i>Vata</i> imbalance ²³ .	Ayurvedic management can improve voiding dysfunction in elderly patients by addressing underlying <i>Vata</i> imbalances ²³ .
2023	Katarina Topoliová et al.	Tissue Engineering and Stem Cell Therapy in NB Dysfunction	Reviews current and future perspectives of tissue engineering and stem cell therapy for NB. Discusses potential for regenerating damaged neural and muscular components ²⁴ .	Stem cell therapy and tissue engineering hold significant promise for future NB treatments, potentially offering curative solutions ²⁴ .
2024	Ilaha Isali et al.	Stem Cell and Neural Progenitor Cell Therapy for NB	Consolidates literature on stem cell and neural progenitor cell therapy for NB. Highlights recent studies demonstrating efficacy in nerve regeneration and improved bladder function ²⁵ .	Stem cell and neural progenitor cell therapy represent a cutting-edge approach to NB treatment, with growing evidence supporting their therapeutic potential ²⁵ .

The literature reveals a dichotomy in approach but a convergence in goals. Modern medicine prioritizes physiological correction, utilizing advanced diagnostics like urodynamics and interventions such as sacral neuromodulation ¹⁶ and stem cell therapy ²⁵ to protect renal function and ensure continence. In contrast, Ayurveda focuses on the holistic restoration of *Vata Dosha* balance, employing *Nidana Panchaka* for diagnosis ¹⁰ and *Panchakarma* procedures like *Uttarabasti* for treatment ².

While modern research is supported by high-level evidence from randomized controlled trials and systematic reviews ¹³²⁰, Ayurvedic evidence is largely derived from case reports and classical textual interpretations ²²²³. However, the integration of Ayurvedic principles, particularly *Uttarabasti*, offers a promising adjunctive or alternative therapy with potentially fewer side effects. Future research should focus on rigorous clinical trials to validate Ayurvedic interventions, facilitating their integration into mainstream urological practice and providing patients with a more comprehensive, personalized management strategy for neurogenic bladder.

Case Report

A 56-year-old female patient attended the OPD of Panchakarma (OPD No 39657) at Government ayurvedic hospital Dharashiv on 24 November 2023 with chief complaints of retention of urine, lower abdominal pain, burning micturition since 15 years. Bilateral knee pain in the last 6 months. As Patient was unable to pass urine, so patient uses catheter for 6 years, 4-5 times a day.

History of present illness:

Patient had c/o weak stream of urine since childhood, patient underwent y-v plasty at bladder neck, was asymptomatic and again developed c/o retention of urine at age of 30yrs. After multiple urologist and neuro physician opinion, patient was kept in dwelling catheterisation for 3 months, and later on CISC (clean intermittent self catheterisation) 4- 5 times daily, than Patient came to PANCHKARMA OPD with above mentioned complaints for further treatment.

Past History: -

S/H/O :-

Y-V Plasty (in 1980)

C – section – 1st (in 1990)

C – section – 2nd (in 1994)

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Cystoscopy and dilatation 12/16 (in 1999)
Tubectomy (2006)
D&C for DUB (2016)

K/C/O :-

voiding dysfunction since childhood (weak stream of urine)
Chronic Retention of Urine with CRF
Left Pyelonephritis
Hypotonic bladder with raised RFT

Personal History :-

Marital status - Married
Maternal history –
G1 – FTCS Female (1990)
G2 - FTCS Male (1994)
G3 – 3 months MTP
G4 – 4 month spontaneous abortion
G5 – 3 month MTP
G6 – 2 month (had taken tablets – unsuccessful – then curettage)

N/H/O – smoking/alcohol/tobacco

FAMILY HISTORY-

Father - no any major illness
Mother - no any major illness

ASHTAVIDHA PARIKSHA :-

Nadi – 74/ min
Mutra – mutrasanga
Mala- Prakrut
Jivha - Saam
Shabda - Spashta
Sparsha- anushnashit
Druk- spashta (aided)
Akruti- Madhyam

GENERAL EXAMINATION

GC- fair
Pulse- 74/ min
Bp – 130/90mm of hg
Spo2- 98%
RR- 18/min
Pallor – no pallor
Icterus – no icterus

S/E (SYSTEMIC EXAMINATION)-

CVS- S1S2 normal
RS- AEBE
CNS- conscious oriented
P/A - soft Liver, Kidney, spleen not palpable

