



Case Study

HEALING BEYOND OBSTRUCTION: *PANCHAKARMA'S* ROLE IN TREATING
HYDROURURETERONEPHROSIS LEADING TO CHRONIC KIDNEY DISEASE

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ABSTRACT

Hydronephrosis and hydroureter occur secondary to obstruction of urinary outflow at the renal pelvis and ureter. These conditions are observed in all age groups. Timely diagnosis and management are necessary to prevent the long-term renal complications. Obstruction to the flow of urine, with attendant stasis and elevation in urinary tract pressure, impairs renal and urinary conduit functions and is common cause of acute and chronic kidney disease (obstructive nephropathy). Early recognition and prompt treatment of urinary tract obstruction can prevent or reverse devastating effects on kidney structure and function and decrease susceptibility to hypertension, infection, and stone formation. Chronic obstruction may lead to permanent loss of renal mass and excretory capability. *Acharya Vagbhata* made a significant contribution by classifying these conditions into two main categories *Mutra Atipravritti Vikara*, which refers to disorders characterized by excessive urination such as *Prameha*, and *Mutra Apravritti Vikara*, which includes conditions marked by obstruction or difficulty in urination, such as *Asmari*, *Muttrakricchra* and *Mutraghata*. This case study highlights the integrated role of *Shodhana* and *Shamana* in the management of chronic kidney disease (CKD). A patient presenting with Grade 4 hydronephrosis who had progressed to chronic kidney disease (CKD) was managed with *Panchakarma* treatment. This case study highlights the potential of *Panchakarma's Shodhana* and *Shamana* in the management of chronic kidney disease (CKD) as a supportive therapeutic modality in advanced renal pathology.

INTRODUCTION

The causes of urinary obstruction can be grouped into two broad categories: intrinsic factors and extrinsic factors. Intrinsic causes arise from conditions within the urinary tract itself, such as kidney stones, tumours, narrowing at the ureteropelvic junction, strictures following inflammation, renal cysts, posterior urethral valves, benign prostatic enlargement or dysfunction of the bladder due to nerve-related problems. Extrinsic causes, on the other hand, involve pressure from outside the urinary tract. These include pregnancy, peri pelvic cysts, retrocaval ureter, external tumours, trauma, retroperitoneal fibrosis, and prostatic abscesses.

In children, most cases are linked to anatomical abnormalities, particularly congenital defects. Common examples include posterior urethral valves, urethral strictures, or narrowing at the junctions where the ureter meets the bladder (ureterovesical junction) or the renal pelvis (ureteropelvic junction). These structural problems interfere with normal urine flow and are the leading contributors to paediatric hydronephrosis.^[1]

Pathophysiology

When urine flow is blocked, pressure builds up in the renal pelvis and collecting ducts, which is transmitted back to the glomeruli. This rise in intraglomerular pressure interferes with normal filtration and reduces the glomerular filtration rate. The extent of kidney damage depends on how long and how severe the obstruction is. If the blockage is relieved quickly, kidney function can return to normal, which is considered acute hydronephrosis. However, if the obstruction persists for a long time, the damage becomes permanent, and kidney function does not

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recover even after the obstruction is removed, which characterizes chronic hydronephrosis. In chronic cases, the collecting system becomes markedly dilated, the renal papillae are compressed, and the parenchyma thins out, eventually leading to cortical atrophy and tubulointerstitial fibrosis. These structural changes impair sodium reabsorption, disrupt urinary acidification resulting in metabolic acidosis, and reduce the kidney's ability to concentrate urine. Over time, both glomerular and tubular functions are compromised, leading to progressive and irreversible loss of renal function.^[2]

Ayurvedic texts describe various disorders of the *Mutravaha Srotas* (urinary system). Acharya Vagbhata made a significant contribution by classifying these conditions into two main categories: *Mutra Atipravritti Vikara*, which refers to disorders characterized by excessive urination such as *Prameha*, and *Mutra Apravritti Vikara*, which includes conditions marked by obstruction or difficulty in urination, such as *Asmari* (urinary stones), *Mutrakricchra* (dysuria), and *Mutraghata* (urinary obstruction).

