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Case Study

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AYURVEDIC APPROACH ENHANCING RENAL HEALTH AND WELL-BEING IN CHRONIC KIDNEY DISEASE: A CASE REPORT

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ABSTRACT

Chronic Kidney Disease (CKD) has emerged as a prevalent condition in contemporary society, affecting individuals across various age groups, including younger populations. The conventional therapeutic options, such as dialysis and renal transplantation, remain financially inaccessible for a significant proportion of the Indian population, limiting their ability to achieve a healthy and satisfactory life. Consequently, there is a growing demand for alternative, sustainable approaches to managing CKD. CKD is characterized by its chronic and progressive nature, resulting in irreversible kidney damage. The primary contributing factors in most cases are uncontrolled hypertension and type 2 diabetes mellitus, which often remain asymptomatic during the early stages. As the disease advances, symptoms such as swelling in the lower limbs, loss of appetite, nausea, reduced urine output or difficulty in urination, frothy or foamy urine, and persistent fatigue become evident. Diagnosis typically involves laboratory investigations, including kidney function tests, which reveal elevated serum urea and creatinine levels—markers of impaired renal filtration. Additionally, reduced erythropoietin production, a critical hormone for red blood cell production, contributes to anemia and a decline in hemoglobin levels. This article presents the case of a 48-year-old male diagnosed with CKD for four years and hypertension for ten years. He reported symptoms of generalized weakness, hyperacidity, gaseous distension, muscle cramps, and flank pain. Integrative *Ayurvedic* management was implemented, incorporating personalized *Panchakarma* with *Ayurvedic* formulations, dietary modifications, and lifestyle adjustments. The patient experienced significant symptomatic relief and improvement in overall well-being. The findings underscore the potential of *Ayurveda* as a cost-effective and holistic approach to improving the quality of life in CKD patients, addressing the challenges posed by financial constraints and the limitations of conventional treatment modalities.

KEYWORDS: Chronic Kidney Disease, *Ayurveda*, Lifestyle Interventions, Renal Function, *Vrikka Roga*, *Mutraghata*.

INTRODUCTION

Chronic Kidney Disease (CKD) is a significant global health concern, with its prevalence varying across regions. In India, estimates range from less than 1% to 13%, while recent data from the International Society of Nephrology's Kidney Disease Data Center Study indicated a prevalence of 17% in the country. CKD is characterized by chronic and irreversible damage to the kidneys, most commonly attributed to hypertension and type 2 diabetes mellitus.[1] The condition has been partially correlated with *Mutraghata* and *Mutrakrichha* in *Ayurveda*, but a closer resemblance is observed with *Vrikka Roga* as described in the *Bhaishajya Ratnavali*.[2]

In contemporary medicine, the management of CKD typically involves diuretics, dialysis, or kidney transplantation, depending on the stage of the disease. In contrast, *Ayurveda* offers a comprehensive understanding and therapeutic approach for conditions akin to CKD, particularly *Vrikka Roga*. With the increasing prevalence of hypertension and diabetes globally, CKD cases have seen a parallel rise, underscoring the need for effective prevention and management strategies.

The kidneys perform vital functions, including regulating glomerular filtration rate (GFR), eliminating metabolic toxins, maintaining fluid and electrolyte balance, controlling blood pressure, and producing

erythropoietin.[3] CKD results from the progressive deterioration of these functions due to pathological changes, such as creatinine accumulation, which damages renal tissue and manifests as chronic renal disease. While CKD often progresses silently, it is frequently identified during routine investigations, showing elevated serum creatinine or proteinuria.

In Ayurveda, CKD can be correlated with various types of *Mutraghata*, which are considered *Tridoshaja* disorders. These conditions arise due to disruptions in the *Mutravaha Srotas* (urinary channels) caused by intrinsic and extrinsic factors, such as suppression of natural urges, intake of rough, sharp, or toxic diets, or excessive use of incompatible medications. Such disruptions lead to impaired urine formation and progression of disease.[4] According to *Ayurvedic* principles, CKD is manageable using specific therapeutic regimens aimed at balancing the *Tridoshas* and restoring urinary function.[5] This perspective offers a holistic, individualized, and cost-effective alternative for CKD management.

This article presents the case of a 48-year-old male with a history of hypertension and a four-year diagnosis of Chronic Kidney Disease stage V (CKD-V), successfully managed using *Ayurvedic* interventions. The case highlights the potential of *Ayurveda* as an integrative and effective approach to addressing the multifaceted challenges associated with CKD.