PREVIOUS

REPORTS

TABLE 1- SHORT SUMMARY OF REPORTS OVER YEARS

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USG SCAN	IMPRESSION
25-05-2005	•b/l kidneys gross hydronephrosis with parenchymal thinning with raised echogenicity
	•Post void residual volume – 350cc
04-02-2009	•Small echogenic rt kidney with irregular contour of lt kidney with dilatation of left pelvi calyceal system of both kidneys with detrusor muscle hypertrophy PVR – 115cc
18-10-2016	•Grade IV b/l hydroureteronephrosis, urinary bladder shows chronic cystitis,
	•PVR – 444cc
14-11-2016	•Mod b/l hydroureteronephrosis secondary to severe cystitis & changes of b/l ureteritis
	•Smaller rt kidney, areas of scarring at midpole of both kidneys
03-01-2017	•Mod b/l hydroureteronephrosis & changes of distal ureteritis secondary to chronic cystitis Post void residual volume – 381cc
06-07-2018	•Urinary bladder, wall thickening with significant post void residue
	•Small rt kidney
	•Post void residual volume – 473cc
06-09-2023	•Decreased kidney size with cortical scarring and maintained CMD
	•Mild pelvicaliectasis in both kidneys
	•Diffuse moderate thickening of bladder wall (7-8mm)

Differential Diagnosis

Ayurveda defines 13 types of Mutraghata. When diagnosing a patient presenting with neurogenic bladder symptoms, the differential focuses on the behavior of Apana Vayu and the specific structural or functional anomalies within the Basti (bladder):

Ayurvedic Type (<i>Mutraghata</i>)	Primary Pathophysiology / Clinical Feature	Modern Comparative Correlation
Bastikundalika	Vitiated Vata creates a spastic, displaced, or distorted bladder ("shape of a uterus"), causing severe pain, retention, or erratic dribbling.	Spastic Neurogenic Bladder / Detrusor Sphincter Dyssynergia (DSD)
Vata-Basti	Suppression of natural urges (<i>Vega-dharana</i>) traps Vata at the bladder neck, presenting as acute retention without mechanical blockage.	Acute Urinary Retention / Functional Sphincter Spasm
Vatakundalika	Erratic, circular movements of Vata causing painful, incomplete, or drop-by-drop micturition without an external tumor.	Smooth Muscle Sphincter Dyssynergia
Mutrājathara	Distension and profound downward pressure due to forced chronic retention of urine.	Flaccid Neurogenic Bladder / Chronic Overstretched Atonic Bladder
Vatashtheela	A hard, mobile or immobile stone-like growth between the rectum and bladder causing structural obstruction.	Benign Prostatic Hyperplasia (BPH) / Prostate enlargement
Mutrātita	Delayed stream or slow initiation of voiding caused by prolonged voluntary suppression.	Urinary Hesitancy / Detrusor Fatigue

Therapeutic Intervention

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Before starting treatment, the written informed consent was obtained from the patient for publication of this case report and accompanying images .

TREATMENT PROTOCOL

- Shaman Chikitsa
- Shodhan Chikitsa
- Full diet
- Monitor water intake
- Monitor frequency of catheterisation
- Monitor urine output
- Tap water sound to induce urination
- Papaya, coconut water, coriander decoction – 100 ml
- Quick relaxation technique

TABLE 2:-ORAL MEDICATION ADMINISTERED

No	KALP	CONTENT	ACTION	DURATION
1	Chandraprabha vati	Shilajatu,gugul,Kapur,Musta,Dhanyak, Loha bhasma,vacha,Tripa	1)Mainly used in all type of Mutrakruhha because of Mutral property 2)It is Tridoshaghan,Deepan and Pramehaghan	24/11/2023 to 04/01/2024 (42 days)
2	Hingwashtak Churna	Hingu,Trikatu,Ajmoda,Saindhav lavan,shwet and Krishna Jeerak	1)It mainly improves Digestion 2)It is vatta - kapha shamak and pittakar 3)Also used in vata diseases like bloating,joint diseases	24/11/2023 to 04/01/2024 (42 days)
3	Bastyamayantak Ghrut	Darvi,Madhuk,Pashanbhed,Varun,Bru hati,prishnaparni,shaliparni, Gokshur,Ikshu	1)Because of its content that have Mutral property it mainly act on diseases of urinary system such as Mutrakruhha, Mutraghat, Ashamri	29/11/2023- 14/12/2023 (16 Days)
4	Jatamansi Fant	Jatamansi	1)Used in neuro -psychiatric diseases 2) Pitta shamana 3) Dahanut 4) Medhya (Improve brain functions) 5) Balaprada	24/11/2023 to 04/01/2024 (42 days)
5	Laghusutshekhar	Suvarngairik 2 parts Shunthi	1) Pitta Shaman -Amltava and tikshntva Guna shaman 2) Suvarnagairik -Pitaa shamana Balya 3) Shunthi –pachak	6/12/2023 to 04/01/2024 (30 days)
6	Panchtiktaghrit guggul	Neem ,Giloy ,Patola , Vasa, Triphala , Ghee, guggul	1) It is used to help increase bone mineral density and slow bone degeneration . 2) Helps in managing post menopausal osteoporosis. 3) Shothhara 4) Pittashamana	24/11/2023 to 04/01/2024 (42 days)
7	Brihatyadi kashayam	Bruhati, Nidigdhika Shalparni , Prushniparni, Gokshur	Brihatyadi kashayam is used in treating diseases of urinary system.	22/12/23 to 04/01/2024