A patient presenting with Grade 4 hydronephrosis who had progressed to chronic kidney disease (CKD) was managed with *Panchakarma* treatment, a classical Ayurvedic approach aimed at detoxification and systemic rejuvenation. Remarkable improvements were documented following treatment, both in subjective parameters including relief of symptoms, improved quality of life, and enhanced overall well-being and in objective clinical measures, such as renal function markers and laboratory indices. This case highlights the potential of *Panchakarma* as a supportive therapeutic modality in advanced renal pathology, demonstrating meaningful changes even in a condition traditionally considered irreversible. Such outcomes underscore the importance of exploring integrative approaches that combine conventional nephrology with evidence-based traditional practices to optimize patient care.

Chief Complaints

The male patient of 22 yrs old N/K/C/O diabetes mellitus, hypertension, K/C/O bladder outlet obstruction with B/ L hydroureteronephrosis with urosepsis and chronic kidney disease reported of pain in lower back, in right lower limb with B/L pedal oedema in the last 3 months. The patient also complained of pain in the flanks in the past six months.

Associated Complaints

Anaemia, reduced sleep, dyspnoea, motor axonopathy of left peroneal nerve

Past Medical History

Has underwent PCN on 28/07/2021 and PCN reposition ON 02/08/2021.

Case Presentation

A 22-year-old male, with no prior history of diabetes or hypertension, was apparently healthy until three years ago when he experienced an episode of gross haematuria as a result of urosepsis. Despite receiving allopathic treatment on two separate occasions, his symptoms persisted. On his third hospital visit, catheterization was performed, which precipitated severe pain and burning micturition. The catheter was subsequently removed, and bilateral PCN DJ stents were placed for five months before. During the course of illness, the patient developed bilateral pedal oedema and pain in the right lower limb, prompting him to seek Ayurvedic management at Yoga Vana Betta, where he achieved partial symptomatic relief. Three months later, he presented to our hospital with recurrent complaints, where appropriate interventions were undertaken, and he was advised to undergo DJ stent removal and admission for further evaluation.

Seven months after being advised to remove the PCN DJ stent, the patient presented once again to our hospital, seeking comprehensive evaluation and definitive management of his condition.

Family History: Nothing significant

Personal History

Diet: Mixed

Bowel- Regular 1 time a day

Appetite - Reduced

Habits: None

Table 1: Astana pareeksha

Nadi	72b/m
Mala	Prakrita 1 time/day
Mutra	Vikritha 1-2 times/day
Jihwa	Alpa lipta
Shabdha	Prakritha
Sparsh	Prakritha
Drik	Prakritha
Akrithi	Karshya

Table 2. Dashavidha pareeksha

1	Prakriti	Vata pittaja
2	Vikriti	Vata kaphaja
3	Sara	Avara
4	Samhanana	Avara
5	Satwa	Avara
6	Satmya	Sarva rasa satmya
7	Ahara shakti	Avara
8	Vyayama shakti	Avara
9	Pramana	Avara
10	Vaya	Yuva (22yrs)

Systemic Examination

- **Respiratory system:** NVBS heard, no added sounds.
- **Cardiovascular system:** S1, S2 heard, no abnormality detected.
- **Gastrointestinal system:** Abdomen hard and non-tender
- **CNS:** HMF- intact, patient is conscious and well-oriented with time, place and person.
Speech: Normal
Memory: Intact
Handedness: Right handedness

Sensory System

Touch: Intact
Pain: Intact
Temperature: Intact
One-point discrimination: Intact
Two-point discrimination: Intact
Joint proprioception: Intact
Gait: Antalgic

Motor System Examination

Muscle power	UL	3/5	3/5
	LL	3/5	3/5
Muscle tone	UL	-N-	-N-
	LL	-N-	-N-

Muscle Bulk

	R	L
Brachialis	18cms	18.5cms
Arm	15cms	15cms
Thigh	34.5cms	34.5cms
Calf	22.5cms	21cms

Deep Tendon Reflexes

Reflexes	R	L
Biceps	++	++
Triceps	++	++
Supinator	++	++
knee	++	++
Ankle	++	++
Plantar	Flexor	Flexor

Blood Investigations**USG Abdomen and Pelvis:**(23/5/2025)

B/L Gross HUN Grade 4 with free floating internal echoes likely suggestive of infective aetiology with cortical thinning.

