



**INTEGRATIVE AYURVEDIC APPROACH IN THE MANAGEMENT OF CHRONIC
KIDNEY DISEASE: A CASE REPORT AND THERAPEUTIC INSIGHTS**

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ABSTRACT

Renal failure, a significant condition leading to decreased kidney function, manifests when renal capacity falls below 15% of normal, often progressing to end-stage kidney disease (ESKD). Contributory factors for acute kidney failure include low blood pressure, urinary tract obstruction, haemolytic uremic syndrome and certain medications, whereas chronic kidney failure is frequently caused by diabetes, hypertension, polycystic kidney disease and nephrotic syndrome. Differentiation between acute and chronic kidney failure involves clinical indicators like elevated creatinine levels and reduced urine output in acute cases, while chronic cases often show a glomerular filtration rate below 15 mL/min or require renal replacement therapies. In this report, present the case of a 63-year-old female with known chronic kidney disease stage V (CKD V), hypertension and IHD, who presented at Jeena Sikho Lifecare Ltd. Hospital with symptoms of bilateral pedal oedema, swelling on both upper limbs, nausea, vomiting, severe body aches, weakness and disturbed sleep. She underwent *Ayurvedic* treatment, which included *Panchakarma* therapy, *Ayurvedic* medicines, dietary adjustments and lifestyle modifications. This case highlights the potential role of *Ayurveda* in providing integrative support for chronic kidney disease and improving the quality of life for patients in advanced stages of renal failure.

KEYWORDS: Chronic Kidney Disease, Hypertension, Coronary Artery Disease, *Ayurveda*, *Panchakarma*, *Vrikka Vikara*.

INTRODUCTION

Chronic kidney disease (CKD) is defined as a gradual decline in kidney functions over months or years, which can result in a range of symptoms, including general malaise and decreased appetite. Individuals with high-risk factors, such as hypertension, diabetes or family history of CKD, are frequently monitored to facilitate early diagnosis. CKD is often accompanied by serious complications like anaemia, pericarditis and cardiovascular diseases, which can compound the overall health burden for affected individuals. For CKD to be diagnosed, the deterioration of kidney function must persist for over three months, differentiating it from acute kidney injury, which has a more rapid onset and recovery potential. One of the primary diagnostic tools for CKD is a blood investigation measuring creatinine—a byproduct of muscle metabolism. Elevated creatinine levels suggest reduced glomerular filtration rate (GFR), indicating the kidneys' diminished ability to filter waste products.^[1] The early stages of CKD, creatinine levels

may remain within normal limits, underscoring the need for additional diagnostic assessments. Urinalysis is also critical for detecting CKD, as it can reveal whether red blood cells or protein are leaking into the urine, an indicator of impaired kidney function. Further diagnostic tools, including blood tests, kidney biopsies and imaging techniques, are often used to determine if the kidney impairment has a reversible cause. Chronic Kidney Disease (CKD) has emerged as a major global health concern, now recognized as the 9th leading cause of death worldwide as of 2021—a significant rise from 19th position in 2000, with mortality linked to CKD increasing by 95% during this period (World Health Organization, 2023)^[2] strongly associated with diabetes mellitus and hypertension, which are the two primary risk factors for the disease's progression (Global Burden of Disease Collaborative Network, 2022). The global prevalence of CKD is approximately 9.13%, affecting millions, especially in low- and middle-income regions

where access to critical treatments like dialysis remains limited (International Society of Nephrology, 2024).^[3]

CASE REPORT

A 63-year-old female with a history of chronic kidney disease (CKD) stage V for 2 years, hypertension for 3 years and IHD (previously managed with percutaneous transluminal coronary angioplasty) presented to Jeena Sikho Lifecare Ltd. Hospital with complaints of bilateral pedal oedema, swelling on both hands and itching on 27

March 2024. The test results indicate left ventricular systolic dysfunction with an ejection fraction (EF) of 35%. She also reported nausea, vomiting, generalized body pain, bilateral knee joint pain, profound weakness and disturbed sleep. When the patient presented to the department, her gait indicated difficulty in bearing weight and an inability to walk for extended periods. The patient's examination findings on the day of admission are presented in Table 1.

Table 1: Examination Findings on the day of admission.

Parameter	Findings
Blood Pressure	136/88 mm of Hg
Pulse Rate	64/min
Weight	70 kg
CNS	Conscious, Oriented to time, place and person.

Table 2: Asthvidha Pariksha On The First-Day Visit Of The Patient.