CASE REPORT

A 48-year-old male, with a ten-year history of hypertension and a four-year diagnosis of Chronic Kidney Disease stage V(CKD-V), presented to Jeena Sikho Lifecare Ltd. Hospital, Dera Bassi, Chandigarh, on June 13, 2024. The patient reported experiencing intermittent bilateral pedal edema, lower back pain, generalized weakness, hyperacidity, abdominal bloating, muscle cramps, and flank pain. The patient's family history reveals that the mother has a history of hypertension, and the father has diabetes. The patient underwent a left orchiectomy in 2018.

The patient's initial assessment on the first day is outlined in Table 1.

Table 1: Examination Findings.

Parameter	Findings
Blood Pressure	144/96 mm of Hg
Pulse Rate	88/min
Respiratory System	Chest clear
Per Abdomen (P/A)	Soft, Non Tender
Weight	79 kg
Nadi	*Vata-Kaphaj*
Mala	*Malavashtambha* (constipation)
Mutra	*Safena* (frothy)
Jivha	*Saam* (coated)
Shabda	*Spashta*
Sparsha	*Anushna Sheeta*
Akriti	*Madhyam*
Drik	*Prakrita*
Kshudha	*Alpa*
Agni	*Mandya*
Nidra	*Alpa*

Table 2 provides an overview of the diagnostic test results obtained on the day of admission.

Table 2: Diagnostic Test Results on Admission.

Laboratory Test	Observed Value
Hemoglobin	**9.2 g/dl**
Total Leucocyte Count	8600/cmm
RBC	**3.14 mill/cumm**
Platelet Count	**1.66 lacs/cumm**
Renal Function Test	
Blood Urea	**148.30 mg/dl**
Serum Creatinine	**9.73 mg/dl**
Serum Uric Acid	**8.15 mg/dl**
Electrolytes	
Sodium Na^+	140.5 mEq/L
Potassium K^+	4.31 mEq/L
Chloride Cl^-	102.5 mEq/L
Urine Protein	**Present (+)**

Lipid Profile	
Total Cholesterol	160.58 mg/dl
HDL Cholesterol	34.20 mg/dl
Triglycerides	145.70 mg/dl
LDL Cholesterol	97.24 mg/dl
VLDL Cholesterol	29.14 mg/dl
Chol/HDL Ratio	4.70

The patient underwent comprehensive diagnostic evaluations, including urinalysis, complete blood count (CBC), renal function tests (RFT), serum electrolyte analysis, lipid profile, liver function tests (LFT), and DTPA renal scan. A DTPA scan conducted on June14, 2024, is presented in Table 3, providing detailed insights into renal function and perfusion.

Table 3: DTPA Scan Report done on June14, 2024.

Parameter	Left Kidney	Right Kidney
Visualization	Poor	poor
Relative Perfusion	Poor	poor
Size	Normal	normal
Shape	Normal	normal
Position	Normal	normal
Concentration	Poor	Poor
Cortical Margin Delineation	Poorly defined	Poorly defined
Split Function	**51.0%**	**49.0%**
Collecting system	Normal	normal
Drainage pattern	Normal	normal
Diuretic response	Normal	normal
Ureter	Normal	normal
GFR	**7.5 ml/min**	**7.2 ml/min**
Global GFR	**14.7 ml/min/1.98 sq m BSA**	

The patient was treated with a comprehensive *Panchakarma* protocol, which included *Awagaha Swedana* (therapeutic tub bathing), *Shiropichu* (application of medicated oil on the scalp), *Shiroabhyanga* (head massage using herbal oils), *Sneha Basti* (oil-based enema), and *Kashay Basti* (decoction-based enema). Additionally, head-down tilt (HDT) therapy was incorporated into the treatment regimen. These interventions were complemented by *Ayurvedic* medications, along with individualized dietary and lifestyle modifications aimed at promoting overall well-being and supporting the restoration of kidney function. The patient is on antihypertensive medication, specifically Clonidine 100 mg and Febuxostat 40 mg.

The patient presented with the aforementioned complaints and underwent all relevant laboratory investigations. Management included *Ayurvedic* medications, *Panchakarma* therapies, and other therapeutic interventions. Upon discharge on June 23, 2024, the patient exhibited significant clinical improvement, including enhanced appetite and increased urine output, contributing to a marked improvement in overall well-being.