NCS of all 4 limbs: Motor axonopathy of left peroneal nerve. (24/5/25)

MRI Brain: Normal study (24/5/25)

Samprapthi Ghataka

<i>Dosha: Vatakaphaja</i>	<i>Dushya: Rasa, Raktha, Mamsa, Medha, Majja</i>
<i>Agni: Jataragni</i>	<i>Agnidusti: Jataragnijanya and Dhatwagnijanya</i>
<i>Srotas: Rasa, Raktha, Mamsa Medha, Majja</i>	<i>Srothodusti: Sanga, Vimargagamana</i>
<i>Udhbava Sthana: Pakwashaya</i>	<i>Sanchara sthana: Sarvashareera</i>
<i>VyakthaSthana: Vrikka, Basti</i>	<i>Adhstana: Pakwashaya</i>
<i>Rogamarga: Abhyantara</i>	<i>Sadyaasadhyata: Yappa</i>

Treatment Adopted**Table 6: Treatment protocol from 18/7/25 to 19/8/25**

Date	Panchakarma procedures adopted	Duration
18/7/25 to 29/7/25	<i>Sarvanga mrudhu abhyanga with Balaguduchyadhi taila and Narayana taila</i>	11 days
30/7/25 to 6/8/25	<i>Sarvanga abhyanga with Narayana taila followed by Shastika Shali Pinda Sweda</i>	7 days
6/8/25 to 9/8/25	<i>Niruha basti with Kashaya prepared by Guduchi+ Shatavari+ Gokshuru+ Punarnava choorna+ Yava kshara</i>	3 days
6/8/25 to 9/8/25	<i>Anuvasana basti with Sukumara gritha</i>	30ml
9/8/25 to 19/8/25	<i>Matra basti with Sukumara gritha and Balaguduchyadhi taila 25ml+25ml</i>	11 days

Formulation of Niruha Basti

Madhu- 10ml

Saindava lavana- 5gm

Balaguduchyadhi taila - 30ml

Gudhuchi choorna- 6gm
 Shatavari choorna- 6gm
 Gokshuru choorna- 6gm
 Punarnava choorna - 6gm
 Yava Kshara 2 pinch

+ 400ml water
 boiled

reduced to 200ml

That Kashaya was used for preparation of *Basti dravya*

Shamana Oushadhis

S.no	Oushadhi yogas	Dose	Oushadha sevana kala	Anupana	Duration
1	Gokshuradhi guggulu	1-0-1	After food	Ushna jala	Avasthanusara
2	Punarnava mandoora	1-1-1	After food	Ushna jala	Avasthanusara
3	Avipattikara choorna	3gm bd	Before food	Ushna jala	Avasthanusara
4	Ashwagandha Ksheerapaka	3gm bd	Before food	Ushna jala	Avasthanusara
5	Guduchi+ Shatavari+ Gokshuru+ Punarnava choorna	15ml bd	Before food	Ushna jala	Avasthanusara

Subjective assessment before and after treatment:

Assessment	Before treatment	After treatment
Pain in the lower back	+++	+
Difficulty in standing and walking	+++	+
Power in b/l lower limbs	3/5	+4/5
Insomnia	+++	-
Dyspnoea	+++	-

