



UNDERSTANDING OF CHRONIC KIDNEY DISEASE THROUGH THE LENS OF AYURVEDA

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ABSTRACT

Background:

Chronic Kidney Disease (CKD) poses a significant global health burden, affecting approximately 13% of the adult population and ranking as the 8th leading cause of death in India. Despite advances in biomedical science, the progressive and multifactorial nature of CKD continues to challenge conventional therapeutic strategies. In this context, Ayurveda a traditional Indian system of medicine rooted in holistic principles offers a promising complementary perspective for CKD management.

Objective:

This conceptual article aims to explore the untapped potential of Ayurveda in understanding and managing CKD, through a multidisciplinary lens that integrates classical Ayurvedic wisdom with contemporary clinical insights.

Methods and Scope:

The methodology involved scrutinizing classical Ayurveda texts and meticulously examining pertinent scientific databases, including PubMed, Google Scholar, and the AYUSH Research Portal. This quest employed MeSH (Medical Subject Headings) terms and keywords to identify clinical trials employing Ayurvedic medicine/therapy as an intervention within the context of CKD

Conclusion:

By bridging traditional Ayurvedic knowledge with modern nephrology, this article advocates for a more integrative, patient-centric approach to CKD care. This synergistic model holds the potential to enhance clinical outcomes, improve quality of life, and contribute to the development of sustainable, holistic kidney care strategies. Further research and interdisciplinary collaboration are essential to validate and operationalize Ayurvedic interventions within the framework of evidence-based medicine.

KEYWORDS: Chronic Kidney Disease, Ayurveda, Mutravaha Srotas, Nephropathy, Integrative Medicine, Herbal Medicine, Holistic Health

INTRODUCTION

Chronic Kidney Disease (CKD) is a progressive condition marked by a gradual loss of kidney function, often advancing silently until significant damage has occurred. It is classified into five stages based on glomerular filtration rate (GFR), with the final stage (ESRD) requiring dialysis or kidney transplantation. Common causes include diabetes, hypertension, and glomerulonephritis. Early stages are typically asymptomatic, but as the disease progresses, signs and symptoms such as fatigue, weakness, loss of appetite, nausea, vomiting, swelling (edema), decreased urine output, and shortness of breath may appear. Diagnosis relies on markers like serum creatinine, eGFR, and albuminuria. While current treatments help manage the disease, they often have limitations, prompting interest in alternative systems like Ayurveda

Materials and Methods

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DISCUSSION

Anatomy of kidney in Ayurveda

In classical Ayurvedic texts, including the *Bṛhatrayī* (Charaka, Sushruta, and Ashtanga Hridaya), the **Vrikkas** (kidneys) are described as one of the vital abdominal organs (*Koshtha Gata Avayava*), positioned bilaterally in the *Parsva Pradesha* (flank region). Anatomically, they are depicted as paired, fleshy masses resembling a *Māmsapinda* reflecting their solid, glandular consistency.

During intrauterine development (*Garbha Sharira*), the formation of Vrikkas is attributed to the essence (*Sara*) of *Rakta* (blood) and *Medas* (fat), indicating their vascular and metabolic significance. Within the framework of Ayurvedic srotas (physiological channels), Vrikkas serve as principal components of both the *Mutravaha Srotas* (urinary system) and *Medovaha Srotas* (fat metabolism pathway). Their inclusion in *Medovaha Srotas* is conceptually aligned with the role of adrenal (suprarenal) glands, located anatomically atop the kidneys in lipid metabolism, as understood in contemporary