TREATMENT PLAN

I. Diet Plan[6] Overview

At Jeena Sikho Lifecare Ltd. Hospital, Dera Bassi, the patient's diet was tailored to support kidney health and recovery with the following key elements:

1. **Foods to Avoid:** Wheat, processed foods, dairy, animal products, coffee, tea, and late meals (post-8 PM).
2. **Hydration:** 1.5 liters daily, including alkaline water, herbal teas, and turmeric-infused water.
3. **Millets:** Five varieties (foxtail, barnyard, little, kodo, browntop) cooked in stainless steel utensils.
4. **Structured Meals[7]**

- **Early Morning:** Curry leaves, herbal tea, raw ginger, and turmeric.
- **Breakfast:** Seasonal fruits, sprouts, fermented millet shakes, and red juice.
- **Lunch:** Millet dishes with steamed vegetables *Mugda Yusha*, and alkaline water.Plate 1 with a steamed vegetable salad or sprouts and Plate 2 with a millet-based dish.
- **Snacks:** Green/red juices and soaked almonds.
- **Dinner:** Plate 1 with a steamed vegetable salad or sprouts and Plate 2 with a millet-based dish.Millet khichdi, soups, chutney and steamed salads.

" "शाल्यादीनां तु धान्यानां
यवकाः श्यामकाः प्रियङ्गवः।
कोद्रवाः शालिपर्ण्यश्च
लघवः कषायोष्णगुणाः स्मृताः॥[8]
(*Charaka Samhita, Sutrasthana* 27/88).

5. **Periodic Fasting:** Detoxification through fasting every 3–4 days.
6. **Special Practices:** Gratitude before meals and sitting in *Vajrasana* post-meal for digestion.
7. **Dietary Emphasis:** Natural foods, including herbal tea, juices, steamed fruits, sprouts, and salads, with no added salt.

II. Lifestyle Recommendations[7]

1. **Sunlight:** Spend 30 minutes in morning sunlight to boost vitamin D and overall health.
2. **Yoga:** Practice one hour of yoga daily for physical and mental well-being.
3. **Meditation:** Practice mindfulness meditation to reduce stress and enhance well-being.
4. **Grounding:** Walk barefoot on natural surfaces for 30 minutes to improve circulation and connect with nature.
5. **Sleep:** Ensure 6–8 hours of quality sleep for optimal recovery.
6. **Routine:** Maintain a structured daily schedule for balanced living.

III. *Panchakarma* Procedures Administered to the Patient

1. *Avagaha Sweda* (Partial Immersion Therapy)

Procedure: The patient sits in a tub of warm water infused with medicinal herbs, maintained at 42°C.Duration: 30–60 minutes.

Physiology

- Warm water induces vasodilation, increasing skin blood flow and promoting sweating, which facilitates toxin elimination.[9]
- Herbal properties are absorbed transdermally.[10]

Mode of Action

- Immersion at 42 °C raises body temperature, stimulating vasodilation and activating the sympathetic nervous system. This enhances metabolic rate, lipolysis, and the excretion of toxins such as urea, creatinine, ammonia, and uric acid through sweat.[11]
- As per *Acharya Charaka*, *Avagaha Sweda* (a form of *Sagni Sweda*) mobilizes and liquefies *Doshas* obstructing microchannels (*Srotas*).[12]
- Studies suggest benefits of hot water immersion in metabolic disorders like obesity.

2. *Gokshura* and *Punarnavadi Siddha Sneha Matra Basti* (120 ml)

Procedure

- Warm medicated oil prepared with *Gokshura* and *Punarnava* is administered rectally, with the patient in a comfortable position.
- The oil is retained for a specified duration.

Physiology

- The oil penetrates the rectal mucosa, aiding absorption, lubricating the intestines, and promoting bowel movements.[13]

Mode of Action

- *Matra Basti* balances *Vata Dosha*, facilitating the elimination of flatus, feces, and urine while exerting systemic effects through the vascular network in the rectum.
- *Gokshura* acts as a diuretic, balancing *Tridosha* and improving strength, while *Punarnava* has diuretic, anti-inflammatory, and antioxidant properties, making it effective in managing kidney disorders.[14]

3. *Shiro Pichu* with *Brahmi* Oil

Procedure

- A cotton pad soaked in warm *Brahmi* oil is applied to the forehead for 30 to 60 minutes.

Physiology

- The oil is absorbed through the skin, nourishing tissues and calming the mind, reducing mental fatigue.

Mode of Action

- *Shiro Pichu* involves the application of herbal oil, increasing local temperature and promoting blood circulation. This enhances oxygen and nutrient delivery, eliminates toxins, and relaxes muscles.[15] It is effective in relieving headaches, migraines, and mental stress, offering anti-inflammatory and calming benefits.

4. *Vrikka Basti* with *Dhanwantram* and *Punarnava-Siddha Sneha*

Procedure

- The patient lies comfortably, typically on their stomach, with a dough ring placed over the lumbar region.
- Medicated oils, *Dhanwantram* and *Punarnava-siddha sneha*, are warmed and poured into the dough ring, covering the area around both kidneys.
- The oil is kept in place for 20–30 minutes to allow deep penetration into the muscles and tissues.

