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# Comprehensive **1 Management of Chronic Kidney Disease:** A Holistic Approach Integrating Lifestyle Modifications and Ayurvedic Principles: A Case Report

## ABSTRACT

In Ayurveda, CKD can be correlated with conditions such as Mutrakrichchhra, Mutraghata, and Prameha-janya Vrikka Vikara, where vitiation of Vata and Kapha Dosha, impairment of Agni, accumulation of Ama, and obstruction of Mutravaha Srotas lead to progressive deterioration of renal structure and function. The present case report describes the clinical outcome of an integrated Ayurvedic management approach in a 39-year-old male with CKD for 8 years, hypertension for 8 years, and **2 type 2 diabetes mellitus** for 10 years, who presented to Jeena Sikho Lifecare Clinic, Baltana, Zirakpur, Punjab, in July 2024. The patient exhibited multiple systemic complaints including generalized weakness (Daurbalya), gastric disturbances (Amlapitta), fever (Jvara), frothy urine (Phenila Mutratā), headache (Shirashoola), vomiting (Chhardi), and throat infection (Kanthashotha), indicating multisystem involvement and Mutravaha Srotas dysfunction. The patient was managed with an integrated Ayurvedic protocol consisting of dietary and lifestyle modifications along with Panchakarma therapies along with supportive Ayurvedic medications. Post-treatment evaluation revealed marked clinical improvement, with complete resolution of major symptoms and significant relief in associated complaints. Biochemical parameters showed substantial improvement, with blood urea levels reduced from 164.78 mg/dl to 76.60 mg/dl and serum creatinine from 7.60 mg/dl to 5.50 mg/dl, indicating supportive enhancement in renal function. This case suggests that integrated Ayurvedic interventions, including Panchakarma, may play a supportive role in improving clinical symptoms and renal biochemical parameters in CKD patients.

Keywords: Ayurveda, Chronic Kidney Disease, Hypertension, Lifestyle Modifications, Panchkarma, Vrikka Vikar.

## INTRODUCTION

**1 Chronic Kidney Disease (CKD)** is a major global public health problem that has gained

increasing attention due to its rising prevalence, progressive nature, associated systemic complications, and significant impact on quality of life. CKD is defined as a structural or functional abnormality of the kidneys lasting for more than three months, with or without decreased **glomerular filtration rate (GFR)**, manifested by pathological abnormalities, markers of kidney damage such as proteinuria, or imaging abnormalities.[1] A progressive decline in GFR ultimately leads **to end-stage renal disease (ESRD)**, which requires renal replacement therapy (RRT) in the form of dialysis or kidney transplantation for survival. According to global epidemiological studies, CKD affects approximately 10–13% of the adult population worldwide, making it **2 one of the most** common chronic diseases.[2] The increasing burden of diabetes mellitus, hypertension, obesity, aging populations, and lifestyle-related disorders has contributed significantly to the rising incidence of CKD. The World Health Organization (WHO) and other international health agencies have recognized CKD as a major non-communicable disease due to its association with cardiovascular morbidity, increased mortality, disability, and high healthcare expenditures.[3] In developing countries like India, **1 the prevalence of CKD is** rising rapidly due to epidemiological transition, urbanization, and lifestyle changes. Limited awareness, late diagnosis, and inadequate access to specialized healthcare further worsen disease outcomes. CKD is often asymptomatic in its early stages, and many patients remain undiagnosed until significant kidney damage has occurred. As renal function deteriorates, patients may experience symptoms such as fatigue, edema, shortness of breath, nocturia, pruritus, nausea, vomiting, and cognitive impairment.[4] Progressive CKD can lead to anemia, mineral and bone disorders, cardiovascular complications, electrolyte imbalance, and ultimately ESRD. Conventional management of CKD includes blood pressure control, glycemic management, dietary protein restriction, and pharmacological interventions aimed at slowing disease progression. However, these approaches are often associated with side effects, high costs, and limited efficacy in advanced stages, prompting interest in complementary and integrative therapeutic systems such as Ayurveda.[5] Ayurveda is a traditional system of medicine that originated in India more than 5,000 years ago and is

widely practiced across South Asia and globally. Ayurveda is based on the holistic concept of maintaining balance among the three fundamental bio-energies or Doshas—Vata, Pitta, and Kapha—to sustain health and prevent disease. It emphasizes individualized treatment based on Prakriti (constitution), Vikriti (disease state), Agni (digestive fire), Dhatu (tissues), and Srotas (body channels).[6] Unlike conventional medicine, which often focuses on symptom suppression, Ayurveda aims to correct the root cause of disease through dietary regulation (Ahara), lifestyle modifications (Vihara), herbal formulations (Aushadha), detoxification therapies (Panchakarma), and mental and spiritual practices.[7] In Ayurvedic literature, there is no direct term corresponding to CKD; however, renal disorders are described under conditions such as Mutravaha Srotas Vikara, Mutrakrichra, Mutraghata, Ashmari, and Prameha-related complications.[8] The kidneys (Vrikka) are considered vital organs associated with Meda and Rakta Dhatus, and their functional integrity is essential for maintaining systemic homeostasis. Impairment of Vrikka function is believed to occur due to Dosha imbalance, Agni dysfunction, accumulation of Ama (metabolic toxins), and obstruction of Srotas, leading to impaired urine formation and excretion.[9] In Ayurveda, kidney function is closely associated with Apana Vata, a subtype of Vata Dosha responsible for excretory functions including urination, defecation, and reproduction. Disturbance of Apana Vata leads to abnormalities in urinary output and contributes to renal pathology.[10]Kapha Dosha is associated with structural integrity and fluid balance, while Pitta is responsible for metabolic and excretory processes. The imbalance of these Doshas, particularly Vata and Kapha, plays a crucial role in the pathogenesis of renal disorders.[11]Ayurvedic management of CKD focuses on restoring Dosha balance, improving Agni, eliminating Ama, clearing Srotas obstruction, and strengthening renal tissues. Dietary and lifestyle interventions are considered fundamental in preventing disease progression. Patients are advised to consume light, easily digestible, and Vata-pacifying foods while avoiding heavy, oily, processed, and incompatible foods. Lifestyle modifications such as yoga, meditation, pranayama, and adequate sleep are recommended to reduce stress and maintain systemic balance.[12]Ayurvedic medicines

play a significant role in Ayurvedic nephroprotective therapy. Several medicinal plants have been traditionally used to support kidney health and treat urinary disorders. Punarnava (*Boerhavia diffusa*) is widely recognized for its diuretic, anti-inflammatory, and nephroprotective properties. It is commonly used in conditions associated with edema and renal dysfunction. Gokshura (*Tribulus terrestris*) is known for its Mutrala (diuretic) and Balya (strengthening) properties and is used in urinary tract disorders and kidney stones.[13] Shatavari (*Asparagus racemosus*) is considered a Rasayana (rejuvenative) herb that supports tissue nourishment and enhances immunity. Other herbs such as Varuna (*Crataeva nurvala*), Chandraprabha, and Dashamoola formulations are also used in renal disorders.[14]