<i>Nadi</i>	<i>VataPittaj</i>
<i>Mala</i>	<i>Malavashtambha</i> (constipation)
<i>Mutra</i>	<i>Safena</i> (frothy)
<i>Jivha</i>	<i>Saam</i> (coated)
<i>Shabda</i>	<i>Spashta</i>
<i>Sparsha</i>	<i>Anushna Sheeta</i>
<i>Akruti</i>	<i>Madhyama</i>
<i>Drik</i>	<i>Avikrita</i>
<i>Kshudha</i>	<i>Alpa</i>
<i>Agni</i>	<i>Mand</i>
<i>Nidra</i>	<i>Khandit</i>

The laboratory investigations conducted on the day of admission; March 27, 2024, are summarized in Table 3. The patient underwent diagnostic tests, including 2D Echo, Urine analysis, Complete Blood Count (CBC) and Renal Function Test (RFT). The 2D Echocardiogram

reveals an ejection fraction (EF) of 35%, indicating severe left ventricular (LV) systolic dysfunction. Findings also include Grade I diastolic relaxation abnormality (DRA) along with mitral and tricuspid regurgitation.

Table 3: Laboratory Investigations on the Day of Admission (March 27, 2024)

Laboratory Test	Observed Value
Blood Count	
Haemoglobin	8.0 g/dl
Total Leucocyte Count	6300/cumm
RBC	2.74 millions/cumm
Platelet Count	1.73 lakh/cumm
Renal Function Test	
Blood Urea	113.2 mg/dl
Serum Creatinine	7.91 mg/dl
Serum Uric Acid	7.0 mg/dl
Electrolytes	
Sodium Na ⁺	134.69 mEq/L
Potassium K ⁺	6.61 mEq/L
Chloride Cl ⁻	111.6 mmol/L
Liver Function Test	
Bilirubin Direct	0.14 mg %
Bilirubin Indirect	0.04 mg %
Bilirubin Total	0.18 mg/L
ALT/SGPT	9.3 IU/L
AST/SGOT	11.1 IU/L

Alkaline Phosphate	140 U/L
Albumin	3.34 g/dl
Globulin	2.39 g/dl
Total Protein	5.73 g/dl
Calcium	7.7 mg/dl
Hormone Assays	
Parathyroid Hormone	753.5 pg/ml
Immunology- Serology	
HIV I & HIV II Antibody	Non-Reactive
HCV Antibody	Non- Reactive
Hepatitis B Surface Antigen	Negative
Endocrinology	
Glycosylated Hb (HbA1C)	5.8 %
Estimated Average Glucose	119.76 mg/dl

The patient underwent a comprehensive *Panchakarma* regimen, including *Awagaha Swedana*, *Vrikka Basti* using *Dhanwantharam* and *Punarnava-siddha sneha*, and *Matra Basti* with *Gokshur-siddha Sneha* along with *Shiropichu* and *Shiroabhyanga* using *Ksheer bala Tail*. In addition to *Panchakarma* therapies, *Ayurvedic* medicines and specific dietary and lifestyle modifications were prescribed.

Prior to treatment, the patient experienced difficulty in standing and could not walk for extended periods.

Following treatment, she was able to walk for at least 20 minutes. Significant symptomatic relief was observed, including reductions in nausea, vomiting, body pain and swelling. Laboratory reports indicated improvement, with reductions in urea and creatinine levels. The patient was discharged on April 2, 2024, demonstrating substantial progress. Symptoms such as disturbed sleep, constipation, itching and pedal oedema were alleviated and there was an improvement in both appetite and urine output.

Table 4: Follow-Up Investigations and Results.

Laboratory test	28/03/2024	01/04/2024	01/07/2024
Glucose (Fasting)	-	-	119.0 mg/dl
Urea	115.23 mg/dl	111.60 mg/dl	63 mg/dl
Creatinine	8.46 mg/dl	7.96 mg/dl	5.2 mg/dl
Uric Acid	7.45 mg/dl	8.21 mg/dl	6.0 mg/dl
Na+	143.3mEq/L	141.3mEq/L	144mEq/L
K+	5.80mEq/L	5.30mEq/L	5.6 mEq/L
Cl-	104.8mEq/L	102.9mEq/L	109.0mEq/L

Treatment plan

I. Diet Plan

The patient's diet plan⁴ at Jeena Sikho Lifecare Ltd Hospital, Dera Bassi emphasizes the following:

1. Foods to Avoid

- Refrain from wheat, processed foods, refined products, dairy, animal products, coffee and tea. Avoid eating after 8 PM.

2. Hydration

- Drink alkaline water 3-4 times daily, along with herbal tea, "living" water and turmeric water. Limit total water intake to 1.5 liters.

3. Millet Inclusion

- Incorporate five millets: Foxtail, Barnyard, Little, Kodo, and Browntop. Cook millets using only steel utensils.

4. Meal Timing & Meal Structure (DIP Diet)

- Breakfast (9:00-10:00 AM): Steamed fruits (in grams, equal to patient's weight × 10) and steamed sprouts.

- Lunch (12:30 PM - 2:00 PM): Steamed salad (weight × 5 in grams) and cooked millets.

