



CLINICAL EVALUATION OF MEDICATED HERB DECOCTION FOMENTATION OF *SHUNTHI* ON CHRONIC KIDNEY DISEASE (*MUTRAGHATA*) – A CASE STUDY

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ABSTRACT

CKD is strongly associated with hypertension and type 2 diabetes mellitus, often progressing silently until advanced stages¹. Patients commonly present with symptoms such as oedema, fatigue, nausea, anorexia, and reduced urine output². Usually it is manifested through various lab investigations such as kidney function test in which increase in serum urea levels, serum creatinine, uric acid and other parameters seen.

Chronic Kidney Disease (CKD) is an increasingly prevalent global health concern with an estimated prevalence of 13.4%. Studies reveal higher rates in rural areas (15.34%) compared to urban populations (10.65%)³. Despite dialysis and renal transplantation being the conventional treatment options, their accessibility remains limited in India due to financial constraints, leaving a significant portion of patients without viable therapeutic choices. Consequently, there is an urgent need for affordable and holistic approaches that can improve patients quality of life.

A 29 year old patient came in the Swasthavritta OPD with case of *mutraghata* i.e. Chronic Kidney Disease. The present study explores the role of *Shunthi Seka* with *Punarnava Kwath*, combined with Diet and Yoga, as an integrative therapeutic intervention.

The conclusion came out that creatinine levels goes down from 13.4 to 0.70 in 21 days and then diet and yoga was continued for 2 months.

This study emphasizes the significance of cost-effective, holistic interventions in CKD treatment and highlights the potential of Ayurveda and lifestyle modifications in offering supportive and sustainable care for chronic renal failure patients.

Key words: Chronic Kidney disease (CKD), Serum Creatinine, Serum Urea, Uric acid, *Shunthi seka*, *Punarnava kwath*, Diet, Yoga.

INTRODUCTION

Chronic Kidney Disease (CKD) has emerged as a major global health concern, with a steadily rising prevalence and an enormous impact on healthcare systems. In India, the burden is particularly alarming, with diabetes mellitus and hypertension recognized as the leading contributors to Chronic Renal Failure (CRF). Additionally, factors such as increasing sedentary lifestyle, low birth weight, malnutrition, lack of accessible and affordable renal care, inadequate treatment infrastructure, and the lifelong economic burden of dialysis or transplantation compound the challenge⁴.

CKD is defined as a progressive and irreversible decline in renal function, characterized by structural or functional damage of nephrons, ultimately leading to the inability of kidneys to maintain homeostasis. A diagnostic criterion includes a sustained reduction in estimated glomerular filtration rate (eGFR) below 60 ml/min/1.73 m² for at least three months. While the disease often remains asymptomatic in its early stages, progressive loss of renal function results in accumulation of metabolic waste in blood, a condition termed azotemia, manifesting as fatigue, oedema, nausea, and other systemic complications.

The understanding of kidney disorders is not new to traditional systems of medicine. In Ayurvedic classics, urinary disorders have been described under the broad spectrum of *Mutra-Rogas*, with the *Basti* (urinary bladder) considered the principal site of pathology. *Acharya Charaka* emphasizes that the vitiation of *Doshas* and accumulation of *Malas* alter urine quantity, quality, and flow, resulting in clinical entities such as *Mutrakrichha* and *Mutraghata*. *Acharya charaka* has mentioned 13 types of *mutraghata*⁽⁵⁾. He

further explains that the suppression of natural urges leads to *dushti* (vitiation) of the *Mutravaha Srotas*, thereby predisposing to urinary diseases⁽⁶⁾. *Acharya Sushruta* elaborates that in the stage of *Sthanasamshraya*, vitiated *doshas* localize in the *basti* and give rise to disorders like *Prameha*, *Ashmari*, and *Mutraghata*⁽⁷⁾. Similarly, *Ashtanga Hridaya* describes the involvement of *Mutravaha Srotas* in the *basti marma*, resulting in the manifestation of twenty types of *Mutraghata* and twenty types of *Prameha*⁽⁸⁾. Thus, CKD, though defined in modern medicine through biochemical and pathological parameters, has a deep conceptual foundation in Ayurveda, where urinary disorders are linked to *dosha* vitiation, *srotas dushti*, and *basti* involvement. Integrating these perspectives offers a broader understanding of the disease and underscores the need for exploring holistic, cost-effective, and Reno-protective therapeutic approaches.