Samprapti Ghatka of Vrikka vikara[15]

Dosha (Functional Principles):

- Predominant Kapha and Pitta involvement initially causing obstruction (Srotorodha).
- Secondary Vata aggravation occurs due to tissue depletion (Dhatu Kshaya).

Dushya (Affected Tissues):

- Rakta (blood), Meda (adipose tissue), Majja (bone marrow and nerve tissue), and Mutra (urinary system).

Adhithana (Site of Pathology):

- Vrikk (Kidney), Basti (Urinary bladder), Mutravaha Srotas (urinary channels), and Raktavaha Srotas (blood channels).

Samprapti (Pathogenesis):

- Faulty diet (Ahara) and lifestyle (Vihara) lead to weakened digestive fire (Mandagni).
- Formation of toxins (Ama) and aggravation of Kapha cause obstruction (Srotorodha) in Mutravaha and Raktavaha Srotas.
- Vata aggravation due to tissue depletion (Dhatu Kshaya) leads to degeneration of renal and urinary tissues (Basti-Kshaya Avastha).

Srotas (Channels Involved):

- Mutravaha Srotas (urinary channels), Raktavaha Srotas (blood channels), and systemic

Pranavaha Srotas (affected due to hypertension).

Purvarupa (Early/Prodromal Symptoms):

- Fatigue, mild edema, pallor, anorexia, mild dyspnoea, and dizziness (Shirashoola, Bhrama).

Rupa (Clinical Manifestations):

- Oliguria (Mutraalpata), pedal edema (Shotha), generalized weakness (Daurbalya), anorexia (Aruchi), nausea (Mūrchā), itching (Kandu), dyspnoea (Shwasa), palpitations (Hridaya Spandana), and signs of hypertension (Uccha Raktachapa).

## CASE REPORT

A 39-year-old male with a known case of CKD for 8 Years, hypertension for 8 years, and **2 Type 2 Diabetes Mellitus** (T2DM) for 10 years, visited Jeena Sikho Lifecare Limited Clinic, Zirakpur, Punjab on 14 July 2024. At that time, the patient was on an insulin mixtard and not taking any hypertensive medicines. The patient suffered from generalized weakness (Daurbalya), gastric disturbances such as indigestion and acidity (Amlapitta), fever (Jvara), frothy urine (Phenila Mutratā), headache (Shirashoola), vomiting (Chhardi), and throat infection with irritation and inflammation (Kanthashotha). The patient was admitted to the IPD for treatment from 14/07/2024 to 19/07/2024.

Table 1: Vitals during the initial examination on the first day of the visit

Parameters

Findings

Blood Pressure

140/80 mmHg

Pulse Rate

88/min

Random Blood Sugar (RBS)

137 mg/dl

Weight

79.5kg

Table 2: Ashtavidha Pariksha on the first-day visit of the patient

Parameters

Findings

Nadi (Pulse)

Vatapittaj

Mala (Stool)

Abadha (Normal)

Mutra (Urine)

Phenila(Frothy urine)

Jiwaha(Tongue)

Saam (Coated)

Shabda (Speech)

Spashta (Clear)

Sparsha (Touch)

Anushna Sheeta (Moderate temperature)

Drika (Eyesight)

Avikrit (Normal)

Akriti (Appearance)

Madhyam (Moderate)

## INTERVENTIONS

II Ahara Krama[16]: The dietary guidelines provided by Jeena Sikho Lifecare Limited Clinic included the following:

1. Do's and Don'ts:

1. Avoid eating after 8 PM.

2. Take a small bite of solid food and chew it 32 times to aid proper digestion and nutrient absorption.

3. Do not consume wheat, refined food, milk, milk products, coffee, tea, and packed food.

b. Jala Sevan (Water intake):

1. Take small sips of water.

2. Drink about 250ml of alkaline water 3 to 4 times a day.

3. Consume Herbal tea 300ml twice daily. To prepare 300 ml of Herbal tea, combine 2 cloves (*Trifolium pratense*), 2 cardamom pods, 10 black pepper seeds (*Piper nigrum*), 5 gm cinnamon sticks (*Cinnamomum verum*), and a half tea spoon of fennel seeds (*Foeniculum vulgare*) with hot water.

4. Drink Red juice made up Beetroot, Pomegranate and Carrot (100-150 ml).

5. Green juice composed of Neem(*Azadirachta indica*),Tulsi(*Ocimum tenuiflorum*),Paan(*Piper betle*),Karela(*Momordica charantia*),Jamun(*Syzygium cumini*),Sadabahar (*Vinca rosea*) taken in quantities of 10 gm each, 200 ml water added, ground in a mixer grinder, filtered, and consumed in a quantity of (100-150 ml).

6. Living water: The approach involves a three-tiered filtration system using clay pots, each serving a specific purpose to purify and energize the water: Top Pot: Fill this pot with a mixture of small and large river stones, followed by charcoal made from burning wood. This layer acts as an initial filter, removing larger impurities. Middle Pot: Place a similar mix of stones here. Additionally, add Moringa seed powder (also known as drumstick or "Sahjan" powder), a silver vessel, a copper vessel, and Rudraksha(*Elaeocarpus angustifolium*). Moringa seeds are known for their natural water-purifying properties, while silver and copper are believed to enhance the quality of water. Bottom Pot: This pot remains unaltered and serves as the collection chamber for the purified water. Advised to drink as per the need.