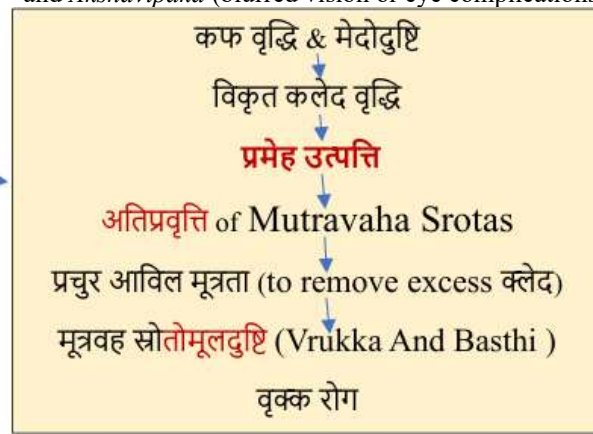
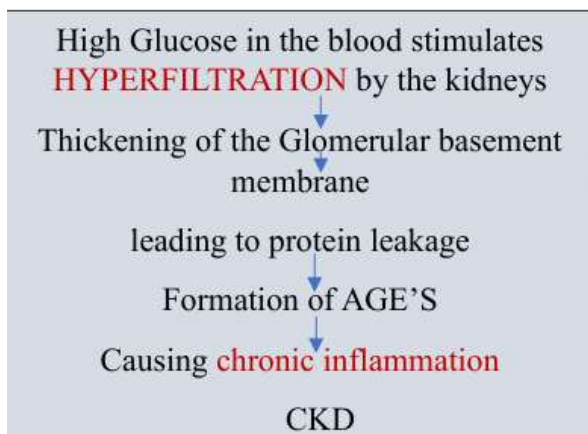
physiology. This multi-faceted understanding underscores the integrative anatomical and functional role of Vrikkas in Ayurvedic medicine.

Physiology of Mutravaha Srotas

In Ayurvedic physiology, the formation of urine (*Mutra*) and the functional role of kidneys (*Vrikka*) are described within the framework of *Mutravaha Srotas* (the channel system responsible for urine transport and excretion). Urine formation is understood through two primary mechanisms. First, during the *Katu Avastha Paka* (final phase of digestion) occurring in the *Pakwashaya* (large intestine), the *Kitta Bhaga* (waste fraction) of *Ahara Rasa* (nutrient essence of digested food) gives rise to *Mutra*. This concept finds contemporary parallel in emerging research linking uremic toxins and intestinal dysbiosis commonly referred to as the *gut-kidney axis* to the pathophysiology of uremia and CKD. Second, *Mutra* is derived from the *Kleda* (excess fluid/metabolic moisture) component of the *Saptadhatus* (seven body tissues), as stated in classical texts: "*Mutrasya Kledavahanam*"—urine serves to carry and eliminate bodily *Kleda*. The primary function of the kidneys in this context is the filtration and excretion of this *Kleda*, which is then transported to the *Basti* (urinary bladder) and expelled through *Mutravaha Srotas*. The process is regulated by *Apana Vayu*, a subtype of *Vata Dosha*, which governs the neuro-regulatory control of urinary secretion and elimination. Understanding the concept of *Kleda* is crucial in the Ayurvedic pathogenesis (*Samprapti*) of chronic kidney disease (CKD), where impaired *Kleda* metabolism and elimination are seen as foundational contributors to disease progression.

As Type 2 Diabetes Mellitus (T2DM) contributes to 30–60% of chronic kidney disease (CKD) cases, understanding its *Samprapti* (pathogenesis) from an Ayurvedic perspective is essential. The indulgence in *Kleda-karaka Ahara-Vihara* (dietary and lifestyle factors that increase moisture and heaviness in the body) leads to *Kapha* and *Medo-dushti*, resulting in *Vikruta Kleda Vriddhi*—a state that parallels elevated blood glucose levels (*hyperglycemia*). To eliminate this excess glucose, the kidneys initiate a compensatory mechanism of hyperfiltration, which over time causes thickening of the glomerular basement membrane. This disrupts normal permeability, leading to protein leakage and the formation of advanced glycation end-products (AGEs), which trigger chronic inflammation and cellular damage—key contributors to the progression of CKD.

In Ayurvedic terms, this ongoing effort to expel excessive *Kleda* results in *Atipravritti* (excessive flow) of the *Mutravaha Srotas* (urinary channels), manifesting as *Prachura Avila Mutrata*—a cardinal feature of *Prameha*. When unmanaged, this chronic pathological state gradually impairs vital components of the *Mutravaha Srotas*, especially the kidneys (*Vrikka*), ultimately resulting in *Vrikka Roga*. Clinically, this presents with symptoms akin to CKD such as *Daurbalya* (weakness), *Pada-shotha* (pedal edema), *Akshi-kuta pradeshi shotha* (periorbital swelling), *Angamarda* (body ache), *Tandra* (drowsiness), *Alpa-Ikshap Cheshtite Shwasam* (dyspnea on exertion), *Kshataкта Asyata* (metallic or bloody taste in mouth), *Hasta-Pada Tala Daha* (burning sensation in palms and soles), *Vaaram-Vaara Mutrapravritti* (frequent urination), *Arochaka* (loss of appetite), and *Akshavipaka* (blurred vision or eye complications).