CASE REPORT

A 29 yrs old male patient name XYZ reported first time in the OPD of Swasthavritta department of Patanjali Ayurveda hospital, Haridwar on with chief complaints of –

Table 1: Chief complaints

S. No	Chief complaints	Duration
1	Weakness	7 days
2	Loss of appetite	
3	Nausea	
4	Reduced frequency of urine	
5	Bilateral swelling on foot	

Table 2: General examination

Pedal edema	3+
Pallor	1+
Blood pressure	132/90mmHg
Random blood sugar	100mg/dl
Weight	74kg

As per the patient, he had above mentioned symptoms since 7 days taking no medicine prior. After visiting nearby hospital he was advised to undergo urgent dialysis and kidney transplant. He was not satisfied and visited our hospital for the treatment.

MATERIAL AND METHOD

A 29 year old patient came in the Swasthavritta OPD with case of *mutraghata* i.e. Chronic Kidney Disease. The present study explores the role of *Shunthi Seka* with *Punarnava Kwath*, combined with Diet and *Yoga*, as an integrative therapeutic intervention.

In ayurveda texts, Chronic Kidney Disease can be taken under *mutra vaha srotas dushti vikaras* which include *mutraghata*, and the treatment given according to the *mutraghata* as:

1. Swedan therapy (intervention)^(9,10) - *ushma swedan* was given to the patient with decoction of overnight soaked *Shunthi* prepared fresh daily and the *seka* is done by dipping small hand towel in the prepared water and procedure done on the lower back for about 45 mins daily. (SU. CHI. 32/5)
 Step 1 – Soaked shunthi (30gm) overnight.
 Step 2 – Rub all medicine with hand and boil the water upto boiling point.
 Step 3 – Filter the water in another utensil.
 Step 4 – Patient should lay down in prone position
 Step 5 – Gentle massage with *Mahanarayan taila* on lower back (kidney region) for 10 mins.
 Step 6 – Dip the hand towel in hot (65 °C) *shunthi* decotion and *swedan* is done on lower back for 1 *muhurata* (48 mins).
2. *Punarnaav kwath*^(11,12) – 48ml twice a day before meal, around 200ml of water is taken in which 1 tsp of *Punarnava* is added and boiled until water remain is ¼ of it, then take the *kwath* orally in morning and evening before food.
3. Diet plan(*pathya ahar*) – followed for 2 months

DAY/ TIMING	6AM	7:30AM	8:30AM – 9AM	1PM – 2PM	4PM – 5PM	7PM – 8PM
DAY 1	Suksham pranayama + light yoga	Punarnava kwath (80ml)	Suji-idli (2pcs)	1 katori rice + 1 katori daal / sabji	Fruits	2-3 roti + 1 katori daal / sabji
DAY 2	Suksham pranayama + light yoga	Punarnava kwath (80ml)	1 katori poha (bhojan kutuhalm)	2-3 roti + 1 katori daal / sabji	Fruits	1 katori rice + 1 katori daal / sabji
DAY 3	Suksham pranayama + light yoga	Punarnava kwath (80ml)	1 katori krishra (semi solid make in 6X water)	2-3 roti + 1 katori daal / sabji	Fruits	2-3 roti + 1 katori daal / sabji
DAY 4	Suksham pranayama + light yoga	Punarnava kwath (80ml)	1 katori yav daliya (bhojan kutuhalm)	1 katori rice + 1 katori daal / sabji	Fruits	2-3 roti + 1 katori daal / sabji
DAY 5	Suksham pranayama + light yoga	Punarnava kwath (80ml)	Suji-idli (2pcs)	2-3 roti + 1 katori daal / sabji	Fruits	1 katori rice + 1 katori daal / sabji
DAY 6	Suksham pranayama + light yoga	Punarnava kwath (80ml)	1 katori poha (bhojan kutuhalm)	2-3 roti + 1 katori daal / sabji	Fruits	2-3 roti + 1 katori daal / sabji
DAY 7	Suksham pranayama + light yoga	Punarnava kwath (80ml)	1 katori krishra (semi solid make in 6X water)	1 katori rice + 1 katori daal / sabji	Fruits	2-3 roti + 1 katori daal / sabji