7. Boil 2 liters of water to reduce it to 1 liter and consume.

c. Aim to drink 1 liter of alkaline water daily (Procedure as follow):

1. Setup the Glass Jug: Fill a clean jug with fresh drinking water.

2. Add Copper Vessel: Place a copper vessel or glass inside the jug.

3. Infuse Flavors: Add slices of carrot, cucumber, and lemon to the water.

4. Add Herbs: Include ginger slices, mint leaves, and coriander leaves.
5. Optional Spice: Add a slice of green chili for added flavor.
6. Let it Sit: Allow the mixture to sit for 12 hours.
7. Add Amalaki (*Emblica officinalis*) and Basil (*Ocimum tenuiflorum*): After 6 hours, add 3–4 pieces of Amalaki and a handful of Basil leaves. Let it infuse for 6 hours.
8. Ready to Drink: 3 to 4 times a day in divided portions

d. Shooka Dhanya Sevan:

1. Incorporate five types of millet into diet: (Priyaṅgava) Foxtail (*Setaria italica*), (Śyāmākā) Barnyard (*Echinochloa esculenta*), (Kodrava) (*Paspalum scrobiculatum*) and Browntop (*Urochloa ramosa*).

2. Use only steel cookware for preparing the millets. Cook the millets only using mustard oil.

e. Ayurvedic and Disciplined & intelligent Person's diet (DIP) includes:

Time

Meal

Items Included

5:45 AM

Early Morning

Herbal tea, curry leaves (1 leaf per minute, up to 5 leaves), raw ginger, turmeric

9:00 – 10:00 AM

Breakfast

Steamed seasonal fruits (weight × 10 grams), mugda yusha, fermented millet shake (4–5 types)

11:00 AM

Morning Snack

Red juice (150 ml), ingredients include Carrot (*Daucus carota*), Beetroot (*Beta vulgaris*)

12:30 – 2:00 PM

Lunch

Plate 1: Steamed salad (weight × 5 grams)

Plate 2: Millet recipe

4:00 – 4:20 PM

Evening Snack

Green juice (100–150 ml), ingredients include Coriander leaves (*Coriandrum sativum*), Mint leaves (*Mentha spicata*), Spinach leaves (*Spinacia oleracea*), Curry leaves (*Murraya koenigii*), Tulsi leaves (*Ocimum tenuiflorum*)

6:15 – 7:30 PM

Dinner

Plate 1: Steamed salad (weight × 5 grams), chutney, soup

Plate 2: Millet khichdi

f. Fasting:

1. One-day fasting per week.

g. Special Instructions:

1. Express gratitude to the divine before consuming food or drinks.

2. Sit in Vajrasana (a yoga posture) after each meal.

3. 10-minute slow walk after every meal.

h. Diet Types:

1. The diet comprises low-salt solid, semi-solid, and smoothie options.

2. Suggested foods include herbal tea, red juice, green juice, a variety of steamed fruits, fermented millet shakes, soaked almonds, and steamed salads.

II. Lifestyle Recommendations

(i) Include Dhyana (meditation) for relaxation.

(ii) Engage in Yoga (Sukhasana and Sukshma pranayama) from 6:00 AM to 7:00 AM.

(iii) Practice barefoot brisk walk for 30 minutes.

(iv) Ensure 6-8 hours of quality sleep each night.

(v) Adhere to a structured daily routine.

II. Panchkarma procedures were administered to patients.

1. Avagha Swedana [17]

Procedure: The patient was immersed up to the navel in a tub of warm water. Sweating was encouraged by maintaining the water temperature at 42°C. The procedure was recommended to be followed for 40 minutes.

2. GokshurPunarnava Siddha Sneha Basti (90ml)[18]

Procedure: 90ml of this Gokshur punarnava oil was inserted with the patient laying in the left lateral Position. The Gokshur and PunarnavaSiddhaSneha were gently introduced into the rectum using an enema tube. The patient usually does this sneha basti for 8-12 hours.

3. Kashaya Basti with Punarnava and Gokshur[19]

Procedure: The roots of Gokshur (*Tribulus terrestris*) and Punarnava (*Boerhavia diffusa*), were taken in quantity of 50gm each and 20 gms of fennel (*Foeniculum vulgare*)Kalka boiled with 1600 ml of water, reduced to 400ml, and filtered. Rock salt :10gm was mixed with Honey: 40 ml, & stirred hard till frothing. 30 ml of Ksheerbala Taila was taken and the mixture of Honey and Rock salt mixed with The decoction of Gokshur and Punarnava, totaling a volume of 480 ml. The patient was positioned on his left side with his right knee flexed to his abdominal wall and the left knee fully extended. The enema apparatus was sterilized; the enema tube was lubricated for easy administration. The lukewarm Gokshur and PunarnavaNiruha Basti (480 ml) was gently introduced into the rectum using the enema tube. The patient was asked to retain the liquid as long as comfortably possible.

4. Shirodharawith Ksheerabala oil [20]

Procedure: The procedure began with the patient lying in a supine position, followed by the continuous pouring of warm Ksheerabala oil over the forehead from a Shirodhara pot from a height of 6 inches. The oil flowed in a rhythmic stream over the Ajna (third eye) chakra

for 45 minutes. This procedure was administered on alternate days, using 1 litre of oil maintained at 40°C.

#### 5. Shiropichu with Brahmi Tail[21]

Procedure: Warm Brahmi Tail was massaged on the scalp and neck for 20–30 minutes, a cloth pad soaked in this warm oil was placed on the forehead, covering the Ajna Chakra and crown, left in place for 20 minutes. The cloth was removed, & the patient was advised to massage the scalp gently.

#### 2. Sarvanga Abhyanga with Bala oil[22]

Procedure: In Sarvanga Abhyanga with Bala oil, lukewarm oil is applied over the whole body and massaged with gentle, rhythmic strokes from head to toe, paying attention to joints and muscles. The process lasts 30–45 minutes, followed by mild steam therapy (Swedana) and a warm bath, leaving the body relaxed, nourished, and rejuvenated.

#### 6. Vrikka Basti with Punarnava Taila[23]

Procedure: It was kept at a steady, pleasant temperature. Deep penetration into the underlying tissues was ensured by the oil's retention for 20 to 30 minutes. With the removal of Tail, the area was gently massaged to improve blood flow and absorption.

### III. Shaman Chikitsa

Based on the clinical evaluation, a detailed and patient-specific medication protocol was devised, as outlined in Table 3.