Samprapti can be managed by modalities like, SHODANA: Considering the *vyadhi bala* and *rogi bala* Mrudu Shodana can be adopted, using *Vyoshadi yoga virechana* can be planned in order to pacify *Kapha* and *Vata dosha* and it is directly indicated in *Mutrakrichra* and *prameha chikitsa*. *Thapyadhi loha* can be used as it is directly indicated in *Prameha & Shophya & Kantaka panchamoola & Valli panchamoola* can be used as they are *SarvaPramehahra* and *Shophahra*. *Rasayana* like *Shilajathu rasayana* and *Shiva gutika* can be used.

Hypertension, accounting for approximately 27.2% of Chronic Kidney Disease (CKD) cases, stands as the second leading cause after Type 2 Diabetes Mellitus. From a modern medical standpoint, sustained high systemic blood pressure exerts increased force on the glomerular capillaries, which, over time,

damages the vascular endothelium through processes such as atherosclerosis. This impairs renal perfusion and oxygenation, leading to glomerular necrosis, progressive nephron loss, and ultimately CKD. In Ayurveda, hypertension can be conceptualized through the lens of *Margavarana*—obstruction in the channels—particularly the obstruction of *Rakta Vaha Srotas* (blood-carrying channels), resulting in *Vyana Vata Prakopa* (aggravation of the circulatory function of *Vata*). In the context of CKD, this pathogenesis progresses with *Sanga* (blockage) caused by *Vikruta Kleda* (vitiated fluid metabolism) in the *Dhamanis* (blood vessels) of the *Mutravaha Srotas* (urinary system). This obstruction disrupts the balance of *Vyana* and *Apana Vata*, leading to a functional deficit in the urinary system and resulting in *Vrikka Roga* (kidney disease). Thus, the Ayurvedic interpretation not only aligns with the structural

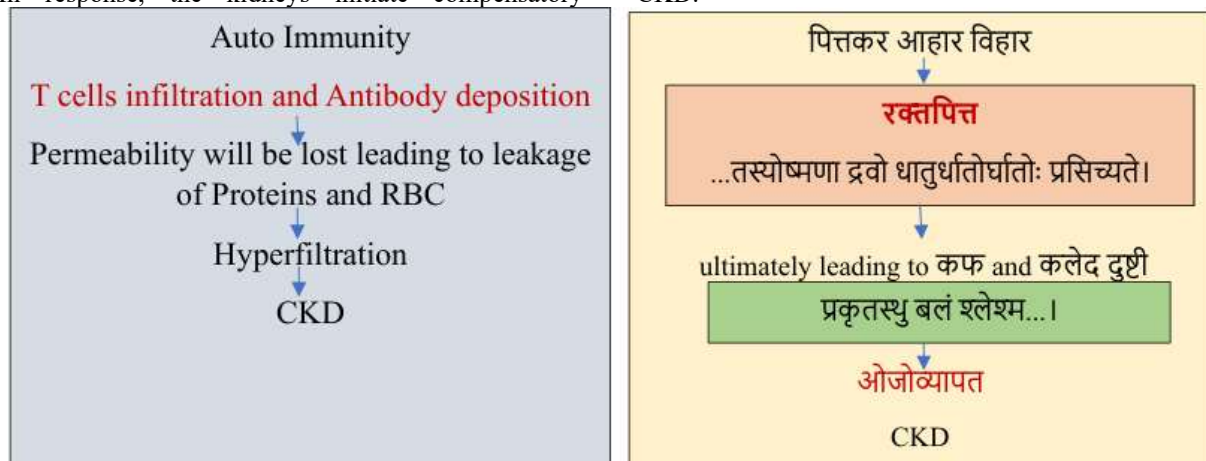
damage seen in modern pathology but also emphasizes the subtle physiological imbalances contributing to the onset of CKD.



Considering the vyadhi bala and rogi bala Mrudu Shodana can be adopted here, using Nimbaamruthadi eranda taila for Mrudu rechana as it is Shreshta Vatahara and directly indicated in Hrudroga, Vataraktha and Shotha chikitsa. Ashtaguna Manda can be used as it is Basthishodana and Raktha Vardhana and Brihatyadhi Gana as it is indicated in Hridroga & Mutrakrichra chikitsa. Along with this Yoga Pranayama Dhyana has also found to be useful.