- Dal – moong (green), masoor (50gm)
 - Sabji - cauliflower, capsicum, onion, bittergourd, applegourd [tinda], bottle gourd [lauki], ridge gourd [turai], pointed gourd [parval], pumpkin [kaddu], lahsun –
 - Fruits – papaya, pomegranate, pear
 - Chapatti – normal /multigrain, missi roti
 - Krishra (khichdi)
 - Rice will be prepared without manda (rakta varn shali)
 - 0.5 -2gm salt /day only
 - 1.5 – 2 l water intake in day
 - Less intake of protein (20-40g/day is sufficient)
 - 1 tsp mustard oil / day [no refined use]
 - Don't take veg soup and fruit soup
 - 1 katori = 100-150gm
4. Yoga plan⁽¹³⁾ - followed for 2 months

S.NO	YOGASANA	TIME DURATION	PERIOD
1.	Standing asana: a) Tadasana b) Padahasthasana c) ardhakatichakrasana	1 min 1 min 1 min	2 months
2.	Sitting asanas: a) shashankasana b) vakrasana c) tittaliasana	1 min 1 min 1 min	2 months
3.	Supine asanas: a) setubandhasana b) pavanmuktasana c) savasana d) viparitaKarani	1 min 1 min 1 min 1 min	2 months
4.	Pranayama: a) Anulom vilom b) Sitali c) Abdominal breathing	10 min 5 min 5min	2 months
5.	Meditation Om chanting	10 min	2 months

RESULTS

Patient's kidney profile was improved with decline in Serum Creatinine level, S. urea, uric acid and other associated lab investigations got normal in 21 days of treatment continued Pathya diet and yoga for 2 months.

Decline in the levels of creatinine along with improvement in other lab investigations are mentioned below-

DATE	21/4/2025	28/4/2025	5/5/2025	17/5/2025
S. CREATININE	13.4	6.26	1.10	0.70
S. UREA	135	191	20.8	22.50
URIC ACID	23.6	14.7	4.90	5.30
ALP	417	244	138	112

Lab No/Ward	284985	Test Priority	Source
Referred By	Dr. Ajay Arya	Collection Date & Time	21/04/2025 10:30AM
Prescribed Doctor	MEDICINE	Receiving Date & Time	21/04/2025 11:45AM
		Report Date & Time	21/04/2025 14:00AM
Sample Type	Serum		
Sample Quality	Satisfactory		
Urea-Serum	135*	15 - 43	mg/dL Urease (Dry Chemistry)
Creatinine, Serum	13.4*	0.8 - 1.5	mg/dL Biopac (Dry Chemistry)
Uric Acid, Serum	23.6*	3.5 - 8.5	mg/dL Biopac (Dry Chemistry)
Total Protein, Serum	10.10	6.30 - 8.20	gm/dL Biuret (Dry Chemistry)
Albumin, Serum	3.70	3.50 - 5.00	gm/dL BCG (Dry Chemistry)
Globulin, Serum	6.40	2.30 - 3.50	gm/dL Calculated Value
Alkaline Phosphatase, Serum	417	38 - 126	U/L IFPP (Dry Chemistry)
Sodium, Serum	129	137 - 145	mmol/L Direct ISE
Potassium, Serum	4.7	3.5 - 5.1	mmol/L Direct ISE
Chloride, Serum	99	98 - 107	mmol/L Anionate III (Dry Chemistry)
Calcium, Serum	9.3	8.4 - 10.2	mg/dL Phosphomolybdate (Dry Chemistry)
Phosphorus, Serum	3.1	2.5 - 4.5	mg/dL CMO-POD (Dry Chemistry)
Cholesterol-Total, Serum	252	150 - 200	mg/dL (Dry Chemistry)
Remarks	Kindly correlate clinically		
	and all Report		

