IAMJ

INTERNATIONAL AYURVEDIC MEDICAL JOURNAL

Review Article ISSN: 2320-5091 Impact Factor: 6.719

CHRONIC KIDNEY DISEASE – AYURVEDIC REVIEW

Anu Krishna P[1], **Madhava Diggavi**[2]

[1] final Year Kayachikitsa Pg Scholar, [2] Professor&Hod Dept of Pg Studies In Kayachikitsa
Taranath Government Ayurvedic Medical College and Hospital, Ballari, Karnataka, India

Corresponding Author: anukrishna.iijeesh@gmail.com

https://doi.org/10.46607/iamj3310072022

(Published Online: July 2022)

Article Received: 10/04/2022 - **Peer Reviewed:** 01/07/2022 - **Accepted for Publication:** 01/07/2022

Check for updates

ABSTRACT

Chronic Kidney Disease is recognized as a major health problem affecting approximately 13% of the population. Chronic Kidney Disease (CKD) is defined as either kidney damage or glomerular filtration rate (GFR) <_60 ml/min/1.73m^2 for a period of 3 months or more. Kidney damage is characterized by structural or functional abnormalities, with or without decreased GFR, and is manifested either by pathological abnormalities or markers of kidney damage including abnormalities in the composition of blood or urine, or abnormalities in imaging tests. This ayanadourbalya ultimately leads to the excessive loss of dhathusaramsa along with kledabhavas because of their loss of ability to hold them back before separating from malabhavas. This atipravritti of srothas causes vata prakopa and structural damage to the organ. Albuminuria seen in CKD stages 1 and 2 is nothing but the excess loss of dhathusaramsa due to ayanadourbalya. Finally concluded that CKD can be considered as Malasamchaya, Kledavridhi in shonita, or Nidanarthakara roga of Diabetes and Hypertension.

Keywords: CKD, Kleda, Ayanadourbalya, GFR

INTRODUCTION

Chronic kidney disease[1] is one of the major clinical problems in specialty practice in the current scenario. Multiple factors are responsible for the manifestation of chronic kidney disease, however, diagnosing the exact cause is not easy. It is also encountered as upadrava of hridroga and systemic hypertension, sometimes it is also reported to be drug induced. Initially, the disease is asymptomatic later symptoms like pedal edema, anemia, loss of appetite, tiredness, and dyspnea are developed. Vrikka roga[2] is not having a separate chapter dedicated to Brihatrayi and Laghutrayi whereas it is used as an umbrella term and diversely has descriptions related to CKD in Ayurveda. However, Pandu, Pandutharashotha, jalodara, shotha, Gulma Hridroga, Trimarmiya Chikitsa, Mada, Murcha, Sanyasa, Udavarta, Agnimandya, Ajirna are some important clinical landmarks from where clinically applied aspects of chronic kidney disease are available. Vrikka roga has been explained as a separate chapter in Bhaishajya Ratnavali.

CHRONIC KIDNEY DISEASE (CKD)

Chronic Kidney Disease (CKD) is a significant growing public health problem, responsible, for the substantial burden of illness and premature mortality. According to WHO, CKD is the 12th leading cause of death and the 17th leading cause of disability. According to the World Health Organization, approximately 850,000 patients develop ESRD every year. The burden of kidney disease is most significant in developing countries and is adversely influenced by inadequate socioeconomic and health care infrastructures. Importantly, kidney disease progression may be curtailed if the disease is diagnosed early. Hence, detection and management of kidney diseases, whether acute or chronic, in the early, reversible, and potentially treatable stages are of paramount importance. Biomarkers that will help diagnose kidney injury, predict the progression of kidney disease, and provide information regarding the effectiveness of the therapeutic intervention will be important adjuncts to our standard management strategies[3]. Chronic kidney disease (CKD) encompasses a spectrum of different pathophysiologic processes associated with abnormal kidney function and a progressive decline in glomerular filtration rate (GFR). Kidney Disease Improving Global Outcome (KDIGO) 2012 provides a recently updated classification, in which stages of CKD are stratified by both estimated GFR and the degree of albuminuria, to predict the risk of progression of CKD. The dispiriting term end-stage renal disease represents a stage of CKD where the accumulation of toxins, fluid, and electrolytes normally excreted by the kidneys results in uremic syndrome. This syndrome leads to death unless the toxins are removed by renal replacement therapy, using dialysis, or kidney transplantation.

Classification Of Chronic Kidney Disease[4]

Based on the level of GFR and severity of the disease CKD has been subdivided into 5 stages. To understand the stage of CKD, it is necessary to estimate the GFR rather than relying on serum creatinine concentration. With the severity of the disease, the risk of developing complications in CKD also increases. And GFR is widely accepted as the best measure of kidney function in health and disease.