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			Used in dysurea, urinary tract infection, Cystitis .	(14 days)
8	Vishtinduk vati	Shudha Kuchala, Marich, Pugfal, Chinchafal,	Kuchla is spinal excitant. Astringent & diuresis like effects cause the bladder to empty	8/12/23 to 04/01/2024 (28 days)
9	Vasasntkusumarkar ras + Gudduchi Satwa + Ashwgandha chu.	Suvarn bhasm,Rajat bhasm,Vanga bhasm,Abhrak bhasm,Praval bhasm,Mukta bhasm	Provides nourishment & Strength to organs, Nerve Tonic & Rasayan	8/12/23 To 04/01/2024 (28 days)
10	NEERI KFT	Punarnava, Guduchi , Gokshura, Anantmoola, Shwet Parpati, Papaya,Dhanyak	It is used to correct kidney dysfunction caused by metabolic issues,persistent infections or other factors	24/11/2023 to 04/01/2024 (42 days)
11	Tab Enuro	Sameerpannag ras Ekangveer ras Ashwagandha ghan Khurasani ova Mahavaatvidhwans Decotion – nirgundi & bala	1. Improves coordination in neuromuscular activity. 2.Promote healing of damage nerves. 3.Energized diseased neurons,	09/12/23 to 20/12/23 (12 days)
12	Syrup flush it	D- mannose Cranberry extract	1) D-mannose is a naturally-occurring sugar that helps prevent bacteria from sticking to the walls of the urinary tract, which can cause urinary tract infections. 2) Cranberry extract helps reduce the adherence of certain bacteria to the urinary tract walls, which helps prevent urinary tract infections	18/12/23 To 4/1/24 (18 days)

Panchakarma Procedure Adopted

Table 3:-Panchakarma Procedures Administered

NO	PROCEDURE	DURATION	TOTAL DAYS
1	Sthanik Snehana and nadi swedan (kati and janu pradeshi)With til tel	24/11/23 to 04/01/2024	42 days
2	Snehana paschat Baluka Sweda (kati and janu pradeshi)	24/11/23 to 04/01/2024	42 days
3	Avgaha sweda with Ushnodak	27/11/23 to 04/01/2024	39 Days
4	Basti (A A A N A A A N A A A) N – Niruha basti – erandmula + ashva + bala – 450ml A – Anuvasan basti – dhanwantar tel – 75ml	2/12/23 to 12/12/23	10 Days
5	Yoga basti (A N A N A N A A) N – Niruha basti – erandmula + dashmula – 450ml A – Anuvasan basti –piplyadi tel – 75ml	13/12/23 to 20/12/23	8 days

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6	Uttar basti with chandanbalalakshadi tel + sahacharadi tel	21/12/23 to 28/12/23	8 days
7	Adhodar Pichu with Dhanwantar tel	24/11/23 to 04/01/2024	42 Days
8	Nabhipuran with Dhanwantar tel	19/12/23 to 04/01/24	16 Days
9	Merudanda basti with Mahanarayan tel	12/12/23 to 04/01/24	25 Days
10	Erandpatra upnah – (ubhay janu pradeshi)	6/12/23 to 04/01/2024	29 Days
11	Suchivedha (6 Settings)	S1 – 8/12/23 S2- 11/12/23 S3 – 14/12/23 S4 – 19/12/23 S5 – 25/12/23 S6 – 29/12/23	6 Setting
12	Agnikarma (3 Settings)	S1 – 21/12/23 S2 – 25/12/23 S3 – 29/12/23	3 Setting
13	Accupressure (TDS)	5/12/23 to 04/01/24	30 Days
14	Panchtikta kshir basti Yog Basti	28/12/2023 to 4/01/2024	8 Days