Physiology

- *Dhanwantram* oil has anti-inflammatory properties that reduce renal swelling, while *Punarnava's* diuretic and rejuvenating effects help address fluid retention.

Mode of Action

- The treatment enhances circulation to the kidneys, promoting detoxification and fluid elimination. *Punarnava* reduces proteinuria and swelling, while *Dhanwantram* supports renal detoxification, improving kidney function in CKD patients.[16]

5. *Dashamoola, Trikatu,* and *Dashang Lepam* Application

Procedure

A herbal paste made from *Dashamoola*, *Trikatu*, and *Dashang* powders, mixed with water or herbal decoction, is applied evenly to the back and left for a specified duration under medical supervision.

Physiological Effects and Mode of Action

The lepam promotes localized vasodilation, improving blood circulation and reducing inflammation. The anti-inflammatory, analgesic, and mucolytic properties of these herbs help alleviate inflammation, and pain, particularly in the back.

Therapeutic Benefits of Ingredients

- ***Dashamoola*:** Reduces inflammation, pacifies *Vata dosha*, and relieves musculoskeletal discomfort.[17]
- ***Trikatu*:** Acts as a stimulant and expectorant, promoting mucus clearance and enhancing local metabolism.
- ***Dashang*:** Alleviate backache by reducing inflammation, promoting circulation, and relieving muscle tension.

6. *Patra Pottali Sweda* with *Ksheerbala* Oil

Procedure

Herbal leaves are wrapped into small *pottalis* and dipped in *Ksheerbala* oil, which is then heated and applied to the affected area in gentle, circular motions for 20–30 minutes.

Physiological Effects and Mode of Action

The therapy induces sweating and enhances blood circulation, which helps in relieving muscle stiffness, reducing pain, and promoting detoxification. The *Ksheerbala* oil, known for its anti-inflammatory and analgesic properties, penetrates deeply into tissues, providing relief from musculoskeletal discomfort.[18]

Therapeutic Benefits

- Relieves pain, inflammation, and stiffness in the muscles and joints.
- Promotes relaxation and improves overall circulation in the treated area.

IV. Head Down Tilt

As part of the Gravitational Resistance and Diet System, the patient was advised to undergo Head Down Tilt (HDT) therapy. In this procedure, the patient is positioned at a 10-degree incline with the head lowered. This positioning reduces plasma aldosterone and renin levels, subsequently decreasing overall plasma volume. The process enhances natriuresis, facilitating the excretion of sodium from the body.[19]

V. Medicinal Intervention

The *Ayurvedic* therapeutic regimen for this case included a combination of specialized *ayurvedic* formulations, such as GFR Powder, Amalpitta Har Churna, Renal Support Syrup, JS BP Cure, Chandraprabha Vati, and Hemotone Syrup, alongside *Panchakarma* treatments. A comprehensive breakdown of these *Ayurvedic* medicines, including their ingredients, duration, and specific therapeutic indications, is outlined in Table 4. The medications with their dosage provided to the patient during hospitalization and at the time of dischargeare outlined in Table 5.

Table 4: *Ayurvedic* Medications, Ingredients,Duration, and Therapeutic Benefits in the Management of CKD.

Medicine Name	Ingredients	Duration	Therapeutic Effects
GFR Powder	*Bhumi Amla (Phyllanthus Fraternus), Badi Harad (Terminalia Chebula), Bahera (Terminalia Belerica), Kasni (Cichorium Lendivia), Makoy (Solanus Nigrum), Punarnava (Boerhaavia diffusa), Gokshur (Tribulus Terrestris).*	14/06/2024 to 23/06/2024	Supports kidney function and reduces inflammation, helping with renal symptoms.
Amalpit Har Churna	*Shunthi (Zingiber officinale), Maricha (Piper nigrum), Pippali (Piper longum), Amalaki (Phyllanthus emblica), Bibhitaki (Terminalia belerica), Haritaki (Terminalia chebula), Musta (Cyperus rotundus), Sulshmaila (Sida cordifolia), Tvak patra (Cinnamomum verum), Vidanga (Embelia ribes), Bid lavana (Sodium chloride), Lavanga (Syzygium aromaticum), Trivita (Tribulus terrestris), Sharkara (Saccharum officinarum).*	14/06/2024 to 23/06/2024	helps in the management of indigestion, acidity, liver disorders, GERD, vomiting, and nausea
Renal Support Syp.	*Nimba (Azadirachta indica), Arjuna (Terminalia arjuna), Gokshura (Tribulus terrestris), Hareetaki (Terminalia chebula), Ashwagandha (Withania somnifera), Karanja (Pongamia pinnata), Chirayata (Swertia chirayita)*	15/06/2024 to 23/06/2024	helps in managing kidney disorders, urinary tract infections.
Js BP Cure	*Sarpgandha (Rauvolfia serpentina), Arjuna (Terminalia arjuna), Shigru (Moringa oleifera), Haritaki (Terminalia chebula), Bibhitaki (Terminalia bellirica), Amla (Emblica officinalis), Godanti Bhasma*	17/06/2024 to 20/06/2024	helps in managing blood pressure, heart disease, inflammation.