CKD Stage	GFR Ml/min/1.73 m^2
Stage 1	>90Ml
Stage 2	60-89
Stage 3	30 -59
Stage 4	15- 29
Stage 5	< 15

Diabetic nephropathy, Glomerulonephritis, Hypertension, autosomal dominant polycystic kidney disease, and other cystic and tubule interstitial nephropathy are the five most frequent categories of causes of CKD, cumulatively accounting for greater than 90% of the CKD. One of the most common features of glomerular diseases is an abnormal excretion of plasma proteins in the urine. Proteinuria is the cause and effect of several complications not only at a kidney but also at a systemic level. There are complex changes in the structure and function of the glomerular capillary, as well as in the entire nephron, that are responsible for the final elevation in urine protein

concentration in several kidney disorders. There are, in principle, two distinct phenomena that can result in proteinuria. The first is the elevation of glomerular filtration of circulating plasma proteins that are almost completely retained in the circulating plasma in normal physiologic conditions; the second is defective or incomplete reabsorption of proteins by the proximal tubule. The two phenomena are interrelated and likely are both present in so-called glomerular proteinuria, when proteins the size of albumin and larger are present in urine.

AYURVEDIC REVIEW

Ayurveda has given prime importance to mutravaha srotas and srotho gata vikaras. Being a system responsible for the homeostasis of fluids in the body it also detoxifies the body by eliminating certain waste products through urine. As such, there is no clear-cut and well-defined description of the structure and the function of the excretory system in Ayurvedic texts. Scattered references do appear which make mention of the structures involved in excretion. On basis of present-day knowledge of the anatomy of this system, we know that the major structures involved are the Kidneys, Ureter and Urinary bladder, and Urethra. A better understanding of structures related to Mootravaha srothas is needed for a better understanding of Chronic Kidney Disease (CKD) through the light of Ayurveda.

The main function of mutra is the elimination of excess kleda in the body. which may be the ahara kleda or the kleda present in Raktadi dhathus. The transportation and excretion of kleda through urine is known as kleda vahana. So the review of kleda will helps to understand the functional importance of mutra in the proper maintenance of the body. If urine fails to conduct kleda, it will accumulate in the body and result in many diseases**.** CKD is a disease with an insidious onset and progresses gradually, as a complication of many diseases and results in many complications. Based on the level of GFR and severity of the disease CKD has been subdivided into 5 stages. Stages 1 and 2 are asymptomatic. We can correlate this to some concepts explained in Ayurveda.

As prameha upadrava

Diabetes mellitus is the most common cause of chronic kidney disease. It can be taken as the upadrava of the existing disease, as the bhed avastha of the existing disease, or can be correlated to nidanarthakara roga. Upadrava is a disease produced after the formation of pradhana vyadhi. It will have the same etiology, doshasanchayathwa as that of pradhana vyadhi. Usually, no special treatment is required for upadrava vyadhi. The dushyas of prameha are abadha meda, mamsa, kleda, sukra, shonitha, vasa, majja, lasika, rasa and ojas[5]. Diabetic nephropathy is considered a upadrava of madhumeha and is analyzed under vikara prakruthi samuthana vishesha and adhishtana. Medas is the main dushya that gets vitiated in prameha and this can lead to damage to vrikka. It takes its origin from the essence of raktha and meda and vrikka is the Mulasthana of Medovaha srothas. Also in prameha sthanasamsraya of doshas happens mainly in vasthi and Mootradhara kala, with the progression of prameha Ayana dourbalya of Mootravaha srothas and Mootradhara kala occur, in the case of hypertension where the vyana pratilomata, raktha pitha dushti which will become an additional factor for this Ayana dourbalya. It ultimately leads to excessive loss of dhatu saramsa. Albuminuria is the main urinary abnormality noted in Stage 1 and 2 CKD, it is nothing but the excess loss of Dhathu saramsa due to Ayana dourbalya. Bhedawastha is explained by Susrutha in shad Kriyakala, in this stage the disease progresses into the next stage or it may persist for a long time. Nidanarthakara rogas are the diseases that result in the causation of other disease. CKD can be understood as any of the following based on the clinical features associated.

Marmashrita Nija Vyadhi

Charakacharya gives importance to Trimarma namely siras, Hridayam, and vasthi. From the descriptions of vasthi marma, present in charaka samhitha Trimarmiya Sidhi, it is clear that the function of vasthi marma includes that of the kidney too. So it can be taken as a Marmashrita vyadhi.