Glomerulonephritis, another important contributor to chronic kidney disease (CKD), primarily arises from autoimmune mechanisms or abnormal immune responses. In such cases, antibodies and activated T-cells infiltrate renal tissue, leading to inflammation and damage to the glomerular filtration barrier. As the permeability of the glomerular membrane is compromised, proteins and red blood cells begin to leak into the urine. In response, the kidneys initiate compensatory

hyperfiltration to preserve function. However, over time, this persistent hyperfiltration causes thickening of the filtering membranes and scarring of renal tissues, progressively leading to CKD. From an Ayurvedic standpoint, this condition can be understood as the result of indulging in *Pittakara Ahara-Vihara* (diet and lifestyle that aggravate Pitta), which leads to *Vidagdhatata* a state of disturbed metabolism resulting in *Pitta* and *Rakta Dushti* (vitiation of Pitta and blood, which are both *Drava Dhatus*). This further disturbs *Kleda* and *Kapha Dosha*, eventually leading to *Ojo Vyapath* (disturbance of vitality and immunity). The combined doshic imbalance affects the *Mutravaha Srotas* (urinary system), initiating a pathological process that mirrors the progression of glomerulonephritis to CKD. This Ayurvedic interpretation emphasizes the interconnectedness of immune imbalance, metabolic disruption, and tissue-level dysfunction in the pathogenesis of CKD.



Katukadhya ghritam as it is Rakthapittahara, Shotahara and Chatushparni siddha ksheera can be used. In certain cases of Chronic Kidney Disease (CKD), particularly those associated with cystic kidney disorders, the pathological progression involves cystic expansion within the renal parenchyma. These fluid-filled cysts exert pressure on surrounding structures, compressing nephrons and triggering interstitial fibrosis. This fibrotic response gradually compromises the kidneys' filtration capacity, contributing to functional decline and the onset of CKD. From an Ayurvedic

perspective, this condition is understood as the solidification of *Vikruta Kleda* (vitiating fluid) within the *Mutravaha Srotas* (urinary channels), facilitated by the *Rukshata* (dryness) of aggravated *Apana Vata*. This leads to the formation of *Granthi* (cystic or nodular growths) at the root (*Mula*) of the *Mutravaha Srotas*, resulting in *Karmahani* (functional impairment) and eventually manifesting as *Vrikka Roga* (kidney disease). Therapeutic modalities in Ayurveda may include *Snehapana* (oleation therapy) with *Varunadi Taila* or *Pippalyadi Ghrita*, both of which are indicated in the treatment of *Granthi* and



Mutrakrichra (urinary disorders), aiming to dissolve pathological accumulations and restore normal function of the urinary system.

Pathya-pathya in ayurveda:

In the Ayurvedic management of Chronic Kidney Disease (CKD), strict adherence to *Pathya-Apathya* (wholesome and unwholesome dietary and lifestyle practices) plays a pivotal role in slowing disease progression and supporting renal function. A kidney-friendly *Pathya* diet includes easily digestible and nourishing items such as *Purana Shali* (old rice), *Yava Kshara* and *Yava Anna* (barley preparations), *Takra* (buttermilk), *Jangala Mamsa* and *Mamsa Rasa* (meat and meat soup from dry-land animals), *Mudga Yusha* (green gram soup), and cooling, light vegetables like *Kushmanda* (ash gourd), *Patola* (pointed gourd), and *Ardraka* (ginger). Renal-protective herbs and foods such as *Gokshura*, *Ghritha Kumari* (aloe vera), *Puga* (areca nut), *Kharjuraka* (dates), *Narikela Phala* (coconut), *Taladruma* (palm fruits), and *Haritaki* are also beneficial. Liquids such as *Sitala Peya* (cool herbal decoctions), *Sitala Annapana* (cooled light meals and drinks), and *Nadeya Jala* (clean well water) are recommended, sometimes flavored with *Karpura* (camphor) for added benefit.

Conversely, *Apathya* or contraindicated items that aggravate the condition and should be strictly avoided include *Madyapana* (alcohol), *Shrama* (excessive exertion), *Maitihuna* (sexual activity), and *Viruddha Ahara-Vihara* (incompatible food and habits). Improper dietary practices like *Vishamasana* (irregular eating), and harmful substances such as *Tambula* (betel leaf), *Matsya* (fish), *Lavanadraka Taila Bhrishtha* (salted and fried food in ginger oil), *Pinyaka* (oil cakes), *Hingu* (asafoetida), *Tila* (sesame), *Sarshapa* (mustard), and *Vegavarodha* (suppression of natural urges) are to be avoided.