Chandraprabha Vati	*Karpura (Cinnamomum camphora), Vacha (Acorus calamus), Musta (Cyperus rotundus), Kalmegh (Andrographis paniculata), Giloy (Tinospora cordifolia), Devdaru (Cedrus deodara), Desi Haldi (Curcuma longa), Atees (Aconitum heterophyllum), Daru Haldi (Berberis aristata), Pipla Mool (Piper longum root), Chitraka (Plumbago zeylanica), Dhaniya (Coriandrum sativum), Harad (Terminalia chebula), Bahera (Terminalia bellirica), Amla (Phyllanthus emblica), Chavya (Piper chaba), Vayavidang (Embelia ribes), Pippal (Piper longum), Kalimirch (Piper nigrum), Sonth (Zingiber officinale dried ginger), Gaj Pipal (Scindapsus officinalis), Swarn Makshik Bhasma, Sujji Kshar, Senda Namak, Kala Namak , Choti Ilayachi (Elettaria cardamomum), Dalchini (Cinnamomum verum), Tejpatra (Cinnamomum tamala), Danti (Baliospermum montanum), Nishothra (Operculina turpethum), Banslochan, Loh Bhasam (Iron), Shilajit (Asphaltum punjabinum), Guggal (Commiphora wightii), Vanshlochana (Bambusa arundinacea), Ela (Elettaria tamala),*	17/06/2024 to 23/06/2024	Promotes the removal of toxins from the body, supporting the kidneys in their detoxification process.
Go Flexi Cap.	*Paneer Dodi (Caralluma fimbriata), Ashwagandha (Withania somnifera), Amla Rasayan (Phyllanthus emblica), Yograj Guggul (Commiphora wightii), Methi (Trigonella foenum-graecum), Shankh Bhasma Gokshura (Tribulus terrestris), Punarnava (Boerhavia diffusa), Nirgundi (Vitex negundo), Haldi (Curcuma longa), Neem (Azadirachta indica).*	19/06/2024 to 23/06/2024	provide analgesic, anti-inflammatory, immunity-boosting, and pain-relieving benefits.
Divya Shakti Powder	*Trikatu, Triphala, Nagarmotha (Cyperus rotundus), VayaVidang (Embelia ribes), Chhoti Elaichi (Elettaria cardamomum), Tej Patta (Cinnamomum tamala), Laung (Syzygium aromaticum), Nishoth (Operculina turpethum), Sendha Namak , Dhaniya (Coriandrum sativum), Pipla Mool (Piper longum root), Jeera (Cuminum cyminum), Nagkesar (Mesua ferrea), Amarvati (Achyranthes aspera), Anardana (Punica granatum), Badi Elaichi (Amomum subulatum), Hing (Ferula assafoetida), Kachnar (Bauhinia variegata), Ajmod (Trachyspermum ammi), Sajjikshar, Pushkarmool (Inula racemosa), Mishri (Saccharum officinarum).*	24/06/2024 to 24/07/2024	Enhances overall vitality and energy levels, addressing fatigue and weakness.
Kidney Care Syp.	*Punarnavarishta, Chandanasava Ushirasava, Gokshuradi Kadha*	24/06/2024 to 24/07/2024	supports byimproving kidney function, and aiding in urinary tract infections (UTI)
Chander Vati	*Kapoor Kachri (Hedychium spicatum), Vacha (Acorus calamus), Motha (Cyperus rotundus), Kalmegh (Andrographis paniculata), Giloy (Tinospora cordifolia), Devdaru (Cedrus deodara), Desi Haldi (Curcuma longa), Atees (Aconitum heterophyllum), Daru Haldi (Berberis aristata), Pipla Mool (Piper longum root), Chitrak (Plumbago zeylanica), Dhaniya (Coriandrum sativum), Harad (Terminalia chebula), Bahera (Terminalia bellirica), Amla (Phyllanthus emblica), Chavya (Piper chaba), Vay vidang (Embelia ribes), Pippal (Piper longum), Kalimirch (Piper nigrum), Sonth (Zingiber officinale* dried ginger*), Gaj Pipal (Scindapsus officinalis), Swarn Makshik Bhasm (*Gold iron pyrite ash - Ayurvedic preparation*), Sajji Khar (*Potassium carbonate - traditional alkali preparation*), Senda Namak* (Rock salt*), Kala Namak (*Black salt*), Chhoti Elaichi (Elettaria cardamomum* - small cardamom*), Dalchini (Cinnamomum verum), Tejpatra (Cinnamomum tamala), Danti (Baliospermum montanum), Nisoth (Operculina turpethum), Vanslochan (Bamboo silica), Loh Bhasm (Iron ash* - Ayurvedic preparation*), Shilajeet (Asphaltum punjabinum), Guggulu (Commiphora wightii).*	24/06/2024 to 24/07/2024	Alleviates urinary tract symptoms and promotes healthy urine flow.
Hemotone Syp	*Laung (Syzygium aromaticum), Badi Ilaichi (Amomum subulatum), Javitri (Myristica fragrans* - Aril*), Dal Chini*	23/06/2024 to 24/06/2024	Improves Blood Circulation, Boosts Immune System