Age/Gender	: 29 Y O M O D / M	Registration Date	: 05/May/2025 10:04PM
LabNo	: DPL96369	Sample Collected Date	: 05/May/2025 10:04PM
Referred BY	: SELF	Report Generated Date	: 06/May/2025 07:21AM
Refer Lab/Shop	: ROYAL PATHOLOGY		
DEPARTMENT OF BIOCHEMISTRY			
BIO T PLUS			
Test Name	Result	Unit	Bio. Ref. Range Method
KIDNEY FUNCTION TEST			
Sample Type : SERUM			
SERUM UREA	20.80	mg/dL	17-43 Urease GLDH
Blood Urea Nitrogen (BUN)	9.72	mg/dL	7-18 Urease
SERUM URIC ACID	4.90	mg/dL	3.5-7.2 Uricase/POD
SERUM CREATININE	1.10	mg/dL	0.67-1.17 Jaffe IDMS
SERUM TOTAL CALCIUM	8.80	mg/dL	8.8-10.6 Arsenazo III
SERUM SODIUM	138.2	mmol/L	136-146 ISE
SERUM POTASSIUM	4.20	mmol/L	3.5-5.1 ISE
SERUM CHLORIDE	105.8	mmol/L	101-109 ISE
Notes:			
Blood Urea Nitrogen (BUN)			
Clinical Significance : Increased blood urea nitrogen (BUN) may be due to prerenal causes (cardiac decompensation, water depletion due to decreased intake and excessive loss, increased protein catabolism, and high protein diet), renal causes (acute glomerulonephritis, chronic nephritis, polycystic kidney disease, nephrosclerosis, and tubular necrosis) and postrenal causes (eg, all types of obstruction of the urinary tract, such as stones, enlarged prostate gland, tumors).			
Creatinine			
Clinical Significance : Serum creatinine is inversely correlated with glomerular filtration rate (GFR). Increased levels of Serum Creatinine is associated with renal dysfunction.			
Calcium			
Serum Calcium levels are used to monitor and diagnose a wide range of diseases of bone, kidney, parathyroid gland, or gastrointestinal tract. Calcium levels may also reflect abnormal vitamin D or protein levels. Hypocalcemia or low serum calcium levels is associated with absent or decreased function of the parathyroid glands, impaired vitamin-D synthesis, low dietary intake and chronic renal failure. Hypercalcemia is due to increased mobilization of calcium from the skeletal system or increased intestinal absorption. It is usually seen in case of primary hyperparathyroidism (pHPT) or bone metastasis of carcinomas of the breast, prostate, thyroid gland, or lung.			
Sodium			
Clinical Significance : Serum Sodium estimation is performed to assess acid-base balance, water balance, water intoxication, and dehydration.			
   			
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Dr. Meenal Gang MBBS, MD Pathology Consultant Microbiologist			
Dr. Richa Consultant Microbiologist			

21-04-2025

28-04-2025

Age/Sex 29 YRS/Male	Sample Coll. Date 28/Apr/2025 04:02 PM
Referral By SELF	Sample Rec. Date 28/Apr/2025 05:33 PM
Client Code/Name AP01295 Sani Blood Collection Center	Report Date 28/Apr/2025 06:54 PM
Ref. Lab/Hop ROYAL PATHOLOGY	

Test Name With Methodology	Result	Unit	Biological Ref.Interval
Kidney Panel-1			
Blood Urea	191.00	mg/dL	15-40.0
Serum Creatinine	6.26	mg/dL	0.7-1.2
Uric Acid	14.7	mg/dL	3.4-7.0
Sodium	135.5	mmol/L	136-145
Potassium	5.75	mmol/L	3.7-5.5
Chloride	96.4	mmol/L	98-107
BUN (Blood Urea Nitrogen)	89.25	mg/dL	6.0-20.0
BUN/Creatinine Ratio	14.26	Ratio	10-20
eGFR (estimated Glomerular Filtration Rate)	11.33	mL/min/1.73 m ²	>60

The National Kidney Foundation recommends using the Estimated GFR using MDRD Creatinine Equation (2021 estimate GFR: <http://nkiidney.org>)

Kidney concrete clinically. Advice for recheck from fresh sample in case. It is not conclusive clinically. To rule out any pre-analytical error.