Table 4 :- Mode of action of karma

NO	PROCEDURE	Mode of action
1	Sthanik Snehana and nadi swedan	Helps in maintaining bio equilibrium of body. Preventive and curative for vatika vikaras. Promotes vasodilatation and increase peripheral circulation. Eliminates metabolic wastes. Maintains proper tension of muscles & tendons. Promotes functional ability of nerves. Promotes physical stability.
2	Avgaha sweda with Ushnodak	Fomentation by immersion of body in vatahara drugs Here done with ushnodaka Submerged about 6 angul above the umbilicus Relaxes pelvic muscles and sphincters by increasing peripheral circulation over the area Passively creates urge for urination Helps in painful urination & defaecation
4	Basti (A A A N A A A N A A A) N – Niruha basti – erandmula + ashva + bala – 450ml A – Anuvasan basti – dhanwantar tel – 75ml	Niruh- Shool shoth katibasti roga vinashanam Balvardhan rasayani. Anuwasan - Apana viseshatwam Madhyama roga marga Mutraghata Degenerative arthropathy and neuropathy Vaathar.

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5	Yoga basti (A N A N A N A A) N – Niruha basti – erandmula + dashmula – 450ml A – Anuvasan basti –piplyadi tel – 75ml	Niruh- Shool shoth katibasti roga vinashanam Balvardhan rasayani vaathar. Anuvasan- Mudhavaatanuloman, Mutrakrichha, Katiuruprishta , daurbalya.
6	Uttar basti with chandanbalalakshadi tel + sahacharadi tel	Strengthens the genito-urinary tract Vata anulomana – apana vayu Strengthens the bladder muscle Remove adhesions Has kshalana effect also according to the drug used
7	Adhodar Pichu with Dhanwantar tel	Modified form of local Sneha sweda application Helps in reducing vatakopa at a specific location Strengthens the muscle Improves the function of bladder Helps in regaining tone of bladder muscles Helps in effective emptying of bladder
8	Nabhipuran with Dhanwantar tel	Nabhi -the Agni sthana- regulates samana vayu Expels apana vayu-eliminates mala and regulates bladder function Strengthens uterine muscle
9	Merudanda basti with Mahanarayan tel	Vata kapha samana Neurological diseases Parswasoola ,asmari
10	Erandpatra upnah – (ubhay janu pradeshi)	Anti inflammatory Analgesic
11	Suchivedha (6 Settings)	Stimulant to prana in marma chikitsa Releases endorphins and neurotransmitters in brain- pain modulation and mood enhancement Improves microcirculation Anti inflammatory and analgesic effect
12	Agnikarma (3 Settings)	Using panch loha shalaka – for pain relief at knee joint Relieves intense pain at twavcha mansa sira snayu asthi sandhi caused by vaat dosha Stimulates pain points and increase capillary circulation.
13	Accupressure (TDS)	Activating acupoints along the meridians across our body Stimulates the body's natural healing
14	Panchtikta kshir basti Yog Basti	Asthimajjagat vaat Katishul Balya

Observations and Results

Table 5 : Subjective Parameters Before Treatment and After Treatment

Sr no.	Parameters	Before Treatment	After Treatment
1	Urge for micturation	NIL	++
2	Urine output without catether	NIL	+

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3	Application of suprapubic Abdominal pressure	++	+
4	Dysuria	++	+
5	Weak stream urine	+++	++
6	Tap water sound effect on urination	NIL	++

Table 6 : Objective Parameters Before Treatment and After Treatment

Investigation	15/12/23	22/12/23	26/12/23	3/1/24
Sr. Creatinine	2.18 mg/dl	2.47 mg/dl	2.07 mg/dl	2.01 mg/dl
Sr. Urea	54.5 mg/dl	64 mg/dl	58.0mg/dl	48.0mg/dl