	*(Cinnamomum verum / Cinnamomum cassia), Haldi (Curcuma longa), Nag Kesar (Mesua ferrea), Ajwain (Trachyspermum ammi), Chavya (Piper chaba), Kutaki (Picrorhiza kurroa), Pippali (Piper longum), Gaj Pipal (Scindapsus officinalis), Devadaru (Cedrus deodara), Kaunch (Mucuna pruriens), Baybidang (Embelia ribes), Chitrak (Plumbago zeylanica), Danti (Baliospermum montanum), Daru Haldi (Berberis aristata), Dhania (Coriandrum sativum), Gangayran (Clerodendrum serratum), Gokhru (Tribulus terrestris), Rasna (Pluchea lanceolata), Kanghi- Atibala (Abutilon indicum), Kherati- Bala (Sida cordifolia), Hauber- Hapuspa (Lepidium sativum), Lodhra (Symplocos racemosa), Marorphali- Murva (Clematis triloba / Marsdenia tenacissima), Mulethi (Glycyrrhiza glabra), Nagarmotha (Cyperus rotundus), Pohkar (Aconitum heterophyllum), Lal Punarnava (Boerhavia diffusa), Saunf (Foeniculum vulgare), Supari (Areca catechu), Tejpatta (Cinnamomum tamala), Utangan (Blepharis edulis), Vaividanga (Embelia ribes), Akarkara (Anacyclus pyrethrum), Triphala (*a combination of *Terminalia chebula, Terminalia bellirica,* and *Phyllanthus emblica), Trikatu (*acombination of *Piper longum, Piper nigrum,* and *Zingiber officinale), Munakka (Vitis vinifera* - Dried Grapes*), Dhay Phool (Woodfordia fruticosa), Gwar Patha (Aloe barbadensis / Aloe vera), Loh Bhasma (*Iron Ash - Ayurvedic Preparation*), Ashwagandha (Withania somnifera), Shehad (*Honey - NaturalProduct from Apis species*), Gur (Saccharum officinarum* - Jaggery*), and Water (*H_2O - Universal Solvent*).*		

Table 5: Medications with dosage Administered During Hospitalization and at Discharge.

Medicine	Dosage
Medicine during patient's hospitalization	
GFR Powder	Half a teaspoon BD*(Adhobhakta with Koshna Jala)*
Amalpit Har Churna	Half tsp BD*(Adhobhakta with Koshna Jala)*
Renal Support Syp.	20 ml BD*(Adhobhakta with Sama matra Koshna Jala)*
Js BP Cure	2 BD*(Adhobhakta with Koshna Jala)*
Chandraprabha Vati	2 BD*(Adhobhakta with Koshna Jala)*
Hemotone Syp.	20 ml BD*(Adhobhakta with Sama matra Koshna Jala)*
Go Flexi	2 Cap. OD*(Adhobhakta with Koshna Jala)*
Medicine given on discharge	
Kidney Care Syp.	20 ml BD*(Adhobhakta with Sama matra Koshna Jala)*
Divya Shakti Powder	Half Tsp HS*(Nishikala with Koshna Jala)*
GFR Powder	Half Tsp BD*(Adhobhakta with Koshna Jala)*
Chander Vati	2 Tab BD*(Adhobhakta with Koshna Jala)*

RESULTS

The clinical management of the 48-year-old male patient diagnosed with Stage IV Chronic Kidney Disease (CKD) and hypertension demonstrated significant improvements in both symptoms and laboratory parameters following an integrative *Ayurvedic* treatment approach.