- Evening Snacks (4:00-4:20 PM): Light, nutritious snacks.

- Dinner (6:15-7:30 PM): Same as lunch.

5. Fasting

- Practice one day of fasting in 3-4 days.

6. Special Practices

- Offer gratitude before meals and sit in *Vajrasana* after eating.

7. Diet Varieties

- Includes solid, semi-solid and smoothie forms. Recommended items: herbal tea, red juice, steamed fruits, fermented millet shakes, steamed sprouts, soaked almonds and steamed salads.

II. Lifestyle Recommendations

- **Sungazing:** Spend 30 minutes each morning in sunlight to absorb vitamin D and boost overall health.
- **Yoga:** Practice yoga (*Sukhasana*) daily from 6:00 to 7:00 AM, focusing on flexibility, strength and mental clarity.
- **Meditation:** Include meditation (*Sukshma Pranayama*) in daily routine to reduce stress and promote mental balance.
- **Barefoot Walking:** Walk briskly for 30 minutes daily, preferably barefoot on natural surfaces like grass, to enhance circulation and connect with nature.
- **Sleep:** Ensure 6-8 hours of restful sleep each night for physical and mental recovery.
- **Daily Routine:** Follow a consistent daily schedule that supports balance in meals, activity, and rest for optimal health.

III. Panchakarma Procedures Administered to the Patient

1. Avagaha Swedana^[4,5]

Procedure: The patient sits in a tub of warm, herb-infused water (42°C) for 30-60 minutes to induce sweating.

Physiology: The warm water dilates blood vessels, improves circulation and aids to toxin elimination through sweat, while herbal properties are absorbed through the skin.

Mode of Action: The heat promotes vasodilation, increases metabolism and helps to break down fat, facilitating the removal of toxins like urea and creatinine through sweat.

2. Vrikka Basti using Dhanwantharam and Punarnava-siddha Sneha

Procedure

- The patient was positioned comfortably, and medicated oils *Dhanwantharam* and *Punarnava-siddhasneha* were warmed.
- The patient was placed in a comfortable position, typically on her stomach.
- A dough ring, made from wheat flour or a similar material, is placed over the lumbar region to create a reservoir for holding the medicated oil, targeting the area around both kidneys.
- The warmed oil is poured into the dough ring, ensuring that it fully covers the affected area of the back and is maintained at a comfortable temperature.
- The oil is kept in place for 20-30 minutes, allowing it to deeply penetrate the muscles and tissues.

Physiology: *Dhanwantharam* oil, with anti-inflammatory properties, reduces renal swelling, while *Punarnava*, known for its rejuvenating and diuretic effects, addresses fluid retention common in CKD.

Mode of Action: This treatment enhances circulation to the kidneys, promoting detoxification and fluid elimination. *Punarnava* aids in reducing proteinuria and swelling, while *Dhanwantharam* oil supports the kidney's natural detox functions, enhancing renal health and functions, in CKD patients.^[6]

3. Matra Basti with Gokshura-siddha sneha^[7]

Procedure

- The patient was positioned comfortably on her left side. Warmed *Gokshur-siddha sneha* (90 ml) is administered rectally with a sterile catheter.
- The oil was retained for 30 minutes to a few hours to allow absorption, with post-procedure rest was recommended.

Physiology: The medicated oil is absorbed through the rectal mucosa, directly delivering *Gokshura* diuretic and anti-inflammatory properties to the bloodstream. This helps to balance *Vata dosha* and nourishes tissues, supporting kidney health.^[8]

Mode of Action: *Gokshura* aids in diuresis, reduces inflammation and improves renal functions by reducing proteinuria and enhancing urine output. The *Basti* helps to detoxify and rejuvenate, alleviating symptoms like bloating, pain and urinary retention, which are common in CKD.

4. Shiropichu and Shiroabhyanga with Ksheerbala Oil

Procedure

- *Shiropichu:* A cotton pad soaked in warm *Ksheerbala* oil is placed on the crown for 30-45 minutes to allow oil absorption.
- *Shiroabhyanga:* Afterward, the scalp is massaged with *Ksheerbala* oil using gentle, circular motions for 20-30 minutes.

Physiology: *Ksheerbala* oil, known for its nourishing and calming properties, helps to reduce stress and balance *Vata*, improves circulation and provides a soothing effect on the nervous system.

Mode of Action: *Shiropichu* supports nervous system relaxation and reduces stress, aiding in blood pressure control, a key factor in CKD. *Shiroabhyanga* further enhances this effect, promoting mental tranquillity, reducing anxiety and improving sleep quality, which benefits overall well-being in CKD patients.