Objective assessment before and after treatment

	7/9/2021	22/5/2025	22/7/2025	6/9/2025	30/9/2025
Hb	11.6g/dl	9.2	11.1	10.6	
RBS	139	108			
Blood urea	94.3	97.3	109		78.0
S. creatinine	5.36	6.3	6.8	6.15	3.8
S. Sodium	131	133		138	
S. Potassium	4.05	4.7		3.7	
S. Chloride	98	105	114	111	
BUN			50.93		
BUN/creatinine			7.49		
Urea/creatinine			16.03		
eGFR			10.94	12	
Alkaline phosphate			604	110	
albumin			3.8	3.4	

DISCUSSION

Hydronephrosis, particularly in its advanced form, is well recognized in modern medicine as a cause of progressive renal damage leading to chronic kidney disease (CKD). The obstruction of urinary outflow results in increased intrapelvic pressure, thinning of renal parenchyma, and eventual irreversible loss of renal function. In Ayurveda, this condition can be correlated with *Mutravaha Srotas Vikara*, a broad category of urinary system disorders. Acharya Vagbhata have classified of these disorders *Mutra Apravritti Vikara*, marked by reduced or obstructed urination, including *Asmari* (urinary calculi),

Mutrakricchra (painful urination), and *Mutraghata* (urinary obstruction).

Within this framework, hydronephrosis aligns closely with *Mutraghata*, as both involve obstruction to urinary flow and subsequent back pressure on the kidneys. When such obstruction persists, it leads to irreversible parenchymal damage, which Ayurveda describes as *Vrikkaroga*. *Vrikkaroga* represents chronic kidney disease in Ayurvedic terms, arising from long-standing imbalance of *Vata* and *Kapha* doshas that disrupts renal tissue integrity and filtration capacity. Clinical features such as reduced urine output

(*Mutrotsanga*), swelling (*Shotha*), fatigue, and progressive decline in renal function are shared between modern CKD and *Vrikkaroga*.

Management in Ayurveda emphasizes *Panchakarma* to eliminate accumulated toxins (*Ama*), *Shamana* therapies with herbal formulations to balance *Doshas*, and *Pathya Apathya* to support renal health. The remarkable improvements observed in this case following *Panchakarma* therapy highlight the potential of integrative approaches. While Grade 4 hydronephrosis progressing to CKD is typically considered irreversible in modern nephrology,

Remarkable improvements were documented following treatment, both in subjective parameters including relief of symptoms, improved quality of life, and enhanced overall well-being and in objective clinical measures, such as renal function markers and laboratory indices. The Ayurvedic framework provides a holistic lens that not only parallels modern pathology but also offers therapeutic strategies aimed at systemic rejuvenation and quality-of-life enhancement.

Punarnavadi Mandoora^[3] is a classical *Kharaliya Rasayana* formulation traditionally indicated in the management of renal disorders and anemia. It exhibits pronounced *Mootrala* (diuretic) and *Rasayana* (rejuvenative) actions, which contribute to its therapeutic efficacy. Owing to these pharmacodynamic properties, *Punarnavadi Mandoora* is particularly beneficial in conditions such as *Shotha* (oedematous states), various urinary tract pathologies, and haematological deficiencies.

Gokshuradi Guggulu^[4] is characterized by the predominance of *Kashaya* and *Tikta rasa*. Its *Virya* is moderately *Ushna*, while its *Vipaka* is sweet. The formulation's distinctive *Prabhava* is its affinity for the *Mutravaha srotas*. On a physiological level, the steroidal saponins present in *Gokshuru* enhance glomerular filtration, thereby supporting renal function, while guggulsterones act on cytokine pathways to mitigate inflammatory processes in the joints.

Avipattikara Churna^[5] is an Ayurvedic herbal medicine that contains 14 ingredients including *Triphala*, *Trikatu*, and *Trivrt*. It stimulates digestion and metabolism, alleviates acidity, and provides gastroprotective and anti-ulcer effects. *Avipattikara Churna* is used to treat indigestion, acidity, gastritis, GERD, constipation, skin disorders. And urinary retention. It helps to relieve constipation and difficulty in urination. It is used in treating diseases of urinary system.