Symptomatic Improvement: Upon admission, the patient reported a range of symptoms, including generalized weakness, muscle cramps, hyperacidity, gaseous distension, and flank pain. Following a comprehensive treatment regimen that included personalized *Panchakarma* therapies, *Ayurvedic* formulations, dietary modifications, and lifestyle adjustments, the patient exhibited marked symptomatic relief.

The symptom scores recorded at admission and discharge are summarized in Table 6.

Table 6: Symptoms were observed on Day 1 and Day 10 with Scores.

Symptom	Score at Admission (Day 1)	Score at Discharge (Day 10)
Pain	2/10 (Discomforting)	Relief 0/10
Generalized Weakness	3/10 (Moderate)	1/10 (Mild)
Muscle Cramps	2/10 (Occasional)	0/10 (No Cramps)

Laboratory Investigations: Laboratory tests conducted during the treatment period revealed significant improvements in renal function markers. The follow-up results are presented in Table 2:

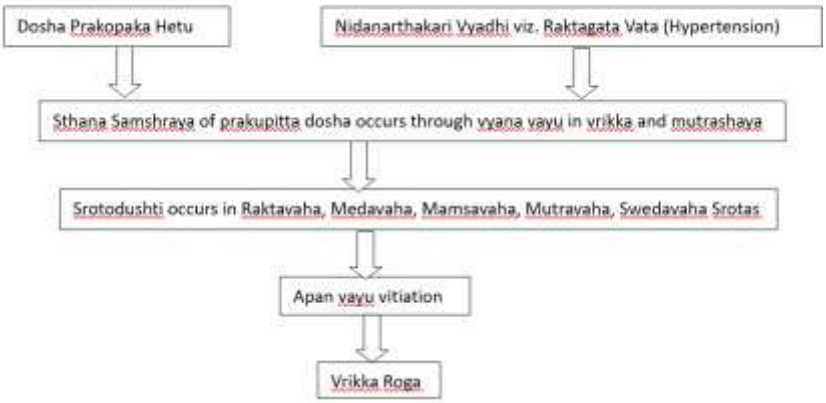
Table 7: Follow-Up Investigations and Results.

Laboratory test	14/06/2024	17/06/2024	22/06/2024
Blood Urea	148.30 mg/dl	126.25 mg/dl	116.40 mg/dl
Sr. Creatinine	9.73 mg/dl	8.37 mg/dl	7.74 mg/dl

The initial elevated levels of blood urea and serum creatinine showed a progressive decline, indicating an improvement in renal function.

DISCUSSION

Chronic Kidney Disease (CKD) represents a significant global health challenge, with increasing prevalence attributed to lifestyle factors, including hypertension and diabetes mellitus. This case study highlights the potential of an integrative *Ayurvedic* approach in managing CKD, particularly in patients with advanced stages of the disease. The patient presented with Stage V CKD and a history of hypertension, exhibiting a range of debilitating symptoms that significantly impacted his quality of life. The *samprapti*[19] (pathogenesis) of the disease in this case can be articulated as follows.



The integrative treatment regimen employed in this case included personalized *Panchakarma* therapies, *Ayurvedic* formulations, dietary modifications, and lifestyle adjustments. The results demonstrated substantial symptomatic relief and improvements in laboratory parameters, including reductions in blood urea and serum creatinine level. These findings align with existing literature that supports the efficacy of *Ayurvedic* interventions in managing renal disorders.

Ayurveda conceptualizes CKD within the framework of *Tridosha* and *Mutraghata*, emphasizing the importance of restoring balance among the *doshas* and promoting the proper functioning of the urinary channels. The individualized treatment plan aimed to address the underlying imbalances contributing to the patient's condition, which is consistent with *Ayurvedic* principles of personalized medicine. The significant improvement in symptoms, such as muscle cramps and generalized weakness, suggests that the holistic approach not only targets the physiological aspects of the disease but also enhances the overall well-being of the patient.

Panchakarma, a cornerstone of *Ayurvedic* therapy, offers a comprehensive detoxification and rejuvenation process that enhances overall health and well-being. Among its various treatments, *Avagaha Sweda* provides localized heat therapy, promoting circulation and alleviating discomfort in the pelvic region, which can be particularly beneficial for patients with renal issues. *Gokshura* and *Punarnavadi Siddha Sneha Basti* (medicated enema) are effective in supporting kidney function and reducing inflammation, while also aiding in the elimination of toxins.[20] The use of *Shiro Pichu* with *Brahmi* oil enhances mental clarity and reduces stress, contributing to the holistic management of chronic conditions. Additionally, *Vrikka Basti* specifically targets renal health, utilizing medicated oils to nourish and rejuvenate the kidneys, thereby improving their functional capacity.