Medicinal Intervention

The *Ayurvedic* treatment approach in this case included a combination of *ayurvedic* preparations, such as Trivrit Avaleha, GFR Powder, Chander Vati, AsthiPoshak Vati, Heart Care Syrup, Lavan bhaskar churna, Divya Shakti Powder along with *Panchakarma* therapies.

Table 5: Allopathic Medicine During The Treatment.

Medicine	Dosage
Sacubitril + Valsartan	1 BD
Nitrazepam	1 OD
Mirtazapine	1 OD
Propranolol	1 BD
Glimepiride	1 BD (Not continuing)
Torasemide	½ OD
Spiro lactone	½ OD
Pantoprazole	1 OD (Not continuing)

Table 6 provides a comprehensive overview of these Ayurvedic medications, detailing their ingredients, duration of use, and specific therapeutic benefits.^[9]

Table 6: Ayurvedic Medications, Ingredients, Duration, and Therapeutic Benefits in the Management of CKD.

Medicine Name	Ingredients	Duration	Therapeutic Effects
GFR Powder	Bhoomi amla (<i>Phyllanthus fraternus</i>), Badi harad (<i>Terminalia chebula</i>), Bahera (<i>Terminalia bellerica</i>), Kasni (<i>Cichorium lenticula</i>), Makoy (<i>Solanum nigrum</i>), Punarnava (<i>Boerhaavia diffusa</i>), Gokhru (<i>Tribulus terrestris</i>).	28/03/2024 to 01/04/2024	Supports kidney functions and reduces inflammation, helps to alleviate renal symptoms.
Chander Vati	Kapoor Kachri (<i>Hedychium spicatum</i>), Vacha (<i>Acorus calamus</i>), Motha (<i>Cyperus rotundus</i>), Kalmegh (<i>Andrographis paniculata</i>), Giloy (<i>Tinospora cordifolia</i>), Devdaru (<i>Cedrus deodara</i>), Desi Haldi (<i>Curcuma longa</i>), Atees (<i>Aconitum heterophyllum</i>), Daru Haldi (<i>Berberis aristata</i>), PiplaMool (<i>Piper longum</i> root), Chitraka (<i>Plumbago zeylanica</i>), Dhaniya (<i>Coriandrum sativum</i>), Harad (<i>Terminalia chebula</i>), Bahera (<i>Terminalia bellerica</i>), Amla (<i>Phyllanthus emblica</i>), Chavya (<i>Piper chaba</i>), Vaividang (<i>Embeliaribes</i>), Pippal (<i>Piper longum</i>), Kalimirch (<i>Piper nigrum</i>), Sonth (<i>Zingiber officinale</i> driedginger), Gaj Pipal (<i>Scindapsus officinalis</i>), Swarn Makshik Bhasma , SajjiKhar , Senda Namak , Kala Namak , Choti Elaichi (<i>Elettaria cardamomum</i>), Dalchini (<i>Cinnamomum verum</i>), Tejpatra (<i>Cinnamomum tamala</i>), Danti (<i>Baliospermum montanum</i>), Nisoeth (<i>Operculina turpethum</i>), Banslochan , Loh Bhasam , Shilajit (<i>Asphaltum punjabinum</i>), Guggul (<i>Commiphora wightii</i>).	27/03/2024 to 01/04/2024	Alleviates urinary tract symptoms and promotes healthy urine flow.
AsthiPoshak Vati	Godanti (<i>Gypsum</i>), Shudh Shilajit (<i>Asphaltum punjabinum</i>), Ashwagandha (<i>Withania somnifera</i>), Tabasheer (<i>Bambusa arundinacea</i>), Pippali (<i>Piper longum</i>), Amba Haldi (<i>Curcuma amada</i>), Hadjod (<i>Cissus quadrangularis</i>), Maida Saq (<i>Litsea chinensis</i>)	28/03/2024 to 01/04/2024	Supports bone health, reduces inflammation, and provides antioxidant benefits.
Heart Care Blk	Arjun Chaal (<i>Terminalia arjuna</i>), Munakka (<i>Vitis vinifera</i>), Mahua Phool (<i>Madhuca longifolia</i>), Brahmi (<i>Bacopa monnieri</i>), Shatavari (<i>Asparagus racemosus</i>), Vidarikand (<i>Pueraria tuberosa</i>), Harad Badi (<i>Terminalia chebula</i>), Khas (<i>Vetiveria zizanioides</i>), Adrak (<i>Zingiber officinale</i>), Saunf (<i>Foeniculum vulgare</i>)	28/03/2024 to 01/04/2024	Supports cardiovascular health, reduces oxidative stress, and improves circulation
Lavanbhaskar Churna	Saindhava Lavana , Samudra Lavana , Sauvarchala Lavana , Pippali (<i>Piper longum</i>), Shunthi (<i>Zingiber officinale</i>) and Amla (<i>Phyllanthus emblica</i>), Hing (<i>Ferula asafoetida</i>) and Ajwain (<i>Trachyspermum ammi</i>)	From 29/03/2024	Improves digestion, preventing the buildup of Ama (toxins)
Divya Shakti Powder	Trikatu , Triphala , Nagarmotha (<i>Cyperus rotundus</i>), Vay Vidang (<i>Embelia ribes</i>), Chhoti Elaichi (<i>Elettaria cardamomum</i>), Tej Patta (<i>Cinnamomum tamala</i>), Laung (<i>Syzygium aromaticum</i>), Nisoeth (<i>Operculina turpethum</i>), Sendha Namak , Dhaniya (<i>Coriandrum sativum</i>), Pipla Mool (<i>Piper longum</i> root), Jeera (<i>Cuminum cyminum</i>), Nagkesar (<i>Mesua ferrea</i>), Amravati (<i>Achyranthes aspera</i>), Anardana (<i>Punica granatum</i>), Badi Elaichi (<i>Amomum subulatum</i>), Hing (<i>Ferula asafoetida</i>), Kachnar (<i>Bauhinia variegata</i>), Ajmod (<i>Trachyspermum ammi</i>), Sajjikhar , Pushkarmool (<i>Inula racemosa</i>), Mishri (<i>Saccharum officinarum</i>).	02/04/2024 to 23/07/2024	Enhances overall vitality and energy levels, addressing fatigue and weakness.
Hrid Care Cap.	Lahsun (<i>Allium sativum</i>), Arjun (<i>Terminalia arjuna</i>), Brahmi (<i>Bacopa monnieri</i>), Giloy (<i>Tinospora cadifolia</i>) Makoy (<i>Solanum nigrum</i>), Sarp Gandha (<i>Rawolfia serpentina</i>), Shankh Bhasam	24/07/2024 for 1 month	Helps to support coronary artery disease (CAD) patients by improving cardiac function, reducing blood pressure
Sama Vati	Vidarikand (<i>Pueraria tuberosa</i>), Akarkara (<i>Anacyclus pyrethrum</i>), Talmakhana (<i>Asteracantha longifolia</i>), Musli (<i>Asparagus adscendens</i>), Amla (<i>Embellica officinale</i>), Sonth	24/07/2024 for 1 month	Supports the patient by improving digestion, relieving constipation, enhancing liver