Test Processed At:
Accupoint Diagnostics, Pk, Opp Civil Hospital, Circular Road, Pimpri Chinchwad, Pune, Maharashtra 411005

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Age/Gender 29 Y O M O D / M	Registration Date 17/May/2025 10:42 PM
LabNo DP190623	Sample Collected Date 17/May/2025 10:42 PM
Referral By SELF	Report Generated Date 17/May/2025 07:17 AM
Ref. Lab/Hop ROYAL PATHOLOGY	

Test Name	Result	Unit	Bio. Ref. Range	Method
KIDNEY FUNCTION TEST				
Sample Type: SERUM				
SERUM UREA	22.50	mg/dL	17-43	Urease GLDH
Blood Urea Nitrogen (BUN)	19.51	mg/dL	7-18	Urease
SERUM URIC ACID	6.30	mg/dL	3.5-7.2	Urease/PDD
SERUM CREATININE	6.70	mg/dL	0.67-1.17	Jaffe IDMS
SERUM TOTAL CALCIUM	9.00	mg/dL	8.8-10.6	Arsenazo III
SERUM SODIUM	137.2	mmol/L	136-146	ISE
SERUM POTASSIUM	4.20	mmol/L	3.5-5.1	ISE
SERUM CHLORIDE	105.8	mmol/L	101-109	ISE

Notes:

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Clinical Significance: Increased blood urea nitrogen (BUN) may be due to prerenal causes (cardiac decompensation, water depletion due to decreased intake and excessive loss, increased protein catabolism, and high protein diet), renal causes (acute glomerulonephritis, chronic nephritis, polycystic kidney disease, nephroses, and tubular necrosis) and postrenal causes (eg, all types of obstruction of the urinary tract, such as stones, enlarged prostate gland, tumors).

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Clinical Significance: Serum Sodium estimation is performed to assess acid-base balance, water balance, water intoxication, and dehydration.

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5-05-2025

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DISCUSSION

1. **Swedan therapy** - Swedan (sudation therapy) induces sweating, which facilitates the internal release of toxins. This process, supported by the antioxidant and anti-inflammatory properties of Shunthi, helps neutralize harmful free radicals such as gingerol, shogaol, and. As a result, the stress on the kidneys is reduced, blood flow is enhanced, and nephrons are rejuvenated. Swedan also stimulates neuroreceptors, thereby decreasing inflammation and improving kidney circulation. Consequently, kidney function test (KFT) abnormalities reduce, and estimated glomerular filtration rate (eGFR) shows improvement.
2. **Punarnava kwith** - Punarnava (Boerhaavia diffusa) has emerged as a promising herbal intervention in the management of chronic kidney disease (CKD). The herb exhibits significant diuretic activity, which facilitates the elimination of excess fluids and metabolic waste products, thereby reducing the overall burden on the kidneys. Furthermore, Punarnava appears to exert a protective effect on nephrons, the functional units of the kidney, by reducing damage and promoting tissue repair. This nephroprotective action not only contributes to improved kidney function but also indicates its potential in slowing the progression of CKD. Collectively, these properties highlight the therapeutic importance of Punarnava as a supportive measure in the holistic management of renal disorders.
3. Diet – followed for 2 months
4. Yoga – followed for 2 months

CONCLUSION

DATE	21/4/2025	28/4/2025	5/5/2025	17/5/2025
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S. UREA	135	191	20.8	22.50
URIC ACID	23.6	14.7	4.90	5.30
ALP	417	244	138	112

On the basis of the above case study it can be concluded that *swedan* therapy with *shunthi*, *Punarnava kwith* along with diet and yoga are quite effective in the treatment of the *mutraghata* i.e. Chronic Kidney Disease and patient needs no dialysis during the treatment. The creatinine levels of the patient came down from 13.4 to 0.70 in 21 days followed by diet and yoga for 2 months.

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