



POTENTIAL OF AYURVEDA TREATMENT MODALITY IN DECREASING SERUM CREATININE LEVELS IN CKD (CHRONIC KIDNEY DISEASE) –A CASE REPORT

POONAM DANG¹* SAKSHI BADYAL² PUNEET DHAWAN³ H. S. TIWARI⁴

^{1*}, ²Research Officer, ³Director, ⁴President Technical, Area of specialization/Research: Ayurveda, Karma Ayurveda, New Delhi

Corresponding Author Email: drpoonam@karmaayurveda.com Access this article online: www.jahm.co.in

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ABSTRACT:

Chronic kidney disease (CKD) depicts high prevalence worldwide, falls under the umbrella of non-communicable diseases & is emerging as a global threat, reducing the productive years, life expectancy, causing immense health expenditure, increasing socioeconomic burden, thereby dilapidating an individual as well as society. It is observed that Ayurveda treatment modality is embraced with kidney rejuvenating herbs thereby promoting normal kidney functions. In the present study, 45-year-old male patient from Assam approached Karma Ayurveda for an online consultation with complaints of constipation, fatigue, swelling in feet since 2 months. Serum Creatinine levels were raised to 3.6mg/dl (19/1/23). He had history of diabetes since 20yrs and hypertension since 4yrs. He was prescribed with *Ren Plus Ultra Kwathachurna* (10g) before meal, *Tab Renal Plus* (400mg) 2Tab TDS after meal, *Arka Nephrowin* 20ml BD with equal amount of water after meal, *Tab SPGV*(250mg) 2 Tab BD after meal, *DOD Kadha* (10gm) BD before meal, for four months. The patient was given dietary recommendations such as avoiding milk and milk products, vegetables such as cabbage, spinach, brinjal etc. Decrease in creatinine level (to 0.61 mg/dl) (3-5-2023) were observed. The case clearly divulges the leverage of Ayurveda treatment modality in the management of CKD.

Keywords: *Ayurveda, Chronic kidney disease, Mutravaha strotas vikar*

INTRODUCTION

Chronic Kidney Disease is a syndrome characterized by progressive, irreversible deterioration of renal function usually developing over a period of years owing to the slow destruction of renal parenchyma thereby damaging sufficient number of nephrons, eventually leading to death. ^[1] The GFR plays a crucial role in CKD and is used to classify the disease into five stages according to the Kidney Disease: Improving Global Outcomes (KDIGO) guidelines: >90 mL/min per 1.73 m² (stage 1), 60-89 mL/min per 1.73 m²(stage 2), 30-59 mL/min per 1.73 m² (stage 3), 15-29 mL/min per 1.73 m² (stage 4), and <15 mL/min per 1.73 m² (stage 5, or end-stage renal disease) ^[2]. Common causes and risk factors of CKD include: diabetes, hypertension (High Blood Pressure), polycystic Kidney Disease (PKD), autoimmune diseases: conditions like lupus and IgA nephropathy, infections: such as pyelonephritis (kidney infection) and HIV, Repeated or large kidney stones ,obstructive kidney diseases such as enlarged prostate or urinary tract obstructions, prolonged use of certain medications (e.g., non-steroidal anti-inflammatory drugs or NSAIDs) or exposure to toxic substance, declining age and a family history of kidney disease further increases the risk of developing CKD ^[3].CKD initially its occurrence is seen only as a biochemical

abnormality but, eventually there occurs loss of the excretory, metabolic and endocrinol functions of the kidney, leading to the manifestation of clinical signs & symptoms such as breathlessness, nausea, loss of appetite, weight loss, proteinuria, gout , fatigue, anemia , weakened bones, itching, cognitive impairment and trouble concentrating, , edema, congestive heart failure etc. ^[4] In Ayurveda it is treated as *Mootravaha srotas vikar*(disorder of urinary system) depicting clinical manifestations as voiding too much urine or complete cessation of urine ,impaired urine composition ,passage of thick urine associated with pain etc. The signs & symptoms of chronic kidney disease are very complex and based on causative factors and stage etc., it depicts various presentations and different aggravated degree of various signs and symptoms ^[5]. Medicinal *Kvathas*(decoctions), *Kalkas* (medicated bolus), *Ghrtas*(clarified butter), various kinds of preparations of milk, alkali's etc. should be employed for the aforesaid ailments. ^[6] .The treatment deployed aims at enhancement of digestive fire, balancing vitiated *Doshas*(biological humors), *sroto shuddhi* (Cleansing the micro channels) and *rasayana chikitsa*(Rejuvenating drugs)

CASE REPORT

Patient information:

A 45-year-old male patient, moderately built, from Assam, approached for online consultation at Karma Ayurveda on January 2023 (UHID No: KRM004484) with complaints of constipation, fatigue, swelling in feet since 2months. Sr. Creatinine levels were raised to 3.6mg/dl (19/1/23)

Medical history of past illness:

Patient was diabetic since 20yrs and hypertensive since 4yrs. There was no history of bronchial asthma or tuberculosis or dialysis, or any other major medical or surgical history.