Table 3: Medicine Name, Ingredients, Therapeutic Effect

Medicine Name

Ingredients

Therapeutic Effects

GFR Powder

Varun (*Crateva nurvala*), Punarnava (*Boerhavia diffusa*), Gokshur (*Tribulus terrestris*), Kaasni (*Cichorium intybus*), Bhumi Amla (*Phyllanthus niruri*), Shirish (*Albizia lebbek*),

Shigru (*Moringa oleifera*), Apamarg (*Achyranthes aspera*)

Supports Vrikka Karya (kidney function) and acts as Shothahara (anti-inflammatory), helping alleviate renal symptoms.

Chandervati

Kapoor Kachri (*Hedychium spicatum*), Vach (*Acorus calamus*), Motha (*Cyperus rotundus*), Giloy (*Tinospora cordifolia*), Devadaru (*Cedrus deodara*), Daru Haldi (*Curcuma longa*), Atees (*Aconitum Heterophyllum*), Pippali Mūla (*Piper longum*), Amla (*Phyllanthus emblica*), Chitrak (*Plumbago Zeylancia*), Dhaniya (*Coriandrum sativum*), Haritaki (*Terminalia chebula*), Vayavidang (*Embelia ribes*), Peepal (*Ficus religiosa*), Kalimirch (*Piper nigrum*), Sonth (*Zingiber officinale*), Gajapippali (*Scindapus Officinalis*), Swarn Makshik Bhasma, Sajjikshar, Sendha Namak, Kala Namak, Choti Elaichi (*Elettaria cardamomum*), Dalchini (*Cinnamomum verum*), Tejpatta (*Cinnamomum tamala*), Danti (*Baliospermum montanum*), Nisoth (*Operculina turpethum*), Banslochan (*Bambusa arundinacea*), Loh bhasma, Shilajeet (*Asphaltum punjabianum*), Guggul (*Commiphora wightii*)

Helps relieve Mutravaha Srotas Vikara (urinary tract symptoms) and supports Mutra Pravartana (healthy urine flow).

Divya Shakti Powder

Trikatu (*Piper nigrum* (Kali Mirch), *Piper longum* (Pippali), and dried *Zingiber officinale* (Saunth)), Triphala (*Haritaki* (*Terminalia chebula*), *Bibhitaki*, (*Terminalia bellirica*) and *Bhumi Amalaki* (*Phyllanthus niruri*)), Nagarmotha (*Cyperus rotundus*), Vay Vidang (*Embelia ribes*), Chhoti Elaichi (*Elettaria cardamomum*), Tej Patta (*Cinnamomum tamala*), Laung (*Syzygium aromaticum*), Nisoth (*Operculina turpethum*), Sendha Namak, Dhaniya (*Coriandrum sativum*), Pippali Mūla (*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*), Sazzikshar, Pushkarmool

It improves digestive function and metabolism of the body through its deepan-pachan

properties. Helps in body detoxification via virechan (purgation).

Raktchapvati

Jatamansi (*Nardostachys jatamansi*), Ajwain Khurasani (*Hyoscyamus niger*), Sarpagandha (*Rauwolf serpentineina*), Bhang (*Cannabis sativa*), Pippali Mool (*Piper longum*), Moti Pishti (Pearl calcium), Mukta sukta Pisti

Supports Hrid Poshana and enhances Agni

Vish Har Ras Syrup

Neem (*Azadirachta indica*), Giloy (*Tinospora cordifolia*), Kalmegh (*Andrographis paniculata*), Papaya (*Carica papaya*), Wheatgrass (*Triticum aestivum* Linn.), Punarnava (*Boerhavia diffusa*)

Supports Shwasa Roga Shamana (respiratory relief), promotes Sharirika Shodhana (natural detoxification), and boosts Ojas

Nephron Plus Cap.

Hazool yahoo bhasma powder, Chandra Prabha powder, Pashanbheda, Mulakkshar powder, Yavakshar powder, Amalaki Rasayan, powder, Trivikrum Rasa powder, Navasra powder, Nimbu Stava powder, Gokshur (*Tribulus terrestris*), Shila Pushpa, Black Salt powder, Hing powder.

Supports Koshtha Punarjanana, enhances Mutra Pravartana (urine outflow), and aids in Mutravaha Srotas

Dhatuposhak Cap.

Chuna Shudh, Shankh bhasam, Mukta shukti, Prawal pishti, Kapardika, Loh Bhasam  
Supports Madhumeha Shamana and enhances Ojas&Bala

Arogyavati

Kajan, Loh Bhasma, Abhrak bhasma, Tamra bhasma, Amalaki, Vibhitika, Haritaki, Chitrak, Katuka, Nimbu Patra

Supports Koshtha Punarjanana acts as a Rasayana, and boosts Ojas

Renal support syrup

Gokshur (*Tribulus terrestris*), Chirayata (*Swertia*), Harad (*Terminalia chebula*), Karanja (*Milletia pinnata*), Ashwagandha (*Withania somnifera*), Arjuna (*Terminalia arjuna*), Neem (*Azadirachta indica*)

Supports Vrikka Poshana, Basti Shuddhi, and Mutravaha Srotas Shamana

Dr. CKD Tablet

Pashanbhed (*Saxifraga lingulata*), Varun (*Crataeva nurvala*), Punarnava (*Boerhavia diffusa*), Gokshur (*Tribulus terrestris*), Apamarg (*Achyranthes aspera*), Harad (*Terminalia chebula*), Chirayata (*Swertia chirayita*), Kulthi (*Dolichos biflorus*), Bhumi Amalaki (*Phyllanthus niruri*), Guduchi (*Tinospora cordifolia*), Shitalchini (*Piper cubeba*), Anantmool (*Hemidesmus indicus*), Khas (*Vetiveria zizanioides*), Yab Kshar (*Hordeum vulgare*), Mooli kshar (*Raphanus sativus*), Kalmi shora, Sajjikhari, Shilajeet, Hajrul Yahud, Shwet Parpti  
It Improves Kidney Function (Vrikka Shuddhi, Mutravaha Srotas Shodhana)

MutraVardhak Vati

Gokshur (*Tribulus terrestris*), Guggul (*Commiphora wightii*), Sonth (*Zingiber officinale*), Kalimirch (*Piper nigrum*), Peepal (*Ficus religiosa*), Bibhitaki (*Terminalia bellirica*), Haritaki (*Terminalia chebula*), Amalaki (*Phyllanthus emblica*), Motha (*Cyperus rotundus*)  
Mutravaha Srotas Vikara Nashak (helps in relieving disorders of the urinary system such as Mutrakricha painful urination and other urinary tract disorders).