	(<i>Zingiberofficinale</i>), Jaiphal (<i>Myristicafragrans</i>), Swarn makshik (<i>Copper pyrite</i>), Shilajit shudh (<i>Asphaltum punjabinum</i>), Kaunch (<i>Mucuna prurita</i>), Shatavari (<i>Asparagusracemosus</i>), Ashwagandha (<i>Withania somnifera</i>)		function, boosting immunity
Nervine tonic	Ashwagandha (<i>Withania somnifera</i>), Musli (<i>Asparagus adscendens</i>), Majeeth (<i>Rubia cordifolia</i>), Harad (<i>Terminalia chebula</i>), Haldi (<i>Curcuma longa</i>), Rasna (<i>Pluchea lanceolata</i>), Vidari (<i>Pueraria tuberosa</i>), Arjun Chaal (<i>Terminalia arjuna</i>), Nagarmotha (<i>Cyperus scariosus</i>), Nisoth (<i>Operculina turpethum</i>), Sariva (<i>Hemidesmus indicus</i>), Chandan (<i>Santalum album</i>), Chandan Red (<i>Pterocarpus santalinus</i>), Chitrak mool (<i>Plumbago indica</i>), Brahmi (<i>Bacopa monnieri</i>), Shatavari (<i>Asparagus racemosus</i>), Adrak (<i>Zingiber officinale</i>), Sounf (<i>Foeniculum vulgare</i>), Renuka (<i>Vitex agnus-castus</i>)	24/07/2024 for 1 month	Helps by alleviating nerve disorders, numbness, insomnia, and general weakness
Kidney Care Syp.	Punarnavarishta (<i>Boerhaavia diffusalinn</i>), Chandanasava (<i>Santalum album</i>), Ushirasava (<i>Vetiveria zizanioides</i>), Gokshuradi Kadha (<i>Tribulus terrestris</i>)	24/07/2024 for 1 month	Supports by managing kidney disorders, improving kidney function, and aiding in urinary tract infections (UTI)

The medications with their dosage provided to the patient during hospitalization, at the time of discharge, and follow-up are outlined in Table 5.

Table 5: Medications with dosage Administered During Hospitalization, at Discharge and follow-up.