Table 7 : Uttar Basti Observations

Date & Given Time	Urination Time	Drug used	Urine Output Without Catheter	Urine Output With Catheter
21/12/23 12.15 pm – Day 1	1.30 pm	Murchit til tel 10ml	0	240ml
22/12/23 12.30pm - Day 2	2.40 pm	Sahacharadi tel (15ml) + chandanbalalakshadi tel (15ml)	60ml	0
	3.40 pm		50 ml	0
	5.00 pm		170 ml	240 ml
23/12/23 12.50pm - Day 3	2.30 pm	Sahacharadi tel (15ml) + chandanbalalakshadi tel (15ml)	60 ml	
	3.05 pm		60 ml	
	4.30 pm		60 ml	
	6.10 pm		90 ml (270 ml)	
	6.30 pm			660 ml
25/12/23 1.00 pm - Day 4	2.50 pm	Sahacharadi tel (20ml) + chandanbalalakshadi tel (20ml)	60ml	
	5.00 pm		100 ml	
	6.20 pm		50 ml	
	7.00 pm		60 ml (270 ml)	780 ml
26/12/23 12.40pm - Day 5	2.40 pm	Sahacharadi tel (25ml) + chandanbalalakshadi tel (25ml)	60 ml	
	3.40 pm		50 ml	
	5.00 pm		60 ml (170 ml)	240 ml
27/12/23 11.00am - Day 6	1.20 pm	Sahacharadi tel (25ml) + chandanbalalakshadi tel (25ml)	60 ml	
	2.00 pm		30 ml	
	4.00 pm		60 ml (150 ml)	600 ml
28/12/23 12.50pm – Day 7	1.30 pm	Sahacharadi tel (25ml) + chandanbalalakshadi tel (25ml)	60 ml	
	2.30 pm		60 ml	
	4.45pm		40 ml (140 ml)	660 ml