Upadrava of vatha rakta

SLE is a cause of developing CKD and a high level of uric acid itself is a risk factor to develop CKD. Lupus nephritis can be considered as a upadrava of vataraktha, when it progresses to deeper dhathu and vasthi it produces symptoms of CKD.

As dhathugatha dushivisha

Toxin-induced nephropathy leads to CKD and the metabolic toxin again causes damage to nephrons. Long-term use of analgesics especially over-the-counter drugs that contain phenacetin or acetaminophen, and the NSAIDs such as Aspirin or ibuprofen. The most common symptoms are dysfunction and then necrosis of the proximal tubules, sometimes progressing to renal failure. When dushivisha reaches dhathus it produces symptoms according to the dhathu getting involved.

Dhathugatha ama/Kaphaja ajeerna

Proper functioning of jataragni and dhatwagni helps in the separation of sara from kitta. So due to dysfunction of agni Apachita sara and amanwitha sara is formed. Amavridhi constitute to kledavridhi.

Gudalinga vyadhi

CKD is asymptomatic in the beginning (Stage I and II), when it starts to exhibit the symptoms, kidney damage may exceed more than 70%. So it can be considered a Gudalinga vyadhi[6].

Tridoshaja shotha with kapha predominance

Shopha is the predominant symptom of CKD.

Tridoshaja pandu with kapha dominance

Pallor can be correlated to pandu. In this, some features of all types of pandu are seen with a predominance of kapha lakshana.

Prabhuta dosha lakshana: This is a condition characterized by the accumulation of the excess amount of vitiated dosha in the body.

Vyadhi sankara: Some diseases result in the causation of other diseases, and the first disease continues as such, this results in the condition called vyadhi sankara. It is mainly occurring because of prayoga aparishodhathwat which is improper treatments and anomia sambhavat which is one disease that becomes the causative factor for other[7]

Kaphaja Udara

Later stages of CKD develop ascites due to the fluid overload in the body, so it can be considered as the Jalodara with Kapha predominance.

Santarpanotha vyadhi

Most of the symptoms of CKD are mentioned under santarpanajanya rogas which include prameha, pandu, kandu, aamadosha, mutrakrichra, arochaka, tandra, klaibyam, alasyam, buddher moha, and shopha[8]. So these are some concepts, which can be correlated to CKD from different aspects. In this, some are having lakshana samyam, samprapthi samyam, dosha dushya samyam, or nidana samyam. In short, this disease occurs due to a specific doshadushti leading to a group of symptoms, manifested together or gradually based on the nidana dosha dushya sammurchana. In Samhithas there is no direct reference to vrikkaroga. In the later texts like Bhaishajya Ratnavali, there is a description of the treatment of vrikkaroga[9]. And in some Malayalam texts like Vaidyatharakam. which is a textbook on Kaumarabrithyam, has the lakshanas and chikitsa of vrikkaroga.

DISCUSSION

The Causative factors include the nidanas of santharpanaroga, muthravaha srothodushti, rakthadushti, medodushti, dushivisha, etc. Nidana explained in Bhaishajya Ratnavali are overuse of cold items, as a complication of masurika, vishuchika, amavatha, and prolonged fever[9].In the case of prameha, kapha is in Bahudravavastha and kledavridhi is present which also promotes the srothorodha. Regarding dhathus, according to Vagbhata, vitiation of pitha and kapha leads to rakthadushti. Due to the above doshas, rasa dhathus is also vitiated. From this, we can conclude that the main dushyas are rasa and raktha. Siras is the upadhathu of raktha so rakthadushti can cause derangement in the integrity of siras. Due to the above causes, in prameha with hypertension, rasa,raktha, and medovahasrothodushti occur, and sometimes pranavaha, Mootravaha, and pureeshavaha srotas may get involved. This srothodushti will cause rasarakthavikshepana karma avarodha and which leads to the vyanakopa and especially pratilomatha of vyanavayu. CKD stage 1 and 2 can be taken as a santarpana janya vyadhi. santarpana nidana leads to agnimandya. This agni dushti further leads to ama for-