Medicines	Dosage
Medicines during patient's hospitalization	
Chander vati	2 Tab BD (<i>Adhobhakta with Koshna Jala</i>)
GFR powder	1/2 Tsp BD (<i>Adhobhakta with Koshna Jala</i>)
AsthiPoshak	2 Tab BD (<i>Adhobhakta with Koshna Jala</i>)
Heart Care Blk	20 ml BD (<i>Adhobhakta with sama matra Koshna Jala</i>)
Lavanbhaskar powder	To sprinkle on diet
Medicines given on discharge from 02/04/2024 to 23/07/2024	
GFR powder	1/2 Tsp BD (<i>Adhobhakta with Koshna Jala</i>)
Chander Vati	2 Tab. BD (<i>Adhobhakta with Koshna Jala</i>)
Divya Shakti powder	Half Tsp HS (<i>Nishikala with Koshna Jala</i>)
AsthiPoshak	1Tab BD (<i>Adhobhakta with Koshna jala</i>)
Medicines given on follow-up from 24/07/2024 for 1 month	
Hrid Care	1 Cap BD (<i>Adhobhakta with Koshna Jala</i>)
Sama Vati	2 Cap BD (<i>Adhobhakta with Koshna Jala</i>)
Chander Vati	2 Tab. BD (<i>Adhobhakta with Koshna Jala</i>)
GFR powder	1/2 Tsp BD (<i>Adhobhakta with Koshna Jala</i>)
Nervine tonic	20 ml BD (<i>Adhobhakta with sama matra Koshna Jala</i>)
Kidney Care Syp.	20 ml BD (<i>Adhobhakta with sama matra Koshna Jala</i>)

The patient continued her prescribed allopathic medications during hospitalization. This regimen included a combination of valsartan and sacubitril, bisoprolol 5 mg, torasemide, a loop diuretic, spironolactone and proton pump inhibitor.

RESULT

The results of the *Ayurvedic* intervention in managing Chronic Kidney Disease (CKD) in the presented case study are categorized into symptomatic improvement and laboratory investigational outcomes.

Symptomatic Improvement

Upon admission, the patient exhibited a range of symptoms indicative of advanced CKD, including bilateral pedal oedema, swelling on the hands, nausea, vomiting, severe body aches, excessive weakness, lethargy and disturbed sleep. The severity of these symptoms was assessed using a scoring system from 0 to 10, with 0 representing no symptoms and 10 indicating the most severe symptoms.

Table 6: Symptoms were observed on Day 1 and Day 7 with Scores.

(Score 0 to 10; 0 being the lowest point and 10 being the highest point)

Symptom	Score at Admission (Day 1)	Score at Discharge (Day 7)
Bilateral Pedal Edema	3°	0 (Relief)
Swelling in hands	3°	0 (Relief)
Itching	5/10	0/10 (Relief)
Nausea	4/10	0/10 (Relief)

Vomiting	4/10	0/10 (Relief)
Backache	4/10	0/10 (Relief)
Bilateral Knee Joint Pain	4/10	1/10 (Relief than before)
Excessive Weakness	8/10	2/10 (Relief than before)
Lethargic	6/10	1/10 (Relief than before)
Quality of Sleep	4/10 (Disturbed Sleep)	7/10 (good sleep)

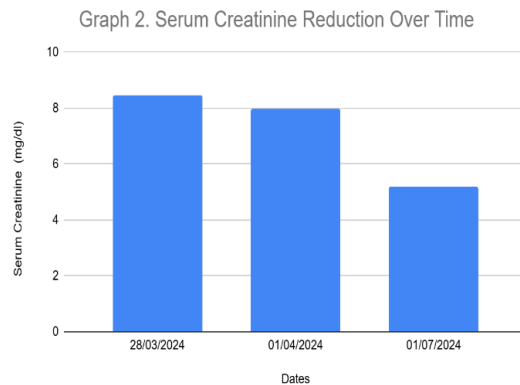
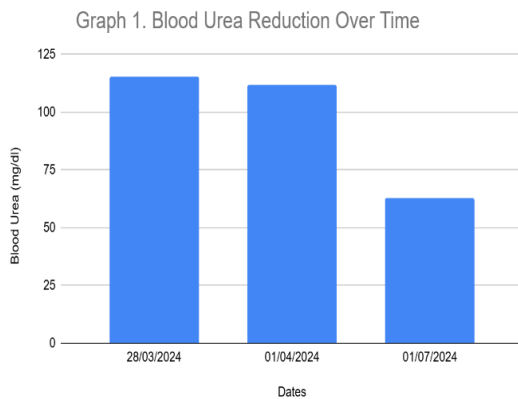
Laboratory Investigational Outcomes

Laboratory tests were conducted at baseline and during follow-up to assess renal functions and metabolic status. The key findings are summarized as follows:

- Serum Creatinine Levels: The initial serum creatinine level was 8.46 mg/dl at admission, which decreased to 7.96 mg/dl by Day 7 and further improved to 5.2 mg/dl at the follow-up on July 1, 2024.

- Blood Urea: The initial Blood Urea level was 115.23 mg/dl, which reduced to 111.60 mg/dl by Day 7 and improved to 63 mg/dl at the follow-up.