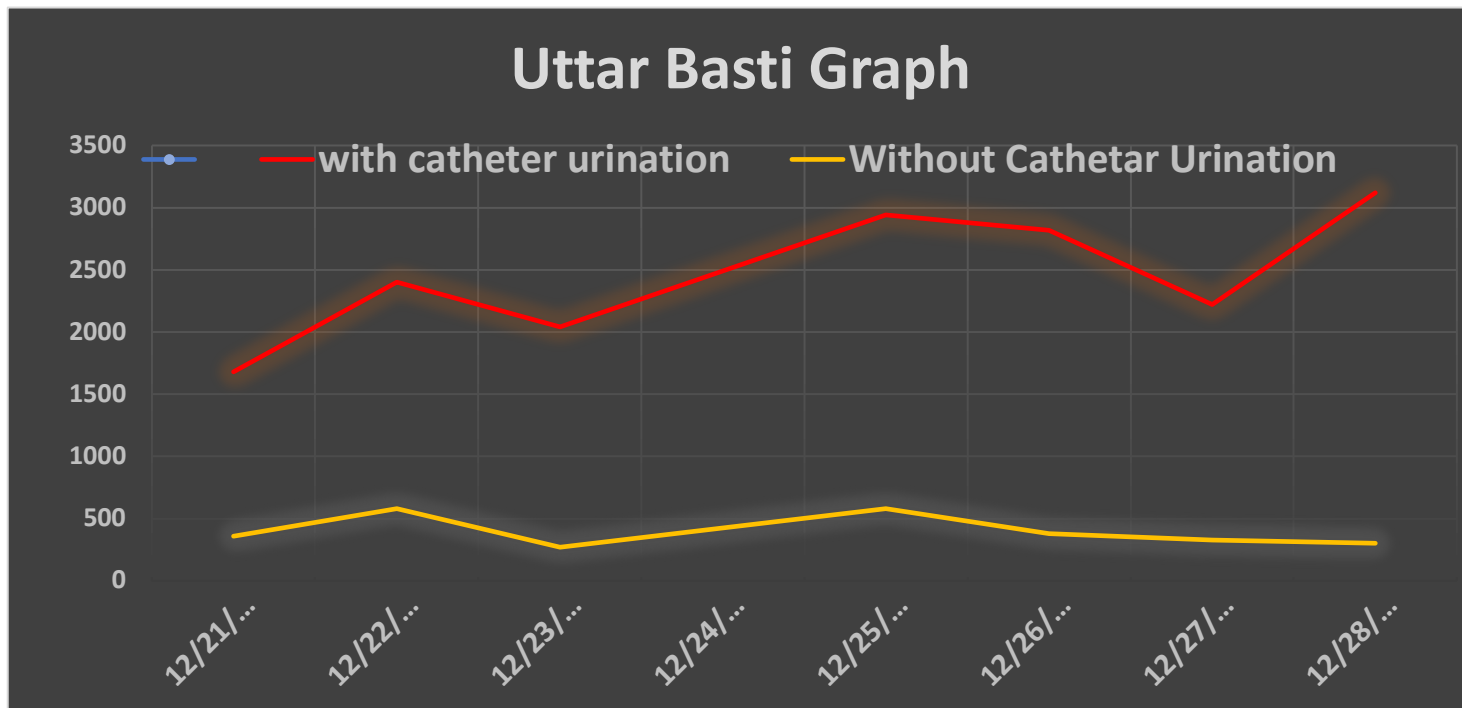


Table 8 : Urine Output After UttarBasti

Date	Urine Output With Catheter (ml)	Urine Output Without Catheter (ml)	Total urine output (ml)	Total Water Intake (ml)
12-12-2023	960	45	1005	1.5
13-12-2023	1560	35	1595	1.5
14-12-2023	600	120	720	1.5
15-12-2023	540	240	780	2.5
16-12-2023	840	360	1200	2.25
17-12-2023	1680	210	1890	2.25
18-12-2023	1200	360	1560	2.25
19-12-2023	1400	100	1500	2
20-12-2023	1980	330	2310	3
21-12-2023	1620	100	1720	2.25
22-12-2023	1680	360	2040	2.5
23-12-2023	2400	580	2980	3.5
24-12-2023	2040	270	2310	2.5
25-12-2023	2940	580	3520	3.5
26-12-2023	2820	380	3200	3.5
27-12-2023	2220	330	2550	3
28-12-2023	3120	300	3420	3.5
29-12-2023	2100	300	2400	2.5
30-12-2023	2400	300	2700	3
31-12-2023	3600	540	4140	3

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01-01-2024	2940	300	3240	3
02-01-2024	2820	420	3240	2.7
03-01-2024	2760	300	3060	3
04-01-2024	1100	120	1220	1.5

Discussion

The present case was diagnosed case of Neurogenic bladder syndrome having complaints of retention of urine, lower abdominal pain, burning micturition since 15 years. Bilateral knee pain in the last 6 months. As Patient was unable to pass urine, so patient uses catheter for 6 years, 4-5 times a day. Based on the clinical presentation in particular and all other findings in general, it was diagnosed as a case of Mutraghat according to Ayurveda. Vatadosha is the prime factor responsible for movement, motor and sensory activities of the body. Nervous system activity is primarily governed by Vatadosha, especially Pranavata and Vyanavata. Apanavata is responsible for Mootranishkramana karma.

The treatments available for Mootrarogas in Ayurveda include Adonabhipichu, Avagahasweda, Avapeedakasnehapana, etc. However, these treatments show less significant effects. Basti is the best treatment mentioned for alleviating vitiated Vatadosha. In Mootramarga, Uttarabasti, per urethral administration of medicine is recommended for urinary disorders. Direct administration of drugs to the target cell might be achieved by Uttarabasti. Basti (bladder) is the Sthana of Vata dosha. Uttarabasti does function like Samana, some Acharya consider it like Anuvasana basti as it does Snehana [6].

Sthanik Snehana and nadi swedan promotes vasodilatation and increase peripheral circulation. Eliminates metabolic wastes. Maintains proper tension of muscles & tendons. Promotes functional ability of nerves.

Avgaha sweda with Ushnodak helps to relaxe pelvic muscles and sphincters by increasing peripheral circulation over the area. Passively creates urge for urination. Helps in painful urination & defaecation.

Conclusion

As patient was suffering from voiding dysfunction since childhood, we can consider khavaigunya was there. We have kept holistic approach of treatment i.e. we have included Ayurvedic (shaman, shodhan, suchivedha & rasayan) Yoga, Accupressure, Exercises

The disease neurogenic bladder is caused by the functional impairment of the bladder due to the damage of the nerves governing them. As apaan vaat controls the normal functioning of bladder, any derangement in the same causes functional abnormality of bladder. Hence the

drugs having vatahara property & Basti have been administered. Avgaha sweda - Passively creates urge for urination Also the drugs employed had mutrala action with specific indication for both mrutrakruchha and mutraghat roga. Uttar basti was beneficial as micturition reflex was seen and patient was able to pass some amount of urine without catheterization. Not only maintaining urine output chart, micturition reflex chart is necessary but also KFT parameters monitoring is important. Thus integrated treatment protocol adopted was proven to be beneficial in the patient. However, a large scale study is required to come to a stronger conclusion

The results revealed that neurogenic bladder disease can be cured effectively with the collaborative approach of various Panchakarma procedures, including uttar basti and Shamana Chikitsa. This case report is only an observation and based on the result, this case opens a new lead to conduct research with a large sample size with this intervention in the management of neurogenic bladder disease.

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Conflicts of Interest

There are no conflicts of interest.

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