Additionally, *Masha* (black gram), *Karira*, excessively *Tikshna* (pungent), *Vidahi* (acidic), *Ruksha* (dry), and *Amla* (sour) foods are considered detrimental to kidney health in this context. Such dietary and lifestyle guidance not only complements internal medication but also aids in maintaining systemic balance and reducing renal burden.

CONCLUSION

we can conclude that Managing Chronic Kidney Disease requires a holistic approach that combines modern medical understanding with traditional Ayurvedic principles. By focusing on correcting imbalances such as Oja Dusti, improving Jataragni, and restoring Dhatu Samyata, Rasayana the treatment aims to address the root causes of kidney dysfunction. The alignment with the principles of Amsha-Amsha Kalpana of Doshas in *Mutrakrichra*, *Prameha*, *Pandu*, *Rakthapitta*, and *Shotha Chikitsa* as described by Acharya Charaka, offers a comprehensive strategy to improve kidney health, enhance eGFR, and prevent further progression of CKD, ultimately improving the quality of life for individuals. Further extensive researches has to be conducted in this regard, in order to produce the evidence based medicine to 'REACH AYURVEDA TO EACH'

BIBLIOGRAPHY

1. Acharya Y T. *Sushruta Samhita with Nibandha sangraha commentary of Dalhanacharya. Nidana Sthana 9/18. Reprint ed. Varanasi (India): Chaukambha Sanskrit Sansthan; 2014.*
2. *Charaka Samhita shareera Sthana 8/1, with Aayurveda Deepikaa commentary of Chakrapani edited by Vaidya Yadavaji Trikamji Acharya, Chaukhamba Surbharati Prakashana, Varanasi, Reprint edition, 2009.*
3. <https://www.bing.com/ck/a?!&p=6a066fd0c89cd8e0af6e8d2059705278d93aab76f3e6b3c0bed0f004d13e988bJmltdHM9MTc0MTQ3ODQwMA&ptn=3&ver=2&hsh=4&fclid=2c193560-842f-6db5-1bcb2010854d6c14&psq=intestine+and+uremic+disease&u=a1aHR0cHM6Ly9wbWVubmNiaS5ubG0ubmloLmdvdi9hcnRpY2xlcY9QTUM1NDA4NTA3Lw&ntb=1>
4. *Ashtaanga Samgraha Nidaanasthaana, 9/5: 375.*
5. <https://www.bing.com/ck/a?!&p=304c6b1bdb5ee9820aaa311a3578fd5020ac8b3b193de2458446a15cebd870ecJmltdHM9MTc0MTQ3ODQwMA&ptn=3&ver=2&hsh=4&fclid=2c193560-842f-6db5-1bcb2010854d6c14&psq=STATpearl+ckd&u=a1aHR0cHM6Ly93d3cubmNiaS5ubG0ubmloLmdvdi9ib29rcy9OQks1MzU0MDQv&ntb=1>
6. *Charaka Samhita kalpa Sthana 8/46-50, with Aayurveda Deepikaa commentary of Chakrapani edited by Vaidya Yadavaji Trikamji Acharya, Chaukhamba Surbharati Prakashana, Varanasi, Reprint edition, 2009.*
7. Acharya Y T. *Sushruta Samhita with Nibandha sangraha commentary of Dalhanacharya. sutra Sthana 37/82-84. Reprint ed. Varanasi (India): Chaukambha Sanskrit Sansthan; 2014*
8. *Sharangadhara samhitha*
9. Acharya Y T. *Sushruta Samhita with Nibandha sangraha commentary of Dalhanacharya. sutra Sthana 38/31-32. Reprint ed. Varanasi (India): Chaukambha Sanskrit*
10. *Charaka Samhita chikitsa Sthana 4/46-50, with Aayurveda Deepikaa commentary of Chakrapani edited by Vaidya Yadavaji Trikamji Acharya, Chaukhamba Surbharati Prakashana, Varanasi, Reprint edition, 2009.*
11. *Charaka Samhita chikitsa Sthana 1/40, with Aayurveda Deepikaa commentary of Chakrapani edited by Vaidya Yadavaji Trikamji Acharya, Chaukhamba Surbharati Prakashana, Varanasi, Reprint edition, 2009.*