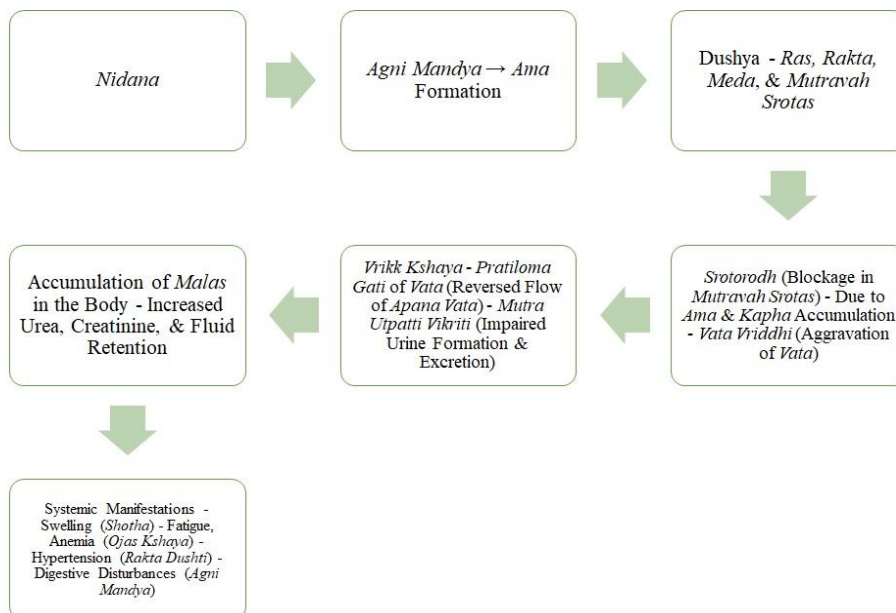
Overall, the results demonstrate significant symptomatic relief as shown in Table 6 and improvement in laboratory parameters as shown in Graph 1 and Graph 2, highlighting the effectiveness of the *Ayurvedic* treatment approach in managing CKD and enhancing the patient's quality of life.



DISCUSSION

Chronic Kidney Disease (CKD) represents a significant global health challenge, characterized by a progressive decline in renal functions over time. The multifactorial aetiology of CKD necessitates a comprehensive approach to management, integrating both conventional

and alternative therapeutic modalities. The *Ayurvedic* approach to CKD emphasizes the restoration of balance within the body, targeting the underlying *doshic* imbalances that contribute to renal dysfunction. The *Samprapti* (pathogenesis) of the disease in this case can be articulated as follows:



In this case, the application of *Panchakarma* therapies, including *Awagaha Swedana* and *Vrikka Basti*, facilitated detoxification and rejuvenation of the renal system.

Awagaha Swedana is a therapeutic sweating treatment that involves immersing the lower body in warm medicated water. This procedure helps in detoxification by promoting sweating, which aids in the elimination of toxins from the body. It also enhances blood circulation to the kidneys, alleviates pain and reduces swelling, making it beneficial for patients with chronic kidney disease (CKD) who experience discomfort and fluid retention. *Vrikka Basti* is a specialized local therapy that utilizes medicated oils to nourish and rejuvenate the kidneys. This treatment enhances renal functions by improving circulation and promoting detoxification. The anti-inflammatory properties of the oils used helps to reduce swelling and proteinuria, providing symptomatic relief for CKD patients and supporting overall kidney health. *Matra Basti* involves the rectal administration of warm medicated oil, which is retained for a specified duration. This therapy delivers the therapeutic benefits of the oil directly to the bloodstream, promoting diuresis and reducing inflammation. It is particularly effective in alleviating symptoms such as bloating, urinary retention and discomfort associated with CKD, while also nourishing the tissues and balancing the *doshas*. *Shiropichu* is a therapeutic procedure where a cotton pad soaked in warm medicated oil is placed on the crown of the head. This treatment nourishes the scalp and promotes relaxation, helps to alleviate stress and tension. *Shiropichu* is beneficial for CKD patients as it supports mental clarity, reduces anxiety and contributes to better sleep, which is essential for overall health and recovery. *Chander Vati*^[7] is an *Ayurvedic* preparation that supports urinary tract health and promotes healthy urine flow. It is particularly effective in alleviating urinary symptoms associated with CKD, helps to reduce discomfort and improves overall urinary function. *GFR Powder* is *Ayurvedic* formulation that supports kidney function and reduces inflammation. It is designed to enhance glomerular filtration rate (GFR), thereby improving renal symptoms and promoting better kidney health in patients with CKD. *AsthiPoshak* is an *Ayurvedic* formulation that supports bone health and reduces inflammation. It provides essential nutrients that strengthens bones and joints, making it beneficial for CKD patients experience musculoskeletal issues due to their condition.^[10] *Heart Care Syrup* is an *Ayurvedic* formulation that promotes cardiovascular health by reducing oxidative stress and improving circulation. This formulation is specifically important for CKD patients, as they often have concurrent cardiovascular issues and it helps in maintaining heart function and overall well-being. *Sama Vati*, containing *Gokhru*, *Shatavari*, *Ashwagandha*, *Vidarikand*, and *Shilajit*, supports the patient by improving digestion, relieving constipation, enhancing liver function, boosting immunity, and promoting overall nourishment and recovery.^[11] *LavanbhaskarChurna* is a