Kidney Shuddhi Ark

Sonth (*Zingiber officinale*), Kali mirch (*Piper nigrum*), Pippali (*Piper longum*), Badi Harad (*Terminalia chebula*), Baheda (*Terminalia bellirica*), Amla (*Phyllanthus emblica*), Nagarmotha (*Cyperus scariosus*), Varun Chhal (*Crataeva nurvula*), Gokhru (*Tribulus terrestris*), Pashanbhed (*Saxifraga ligulata*), Bhringraj (*Eclipta alba*), Shodit Guggul (*Commiphora wightii*), Bhavna Dravya-Gokharu Panchaang (*Tribulus terrestris*),  
Excipients- Sodium Methyl Paraben, Sodium Propyl Paraben, Gum Acacia (*Acacia arabica*)

Boosts Ojas and supports Swasthya Poshana

CKD syrup

Kasani (Cichorium intybus), Gokhru (Tribulus Terrestris), Shatavari (Asparagus racemosus), Giloy (Tinospora cordifolia, Sorbitol, Shilajeet (Asphaltum punjabicum)

Supports Vrikka Vikar Shamana and Mutravaha Srotas Shuddhi

Dr. Immune Tablet

Kesar (Crocus sativus), Shudh Kuchla (Strychnos Nuxvomica), Ashwagandha (Withania somnifera), Shatavari (Asparagus racemosus), Pippali (Piper longum), Tulsi (Ocimum tenuiflorum), Laung (Syzygium aromaticum), Choti Elaichi (Elettaria cardamomum), Sonth (Zingiber officinale), Haldi (Curcuma longa), Shankpushpi (Convolvulus prostratus), Papaya Satva (Carica papaya), Pudina (Mentha piperita), Dalchini (Cinnamomum verum), Tej Patta (Cinnamomum tamala), Ajwain (Trachyspermum ammi), Giloy (Tinospora cordifolia), Amla (Phyllanthus emblica), Haritaki (Terminalia chebula)

Boosts Ojas and enhances Bala

Fe Capsule

Makoy (Solanum nigrum), Shilajeet (Asphaltum punjabianum), Yasad Bhasam, Swarn Makshik Bhasam, Mukta Shukti Pishti

Enhances Rakta Dhatu Poshana and boosts Ojas

Table 4: Medicine advised during Treatment

IPD Medicine 14/7/24 from 19/7/24

Follow-up Medicine's 12/8/ 2024

Follow-up Medicine's 6/9/2024

Follow-up Medicine's 8/10/2024

Follow-up Medicine's 12/11/2024

Follow-up Medicine's 10/12/2024

GFR Powder Half a teaspoon BD (Adhobhakta with kosha jala) (After meal with lukewarm water)

GFR Powder Half a teaspoon BD (Adhobhakta with kosha jala)

GFR Powder Half a teaspoon BD (Adhobhakta with kosha jala)

GFR Powder Half a teaspoon BD (Adhobhakta with kosha jala)

GFR Powder Half a teaspoon BD (Adhobhakta with kosha jala)

GFR Powder Half a teaspoon BD (Adhobhakta with matra kosha jala)

Nephron Plus CAP 1 Cap. BD (Adhobhakta with kosha jala)

Nephron Plus Cap. 1 Cap. BD (Adhobhakta with kosha jala)

Nephron Plus Cap.1 Cap. BD (Adhobhakta with kosha jala)

Nephron Plus Cap.1 Cap. BD (Adhobhakta with kosha jala)

Kidney shuddhi 1 Cap. BD (Adhobhakta with kosha jala)

CKD Syrup 20 ml BD (Adhobhakta with sama matra kosha jala)

Rakt chap Vati 1 Tablet BD (Adhobhakta with kosha jala)

Dhatuposhak Cap. 1 Cap. BD (Adhobhakta with kosha jala)

Arogyavati 1 Tablet BD (Adhobhakta with kosha jala)

Kidney shuddhi Ark 15ml BD (Adhobhakta with sama matra kosha jala)

Chander vati 1 Tablet BD (Adhobhakta with kosha jala)

Mutravardhak vati 2 Tablet BD (Adhobhakta with kosha jala)

Chandervati 1 Tablet BD (Adhobhakta with kosha jala)

Fe capsule 1Cap.BD (Adhobhakta with kosha jala)

Divya Shakti Powder Half a teaspoon HS (Nishikala with kosha jala) (At bed time)

Divya Shakti Powder Half a teaspoon HS (Nishikala with kosha jala) (At bed time)

Arogyavati 1 Tablet BD (Adhobhakta with kosha jala)

Arogyavati 1 Tablet BD (Adhobhakta with kosha jala)

Divya Shakti Powder Half a teaspoon HS (Nishikala with kosha jala) (At bed time)

Renal support syrup 15ml BD (Adhobhakta with sama matra kosha jala)

Renal support syrup 15ml BD (Adhobhakta with sama matra kosha jala)

Renal support syrup 15ml BD (Adhobhakta with sama matra kosha jala)

Renal support syrup 15ml BD (Adhobhakta with sama matra kosha jala)

Dr. CKD Tablet 1 Tablet BD (Adhobhakta with kosha jala)

Dr. Immune Tablet 1 Tablet BD (Adhobhakta with koshna jala)

Chandervati 1 Tablet BD (Adhobhakta with koshna jala)

Chandervati 1 Tablet BD (Adhobhakta with koshna jala)

Chandervati 1 Tablet BD (Adhobhakta with koshna jala)

Renal support syrup 15 ml BD (Adhobhakta with sama matra koshna jala)

Arogyavati 1 Tablet BD (Adhobhakta with koshna jala)

Vish Har Ras Syrup 15ml BD (Adhobhakta with sama matra koshna jala)

## RESULTS

Table 6 shows a marked improvement in the patient's clinical symptoms following the integrated Ayurvedic intervention. Generalized weakness (Daurbalya), fever (Jvara), headache (Shirashoola), vomiting (Chhardi), and frothy urine (Phenila Mutratā) were completely resolved after treatment, indicating correction of Vata–Kapha imbalance and restoration of Mutravaha Srotas function. Gastric disturbances (Amlapitta) and throat infection (Kanthashotha) also showed significant relief, suggesting improved Agni and reduced Ama accumulation. Overall, the findings reflect effective Dosha Samya and systemic recovery achieved through Ayurvedic therapy.