mation. Ama is a by-product of undigested food due to jataragnimandya and is a toxic metabolite that is not needed by the body. Due to jataragnimandya, dhatwagnimandya occurs and by this proper nutrient are not formed by the dhathus. The ama and mandagni vitiate the pachaka pitta situated in between pakwashaya and amasaya which has the fuction of digestion and anna vivechana. And also cause vitiation of samana vayu situated at antaragni sameepastha which has the function of promoting pachaka pitta. These kleda and dushitha doshas produce further shithilatha and dushti of medas, mamsa, rasa, rakthadi dhathus. They circulate throughout the body and get accumulated in the mootradharakala situated in vrikka, which has an embryological origin from raktha meda Prasada. The function of the separation of malabhavas from saramsa is done by Samana vayu and Pachaka pitha. Mootra is the dravaroopa mala carrying excess kleda in the body, formed in the mootradharakala situated in vrikka. Kleda, Bahudrava kapha, samana vayu, pachakapitha, and other dhathus deranged and get localised in vasthi and Mootradhara kala. Finaly ayanadourbalya of Mootradhara kala occurs due to the sithila dooshitha dushyas. CKD will not produce any symptoms in the beginning; it produces symptoms only when the kidney damage is more than 75 percentages. Stages 1 and 2 CKD are usually not associated with any symptoms arising from the decrement in GFR. However, there may be symptoms from the underlying renal disease itself, such as oedema in patients with nephrotic syndrome or signs of hypertension secondary to the renal parenchymal disease. Except for prabhoothaavila mootratha, there is no general sign and symptom. Symptoms like frothy urine (Avilamootratha) and slight oedema in the legs can be seen in some patients with Stage 1 and 2 CKD. Frothy urine is produced due to proteinuria. The direct description of the disease is not available in Brihathrayi, Evaluating the signs and symptoms of the disease got scattered references in Prameha, Shopha, Pandu, Mutraghata, etc. In Bhaisajya Ratnavali one separate chapter is dedicated to vrikka roga, even though not mentioned in our Brihatrayees it can be brought under the broad heading of kleda mala sanchaya, Abhishyanda, ama, Srotosanga, and upadravas of Santarpanottha vikaras. The elevated levels of Urea, Creatinine due to renal insufficiency can be understood as Malasamchaya,kledavridhi in the Rakta. The initial stages of CKD are asymptomatic later while progressing the disease symptoms will start manifesting. Considering the causative factors of CKD, it can be visualized under an untreated complication of Santarpanottha conditions.

REFERENCES

1. K.V. Krishnadas, Text book of medicine, 5th Edition Published by Jaypee Brothers medical publishers,5th edition, 2008, 79th chapter, Chronic kidney disease page no – 1161, pp 1466.
2. Govinda Dasji Bhisagratna Bhaisajya Ratnavali commented by Vaidya Sri Ambikadatta Sastri, English Translation by Dr. Kanjiv Lochan, Vol 3,2006 edition, Chaukhambha series adhyaya 93, verse 1-23, p 647 pp 871
3. J Larry Jameson & Joseph Loscalzo, Harrison's Nephrology and Acid- Base Disorders, 3rd Edition, Chapter 11 p 123 pp 326
4. J Larry Jameson & Joseph Loscalzo, Harrison's Nephrology and Acid- Base Disorders, 3rd Edition, Chapter 11 p 123 pp 326
5. Agnivesha, Charak Samhita, Ayurveda deepika commentary, edited by Vaidhya Harish Chandra Singh Kushwaha Publication Choukhambha orientalia Varanasi 2015, Nidana sthana 4th Adhyaya sloga 7 p 212 pp 1124
6. Agnivesha, Charak Samhita, Ayurveda deepika commentary, edited by Vaidhya Harish Chandra Singh Kushwaha Publication Choukhambha orientalia Varanasi 2015, Vimana sthana 4th Adhyaya sloga 8 p 248 pp 1124
7. Agnivesha, Charak Samhita, Ayurveda deepika commentary, edited by Vaidhya Harish Chandra Singh Kushwaha Publication Choukhambha orientalia Varanasi 2015, Nidana sthana 8th Adhyaya sloga 21 p pp 1124
8. Agnivesha, Charak Samhita, Ayurveda deepika commentary, edited by Vaidhya Harish Chandra Singh Kushwaha Publication Choukhambha orientalia Varanasi 2015, Sutra sthana 23rd Adhyaya sloga 5 p 122 pp 1124
9. Kaviraj Shri Sen Govindadas. Bhaishajya Ratnavali. Vidyothini Hindi Commentary. Edited and enlarged by Bhishagratna Shri Brahmasankar Mishra. Varanasi: Chaukamba Prakashana; 2010, 5th Prakarana, Verse 1268, 185pp

Source of Support: Nil
Conflict of Interest: None Declared

How to cite this URL: Anu Krishna P & Madhava Diggavi: Chronic Kidney Disease – Ayurvedic Review. International Ayurvedic Medical Journal {online} 2022 {cited July 2022} Available from: http://www.iamj.in/posts/images/upload/1834_1838.pdf