The incorporation of *ayurvedic* formulations such as *Dashmoola, Trikatu*, and *Dashang Lepam* in conjunction with *Patra Pottali Sweda* further amplifies the therapeutic benefits of *Panchakarma*. *Dashmoola*, known for its anti-inflammatory properties, helps in alleviating pain and discomfort, while *Trikatu* enhances digestion and metabolism, facilitating better nutrient absorption. *Dashang Lepam*, applied topically, promotes localized healing and reduces inflammation. *Patra Pottali Sweda*, involving the use of herbal poultices, provides deep tissue relaxation and detoxification. Collectively, these treatments not only address the physical symptoms of chronic conditions but also promote a balanced state of health, making *Panchakarma* a valuable approach in integrative medicine.

Head Down Tilt (HDT) therapy effectively reduces plasma aldosterone and renin levels, leading to decreased overall plasma volume and enhanced natriuresis, which facilitates the excretion of sodium from the body. This positioning can improve renal function and support fluid balance, making it a beneficial adjunctive treatment for patients with conditions such as Chronic Kidney Disease.

Ayurvedic formulations such as GFR Powder, Amlapit Har Churna, and Renal Support Syrup are designed to enhance kidney function and reduce inflammation, promoting overall renal health. JS-BP Cure effectively manages hypertension, a common comorbidity in chronic kidney disease, while Chandraprabha Vati supports urinary tract health and alleviates symptoms associated with urinary disorders.[21]Go Flexi provides analgesic and anti-inflammatory benefits, aiding in musculoskeletal discomfort, and Divya Shakti Powder enhances vitality and energy levels, addressing fatigue. Additionally, Kidney Care Syrup supports kidney function and helps prevent urinary tract infections, while Chander Vati promotes healthy urine flow and alleviates urinary symptoms. Collectively, these formulations offer a holistic approach to managing chronic kidney disease and improving the quality of life for patients.

NEED FOR FURTHER RESEARCH

This case study underscores the potential of *Ayurveda* as a viable alternative or complementary approach in the management of CKD. The significant improvements observed in both symptoms and laboratory parameters highlight the need for further research into integrative treatment strategies that can enhance patient outcomes and quality of life in chronic kidney disease. As the global burden of CKD continues to rise, exploring holistic and individualized treatment options becomes increasingly important in addressing this pressing health issue.

Further research is essential to validate the efficacy and safety of *Ayurvedic* interventions for Chronic Kidney Disease (CKD). Rigorous clinical trials and longitudinal studies are needed to assess the long-term outcomes of *Ayurvedic* formulations in diverse populations. Additionally, exploring the mechanisms of action of specific herbal ingredients and their interactions with conventional treatments will enhance our understanding of their therapeutic potential. Standardization of practices and evidence-based guidelines will be crucial for integrating *Ayurveda* into mainstream healthcare, ultimately improving patient outcomes and quality of life.

CONCLUSION

This case study illustrates the promising potential of an integrative *Ayurvedic* approach in the management of Chronic Kidney Disease (CKD), particularly in patients with advanced stages of the condition. The 48-year-old male patient, who presented with Stage V CKD and a history of hypertension, experienced significant symptomatic relief following a comprehensive treatment regimen that included personalized *Panchakarma* therapies, *Ayurvedic* formulations, dietary modifications, and lifestyle adjustments.

Notably, the **patient reported marked improvements in symptoms such as generalized weakness, muscle cramps, and flank pain, which were effectively alleviated by the *Ayurvedic* treatment approach.**

Furthermore, laboratory investigations revealed substantial enhancements in renal function, evidenced by **a progressive decline in serum creatinine levels from 9.73 mg/dl at admission to 7.74 mg/dl by the end of the treatment period. Blood urea levels also decreased significantly, from 148.30 mg/dl to 116.40 mg/dl, indicating improved renal filtrationcapacity**.

These findings underscore the effectiveness of *Ayurvedic* interventions along with Allopathic medicine in not only managing the physiological aspects of CKD but also enhancing the quality of life for patients facing this chronic condition. As the prevalence of CKD continues to rise globally, this case highlights the importance of exploring integrative treatment strategies that can provide holistic care and address the multifaceted challenges associated with CKD. Future research should focus on larger clinical trials to validate these results and further elucidate the role of *Ayurveda* in the comprehensive management of chronic kidney disease.

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