## Table 5: Before and After Treatment Assessment of the Patient

Before Treatment

After Treatment

Generalized Weakness (Daurbalya) (4/10)[24]

Absent / Markedly improved

Gastric issues (Indigestion/Acidity) (Amlapitta)[25]

Relieved

Fever (Jvara)[26]

Absent (0)

Frothy urine (Phenila Mutratā)[27]

Absent

Headache (Shirashoola)[28]

Absent

Vomiting (Chhardi)[29]

Absent

Throat infection/irritation (Kanthashotha/ Galashotha)[30]

Relieved

The table 6 shows the pre- and post-intervention biochemical assessment of the patient recorded on 12/07/2024 and 09/12/2024. Blood urea levels markedly decreased from 164.78 mg/dl to 76.60 mg/dl, indicating a significant reduction in uremic toxin load and improved metabolic clearance. Serum creatinine levels also decreased from 7.60 mg/dl to 5.50 mg/dl, suggesting partial improvement in renal filtration function. These biochemical changes reflect a positive therapeutic response to the intervention, demonstrating supportive improvement in kidney function parameters. However, persistently elevated creatinine values indicate underlying chronic renal impairment, requiring continued long-term management and monitoring.

## Table 6: Pre and Post-Intervention Assessment of the Patient

Parameters

Findings

Date

12/7/24

9/12/24

Blood Urea

164.78mg/dl

76.60mg

Serum Creatinine

7.60mg/dl

5.50mg/dl

Table 7: Vitals During (IPD)

Date

B.P (mmHg)

14/7/24

120/80

15/7/24

100/70

16/7/24

110/80

17/7/24

120/80

18/7/24

110/70

19/7/24

120/80

## DISCUSSION

A 39-year-old male with a long-standing history <sup>1</sup> of chronic kidney disease (CKD) for 8 years, hypertension for 8 years, and type 2 diabetes mellitus (T2DM) for 10 years, presented to Jeena Sikho Lifecare Clinic, Zirakpur, Punjab, on 14 July 2024. At the time of presentation, the patient was receiving insulin Mixtard for glycemic control and was not on any antihypertensive medication. Clinically, he reported multiple systemic complaints including generalized weakness (Daurbalya), gastric disturbances such as indigestion and hyperacidity (Amlapitta), fever (Jvara), frothy urine (Phenila Mutratā), headache (Shirashoola), vomiting (Chhardi), and throat irritation and infection (Kanthashotha), reflecting multisystem involvement and underlying metabolic and renal dysfunction.

### Nidana (Causative Factors) of Vrikka Vikara

In Ayurvedic literature, the causative factors (Nidana) of Vrikka Vikara (renal disorders) are described as multifactorial, involving dietary, behavioral, and psychological components that predominantly aggravate Vata and Kapha Doshas, with occasional involvement of Pitta. Habitual intake of guru (heavy), snigdha (unctuous), madhura (sweet), and abishyandi (channel-obstructing) foods, excessive alcohol consumption, exposure to cold conditions, suppression of natural urges (Vega Dharana), and chronic mental stress are considered important etiological factors.[31] These factors impair Agni (digestive and metabolic fire), <sup>2</sup> resulting in the formation and accumulation of Ama (metabolic toxins). The combined effect of vitiated Doshas and Ama leads to obstruction of the Mutravaha Srotas (urinary channels), ultimately contributing to the development of Vrikka Vikara.

### Samprapti (Pathogenesis) of Vrikka Vikara

The pathogenesis of Vrikka Vikara involves the accumulation and aggravation of Kapha

and VataDoshas within the Mutravaha Srotas. Ama further contributes to Srotorodha (channel obstruction), disrupting normal urine formation and excretion, thereby causing progressive deterioration of renal function. Clinically, this condition manifests as Mutrakrichra (dysuria), Mutraghata (urinary retention or obstruction), Shotha (edema), and Daurbalya (generalized weakness).[32] As the disease progresses, disturbances in Dhatu metabolism—particularly Rasa, Rakta, and Meda Dhatus—occur, leading to systemic complications and gradual organ dysfunction.

#### Ahara and Vihara Chikitsa (Dietary and Lifestyle Management)

The patient was advised to follow a Vata-pacifying and renal-supportive diet comprising light, easily digestible, and nutritionally balanced foods. The dietary regimen included millets such as foxtail, barnyard, kodrava, and browntop, along with fresh fruit and vegetable juices, alkaline water, and herbal infusions. Wheat, refined and processed foods, milk, coffee, tea, and late-night meals were restricted to reduce metabolic burden. Additional dietary recommendations included thorough mastication, cooking with mustard oil, and using steel utensils to enhance digestion and nutrient assimilation.[33] Lifestyle modifications included early morning meditation (Dhyāna), Sukhasana, gentle Prāṇāyāma (Sūkṣma Prāṇāyāma), and 30 minutes of barefoot brisk walking. Adequate sleep of 6–8 hours and adherence to a structured daily routine were emphasized to maintain digestive efficiency, systemic balance, and musculoskeletal health.

#### Panchkarma Mode of Action

According to Ayurvedic principles, the Panchakarma therapies administered in this case act through Dosha Shodhana (bio-purification), Srotoshodhana (channel cleansing), and Agni Deepana (enhancement of metabolic fire) mechanisms. Avagha Swedana and Sarvanga Abhyanga facilitate liquefaction and mobilization of aggravated Doshas and Ama, promoting their elimination and improving systemic circulation.[34] Sneha Basti and Kashaya Basti with Gokshur and Punarnava regulate Apana Vata, enhance renal excretory

function, and support detoxification through the Mutravaha Srotas. Shirodhara and Shiropichu exert calming effects on the central nervous system, reducing stress-induced Vata aggravation and improving neuroendocrine balance.[35]Vrikka Basti provides localized nourishment and improves renal tissue perfusion, thereby supporting kidney function. Overall, these therapies collectively restore Dosha balance, improve microcirculation, and enhance metabolic and renal functional integrity.[36]