Ashwagandha Ksheerapaka^[6] with its *Rasayana*, *Balya*, and *Ojovardhana* properties, supports tissue regeneration and vitality, thereby countering *Dhatu kshaya* commonly observed in chronic kidney disease (CKD). It enhances strength and immunity, which are

often compromised in advanced renal stages, and by alleviating *Mano-vaha srotas* imbalance, it indirectly contributes to stabilizing systemic functions that place a burden on the kidneys.

Balaguduchyadi Taila^[7] is a versatile formulation with notable benefits when used both externally and internally. Applied as *Abhyanga*, it enhances transdermal drug delivery, improves local blood and lymphatic circulation, supports tissue metabolism, and alleviates stiffness and pain through the soothing effect of heat. Pharmacologically, its plant extracts have demonstrated a significant reduction in uric acid levels in plasma and urine, alongside blood-purifying and burning-sensation-relieving properties. Internally, when administered as *Matra Basti*, it is regarded as an *Agrya Aushadha* for *Vata* disorders, penetrating *Srotas* to nourish tissues, impart a *Brimhana* effect, and balance systemic functions.

Guduchi^[8] is known for its immunomodulatory, anti-inflammatory, antioxidant, and nephroprotective properties. It helps reduce oxidative stress and inflammation in renal tissues, improving renal function markers.

Yavakshara^[9] is a classical Ayurvedic preparation valued for its efficacy in *Mutravaha srotas* disorders, being particularly useful in conditions such as *Mutrakrichra* (dysuria), *Mutraghata* (urinary obstruction), and kidney or bladder stones. It exerts a distinct *Lekhana* (scraping) effect, helping to reduce excess *Kapha* and *Meda* (fat) while clearing blockages within the channels. In addition, *Yavakshara* possesses notable diuretic and alkalizing properties, which promote urine flow, relieve urinary obstruction, and reduce burning sensations, thereby supporting both urinary health and systemic metabolic balance.

Punarnava^[10] exhibits multiple pharmacological actions that make it highly relevant in chronic kidney disease (CKD). Its diuretic effect helps reduce fluid retention and swelling. As an anti-inflammatory and antioxidant, *Punarnava* reduces oxidative stress and inflammation, thereby slowing CKD progression. It also plays a nephroprotective role, with bioactive compounds protecting renal tissue and improving kidney function markers. *Punarnava* stimulates kidney D-amino acid oxidase activity, and has strong diuretic activity, reverses stress-induced elevations in glucose, cholesterol, SGPT, and BUN, while normalizing triglyceride levels.

Sukumara gritha^[11] holds relevance in CKD through its *Rasayana* and *Brimhana* properties. It nourishes *Dhatu kshaya* (depleted tissues), strengthens *Ojas*, and pacifies *Vata*, thereby addressing systemic weakness, pain, and fatigue often seen in advanced renal disease. Its *Mridu Virechana* action further aids in reducing metabolic waste accumulation, making it a supportive formulation for rejuvenation and systemic balance.

Shastikashali Pinda Sweda^[12] a nourishing sudation therapy using boluses of *Shastika Shali* rice cooked in medicated milk, is traditionally indicated for *Vata* disorders and systemic debility. In CKD, it serves as a supportive *Panchakarma* procedure by improving local circulation, reducing stiffness and pain, and enhancing tissue metabolism. Its *Brimhana* (restorative) and *Rasayana* (rejuvenative) effects help counter *Dhatu kshaya* (tissue depletion).

CONCLUSION

Urinary obstruction often progresses to chronic hydronephrosis and CKD if not relieved promptly, leading to irreversible renal damage. Ayurvedic texts classify such conditions under *Mutra Apravritti Vikara*, emphasizing obstruction-related urinary disorders. The case of Grade 4 hydronephrosis managed with *Panchakarma* demonstrates its remarkable potential in advanced renal pathology-providing detoxification, rejuvenation, and systemic nourishment. Notably, *Panchakarma* contributed to both symptomatic relief and measurable improvement in renal function, underscoring its value as a supportive therapy and highlighting the promise of integrative approaches in management of Grade 4 hydronephrosis progressing to CKD management.

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