digestive aid that improves digestion and prevents the buildup of toxins (*Ama*) in the body. It is beneficial for CKD patients by enhancing digestive health, which is crucial for nutrient absorption and overall metabolic balance. *Divya Shakti Powder* is an *Ayurvedic* formulation that enhances overall vitality and energy levels. It has laxative properties and helps in the elimination of toxins. It addresses fatigue and weakness, common symptoms in CKD patients, thereby improving their quality of life and promoting better physical and mental well-being.^[12] *Hrid Care*, formulated with *Lahsun*, *Arjun*, *Brahmi*, *Giloy*, *Makoy*, *Sarpagandha* and *Shankh Bhasma*, helps to support coronary artery disease (CAD) patients by improving cardiac function, reducing blood pressure, lowering cholesterol, enhancing circulation and providing antioxidant and anti-inflammatory effects that help to maintain overall cardiovascular health. The *Nervine Tonic*, enriched with *Ashwagandha*, *Shatavari*, *Brahmi* and *Chitrak Mool*, helps this patient by alleviating nerve disorders, numbness, insomnia and general weakness, while supporting nerve health, improving memory and enhancing overall vitality.^[13] *Kidney Care Syrup*, containing *Punarnavarishta*, *Chandanasaava*, *Ushirasava*, and *GokshuradiKadha*, supports this patient by managing kidney disorders, improving kidney functions and aiding in urinary tract infections (UTI) through its diuretic, anti-inflammatory and detoxifying properties.

The case study highlights the importance of a multidisciplinary approach in managing CKD. While conventional medicine often focuses on pharmacological interventions, the integration of *Ayurvedic* practices offers a complementary strategy that addresses both physical and psychological aspects of health. The positive outcomes observed in the patient, including improved sleep quality and reduced anxiety, underscore the potential of *Ayurvedic* therapies in enhancing the quality of life for individuals with CKD.

NEED FOR FURTHER RESEARCH

Despite the promising outcomes associated with *Ayurvedic* interventions in the management of chronic kidney disease (CKD), there remains a critical need for further research to substantiate these findings. Comprehensive clinical trials with larger sample sizes and rigorous methodologies are essential to evaluate the efficacy and safety of specific *Ayurvedic* treatments, such as *Vrikka Basti*, *Matra Basti*, and *Shirodhara*, in diverse patient populations. Additionally, exploring the pharmacokinetics and pharmacodynamics of the *Ayurvedic* formulations used in these therapies will enhance the understanding of their mechanisms of action. Comparative studies between *Ayurvedic* treatments and conventional allopathic approaches could provide valuable insights into integrative treatment strategies for CKD. Investigating the long-term effects of these therapies on renal functions, quality of life and overall health outcomes will be crucial in establishing

standardized protocols and guidelines for their clinical application. Ultimately, a multidisciplinary approach that combines traditional knowledge with modern scientific research will be vital in advancing the field of nephrology and improving patient care in CKD management.

CONCLUSION

The management of Chronic Kidney Disease (CKD) through *Ayurvedic* interventions, as demonstrated in the case of the 63-year-old female patient, illustrates a significant improvement in both clinical symptoms and laboratory parameters. Following a comprehensive treatment regimen that included *Panchakarma* therapies, targeted *ayurvedic* formulations and lifestyle modifications, the patient exhibited notable alleviation of symptoms such as bilateral pedal oedema, nausea, vomiting and disturbed sleep. Laboratory investigations conducted during the treatment period revealed a marked reduction in serum creatinine levels, from 8.46 mg/dl at admission to 5.2 mg/dl at follow-up, indicating an improvement in renal function. Similarly, blood urea levels decreased from 115.23 mg/dl to 63 mg/dl, further supporting the efficacy of the *Ayurvedic* approach in managing metabolic waste accumulation. These findings not only reflect the therapeutic benefits of *Ayurvedic* interventions but also highlights the potential for such holistic treatments to enhance the quality of life for patients suffering from advanced stages of CKD. In conclusion, the integration of *Ayurvedic* practices along with previously prescribed necessary allopathic medicines in the management of CKD not only addresses the physical symptoms but also contributes to overall well-being, as evidenced by the positive changes in both subjective and objective measures.

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