### Treatment Result

The clinical assessment demonstrated substantial symptomatic improvement following the integrated Ayurvedic intervention. Symptoms such as generalized weakness (Daurbalya), fever (Jvara), headache (Shirashoola), vomiting (Chhardi), and frothy urine (Phenila Mutratā) were completely resolved, suggesting normalization of Vata–Kapha Dosha imbalance and restoration of Mutravaha Srotas function. Gastric disturbances (Amlapitta) and throat infection (Kanthashotha) showed significant relief, indicating enhanced Agni and reduced Ama accumulation. These findings collectively reflect Dosha Samya and overall systemic recovery achieved through Ayurvedic therapeutic measures. Biochemical evaluation further supported the clinical improvement. Blood urea levels showed a marked reduction from 164.78 mg/dl on 12/07/2024 to 76.60 mg/dl on 09/12/2024, indicating a substantial decrease in uremic toxin burden and improved metabolic clearance. Serum creatinine levels also decreased from 7.60 mg/dl to 5.50 mg/dl, suggesting partial improvement in renal filtration capacity. Although these changes indicate a favorable therapeutic response, persistently elevated creatinine values reflect ongoing chronic renal pathology, highlighting the need for continued long-term Ayurvedic management and regular renal function monitoring.

### NEED FOR FURTHER RESEARCH

1 **Chronic Kidney Disease (CKD)** is a complex condition requiring a multifaceted management approach. Combining Ayurvedic principles with lifestyle changes has

demonstrated the potential to improve patient outcomes, more research is required to validate and standardize these approaches.[37] To assess the effectiveness, safety, and long-term advantages of Ayurvedic treatments such as Ayurveda formulations, Panchkarma procedures, and dietary regimens in the **1 management of chronic kidney disease**, clinical trials are required.

## CONCLUSION

This case report highlights the potential role of integrated Ayurvedic management in a 39-year-old male with long-standing **chronic kidney disease (CKD)** for 8 years, hypertension for 8 years, and **type 2 diabetes mellitus** for 10 years, who presented to Jeena Sikho Lifecare Clinic, Zirakpur, Punjab, on 14 July 2024. At presentation, the patient exhibited multiple systemic complaints including generalized weakness (Daurbalya), gastric disturbances (Amlapitta), fever (Jvara), frothy urine (Phenila Mutratā), headache (Shirashoola), vomiting (Chhardi), and throat infection (Kanthashotha), indicating multisystem involvement and Mutravaha Srotas dysfunction. Following an integrated Ayurvedic treatment protocol comprising dietary and lifestyle modifications along with Panchkarma therapies such as Avagha Swedana, Sarvanga Abhyanga, Sneha Basti, Kashaya Basti, Shirodhara, Shiropichu, and Vrikka Basti, marked clinical improvement was observed. All major symptoms including Daurbalya, Jvara, Shirashoola, Chhardi, and Phenila Mutratā were completely resolved, while Amlapitta and Kanthashotha showed significant relief. Biochemical parameters demonstrated improvement, with blood urea decreasing from 164.78 mg/dl to 76.60 mg/dl and serum creatinine from 7.60 mg/dl to 5.50 mg/dl, indicating supportive enhancement in renal function. Overall, this case suggests that integrated Ayurvedic therapy, including Panchakarma, may contribute to symptomatic relief, metabolic balance, and supportive renal function improvement in CKD patients, warranting further controlled clinical studies for validation.

## REFERENCES

1. Kovesdy CP. **3 Epidemiology of chronic kidney disease: an update 2022.** *Kidney international supplements.* 2022 Apr 1;12(1):7-11.

2. Shlipak MG, Tummalapalli SL, Boulware LE, Grams ME, Ix JH, Jha V, Kengne AP, Madero M, Mihaylova B, Tangri N, Cheung M. The case for early identification and intervention **1 of chronic kidney disease**: conclusions from a **Kidney Disease: Improving Global Outcomes (KDIGO)** Controversies Conference. *Kidney international*. 2021 Jan 1;99(1):34-47.
3. Kovesdy CP, Davis JR, Duling I, Little DJ. Prevalence of anemia in adults with **chronic kidney disease in** a representative sample **of the United States** population: analysis of the 1999–2018 **National Health and Nutrition Examination Survey**. *Clinical Kidney Journal*. 2023 Feb;16(2):303-11.
4. Kalantar-Zadeh K, Jafar TH, Nitsch D, Neuen BL, Perkovic V. Chronic kidney disease. *The Lancet*. 2021 Aug 28;398(10302):786-802.
5. Verma P, Mahajan J, Kumar S, Acharya S. Lifestyle modification and nutrition: halt the progression **to end-stage renal disease**. *International Journal of Nutrition, Pharmacology, Neurological Diseases*. 2022 Jul 1;12(3):105-11.
6. Manish A, Chaudhary G, Singh SP, Singh M, Richa. Clinical evaluation **of chronic kidney disease** management: integrating lifestyle modification and Ayurveda. *Int J AYUSH*. 2024 Oct;2013(10). doi: 10.22159/prl.ijayush.v2013i10.1152.
7. Chen CH, Teitelbaum I. Physiology of Peritoneal Dialysis. *Applied Peritoneal Dialysis: Improving Patient Outcomes*. 2021:11-23.
8. Shafiee MA, Hosseini SF, Mortazavi M, Emami A, Zadeh MM, Moradi S, Shaker P. Anticoagulation therapy in COVID-19 patients with chronic kidney disease. *Journal of Research in Medical Sciences*. 2021 Jan 1;26(1):63.
9. Kalantar-Zadeh K, Jafar TH, Nitsch D, Neuen BL, Perkovic V. Chronic kidney disease. *The Lancet*. 2021 Aug 28;398(10302):786-802.
10. Purushothaman V, Santhanam R, Ravi P, Kuppusamy M. Development and Validation of Yoga Program for Patients with Chronic Kidney Disease. *Indian Journal of Palliative Care*. 2024 Nov 15;30(4):380.
11. Quimby JM, Brock WT, Moses K, Bolotin D, Patricelli K. Chronic use of maropitant for

the management of vomiting and inappetence in cats with chronic kidney disease: a blinded, placebo-controlled clinical trial. *Journal of feline medicine and surgery*. 2015 Aug;17(8):692-7.

12. Latham-Mintus K, Doshi S, Moorthi R. Chronic Kidney Disease, Muscle Weakness, and Mobility Limitation. *Innovation in Aging*. 2019 Nov 8;3(Suppl 1):S523.

13. Shrinvas KS, Deshmukh RA, Tenahalli RM, Baragi JA, Bagali SS, Haiyalkar M. A conceptual study on Charakokta Nidana of Visarpa with special reference to present day Ahara and Vihara. *Journal of Ayurveda and Integrated Medical Sciences*. 2022 Nov 3;7(9):115-21.

14. Ramteke RS, Patil PD, Thakar AB. Microalbuminuria in Ayurveda. *International Journal of Ayurvedic Medicine*. 2014;5(4):297-306.

15. Shrinvas KS, Deshmukh RA, Tenahalli RM, Baragi JA, Bagali SS, Haiyalkar M. A conceptual study on Charakokta Nidana of Visarpa with special reference to present day Ahara and Vihara. *Journal of Ayurveda and Integrated Medical Sciences*. 2022 Nov 3;7(9):115-21.

16. Bhojar K, Mhaiskar B, Pusadkar S, Bhojar S, Salankar H. A Review Article on Ahar Vihar According to Ritus in Ayurveda. *Indian Journal of Forensic Medicine & Toxicology*. 2021 Apr 1;15(2):4383.

17. Tamrakar U, Chouhan M, Soni K. A case study on Gridhasi wsr to Sciatica. *Journal of Ayurveda and Integrated Medical Sciences*. 2024 Feb 25;9(1):294-7.

18. Das A, Sharma R. Ayurvedic Management of Vrikka Ashmari (Kidney Stones) through Yoga Basti: A Case Study. *IJCRT Research Journal| UGC Approved and UGC Care Journal| Scopus Indexed Journal Norms*. 2025 Aug 14;15(3):50997-1000.

19. Bhargavi M, Chaithanya K. A Comparative clinical evaluation of Sirodhara with Sukhosnajala, Tila Tailam and Brahmi Tailam in the management of mild to moderate essential hypertension. *Journal of Ayurveda and Integrated Medical Sciences*. 2018 Jun 30;3(03):13-20.

20. Dudhamal TS. Wound Healing Effect of Humri (*Securinega leucopyrus*) and Supportive

Ayurveda Therapy in Beurger's Ulcer. *Annals of Ayurvedic Medicine*. 2016 Oct 25;5(1):37-

21. Singh E, Sharma S, Pareek A, Dwivedi J, Yadav S, Sharma S. Phytochemistry, traditional uses and cancer chemopreventive activity of Amla (*Phyllanthus emblica*): The Sustainer. *Journal of Applied Pharmaceutical Science*. 2012 Jan 30(Issue):176-83.
22. Soni S, Sharma HK, Kaushal P, Singh C. Effect of process parameters on the antioxidant activities of bioactive compounds from Harad (*Terminalia chebula* retz.). *Agricultural Engineering International: CIGR Journal*. 2015 Jun 1;17(2).
23. Kumar P, Kamle M, Mahato DK, Bora H, Sharma B, Rasane P, Bajpai VK. *Tinospora cordifolia* (Giloy): phytochemistry, ethnopharmacology, clinical application and conservation strategies. *Current pharmaceutical biotechnology*. 2020 Oct 1;21(12):1165-75.
24. Ahmed K, Shaheen G, Asif HM. *Zingiber officinale* Roscoe (pharmacological activity). *J. Med. Plants Res*. 2011 Feb 4;5(3):344-8.
25. Thorat DB, Narwane S, Kunkulol R, Bhawar SB. Pharmacognostic, Physicochemical and Phytochemical analysis of *Hibiscus cannabinus* Leaves. *Research Journal of Pharmacognosy and Phytochemistry*. 2024 Apr 1;16(2):89-94.
26. Decker E, Kendrick J. Research in the CKD clinic: highs and lows. *Advances in chronic kidney disease*. 2014 Jul 1;21(4):344-8.
27. Aggarwal A, Sokiya G, Sharma G. **Management of Chronic Kidney Disease**-An Ayurveda Case Study. *Journal of Ayurveda and Integrated Medical Sciences*. 2023 Sep 2;8(7):250-6.
28. Bhujbal S, Malawade G. Therapeutic Nutrition in Ayurveda for **Chronic Kidney Disease**. In *Therapeutic Nutrition in Ayurveda* (pp. 283-298). CRC Press.
29. Rathi S, Rathi M. A Clinical Study of Yashtimadhu & Guduchi with special reference to Amlapitta. *Journal of Ayurveda and Integrated Medical Sciences*. 2024 Feb 22;9(1):54-9.
30. Vaidya M, Upadhyay A, Kumar S, Sharma K. Exploration of therapeutic potential and evidence-based applications of Shwaskuthar Rasa: A scoping review. *Journal of Drug*

Research in Ayurvedic Sciences. 2024 Mar 1;9(2):75-85.

31. Sharma R, Maurya A, Yadav H, Shukla AC, Tangjang S. Pippali (Piper longum L.): A Plant with Versatile Pharmaceutical Uses. In *Advances in Medicinal and Aromatic Plants 2024* (pp. vol2-163). Apple Academic Press.

32. Chauhan M, Katiyar P, Gupta H, Antal S. A role of evidence-based Ayurvedic medicines. In *Integrated Pathy 2025* Jan 1 (pp. 107-147). Academic Press.

33. Sushma TJ, Gomare JM, Warad V, Binorkar SV, Lavanya L. Ritu Haritaki (Seasonal Regimen with Indian Rhubarb)—A Boon to Seasonal Health. *Journal of Neonatal Surgery*. 2025;14(15s):1273.

34. Tak S, Sharma MC. CLINICAL STUDY OF “GOKSHURADI YOGA” FOR THE MANAGEMENT OF CHRONIC RENAL FAILURE.

35. Pandey A, Azad AS, Bhardwaj A, Thakur G, Prakash GM. SHRIDHAR UNIVERSITY Dayanand Ayurvedic College

36. Manpreet K, Anita S, Piyush G. Phytochemical and pharmacological study of dhatura: A review. *International Journal of Research in AYUSH and Pharmaceutical Sciences*. 2017:113-8.

37. M. Bhujbal Swarupa Vd. The Aetiopathological Study of Chronic Renal Failure with Ayurveda Perspective. PhD Thesis 2009-2012. Tilak Maharashtra Vidyapeeth, Maharashtra.

## Sources

1 <https://pmc.ncbi.nlm.nih.gov/articles/PMC9073222/>  
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