Personal history:

Mixed diet taker, chronic alcoholic & chronic smoker since 6 yrs. and was suffering from anxiety. Bowel was constipated, bladder depicted frequency of micturition 4-5 times in a day, Sleep was 7-8 hrs. in a day, Appetite was adequate.

Family history:

There was no relevant family history.

Clinical Findings:

The patient was moderately built, well nourished (apparently), able to maintain normal/ straight decubitus. Tongue appeared coated and swelling was present in lower limbs.

Dashavidha pareeksha (~Ten fold examination) *Prakriti* (body temperament) was *Vata pitta*; *Vikriti* (*Pathology*) was *Prakritisamsamveta* (anomaly similar to body

temperament); *Satva* (psyche) was *Madhyama* (moderate); *Aahara shakti* (power of food intake), *Satmya* (suitability), *Pramana* (measurement of body organs) were *Madhyama* (moderate). *Vyayama Shakti* (power of performing exercise) was *Heena* (poor).

Ashtavidha pareeksha (Eight fold examination) *Mala* (bowel) was *Vibhadda* (constipated) ; *Mutra* (urine) was *Samanya* (normal); *Shabda* (voice) was *Sadharana* (normal); *Jihva* (tongue) was *Saam* (coated); *Akriti* (body built) was *Madhyama* (moderate)

Diagnostic assessment:

It was done with the help of blood examination, i.e. serum creatinine levels.

Treatment protocol:

After thorough examination of the patient, the treatment was started *Ren Plus Ultra Kwatha churna* (10 g) before meal, *Tab Renal Plus* (400mg) 2Tab TDS after meal, *Arka Nephrowin* 20ml BD with equal amount of water after meal, *Tab SPGV*(250mg) 2 Tab BD after meal, *DOD Kadha* 10gm BD before meal, for four months. Dietary recommendations were given such as avoiding milk and milk products, vegetables such as cabbage, spinach, brinjal etc.

Outcome:

There was the improvement in constipation, fatigue, pedal oedema. There was a gradual decrease in Serum Creatinine levels from

3.6 mg/dl (19-1-2023) to 0.61 mg/dl (3-5-2023) in 4 months. (Figure I)

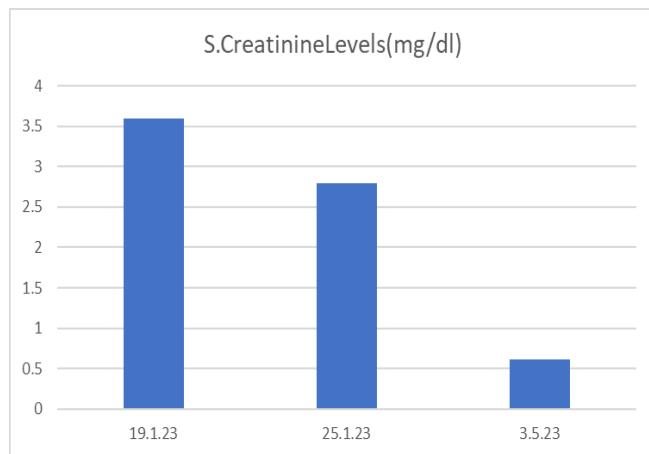


Figure I: Serum Creatinine level.

DISCUSSION

Currently, available conventional treatments for CKD have their own limitations, considering those, alternate remedies for curing and curbing the disease progression are being worldwide welcomed. While treating patients on Ayurveda principles, it is essential to identify the disease nature in terms of its components such as *dosha* (humour), *dushya* (part which is affected), *adhishtana* (abode). In CKD, renal function is impaired and there occurs derangement of *tridoshas* (three biological humours such as *vata*, *pitta* & *kapha*), with predominance of *vata dosha*, *agnimandya* (weak digestive fire), *srotosanga* (obstruction in microchannels of *mutravaha srotas*), and *vimarga gamana* (deflection of *doshas* from their natural course). It is necessary to break the

pathogenesis to get the desired results. Therefore, the treatment of CKD aims at the enhancing the digestive fire, balancing vitiated *doshas*, diuresis and control of excessive salt and water retention, *srotoshuddhi* (cleansing microchannels) and *rasayana chikitsa* (rejuvenating drugs), which aims at creating an improved nutritional status.^[7] In view of above line of treatment, the treatment of the present case was started. The patient depicted elevated serum creatinine levels. Serum creatinine is a waste product produced as a result of muscle activity & removed by the kidney. Therefore, elevated levels are observed in renal disease. Initially, patient took online consultation and for subsequent visit he came to the OPD. Looking into signs and symptoms patient was prescribed *Ren Plus Ultra Kwatha churna* (10 g) before meal, *Tab Renal Plus* (400mg) 2Tab TDS after meal, *Arka Nephrowin* 20ml BD with equal amount of water after meal, *Tab SPGV* (250mg) 2 Tab BD after meal, *DOD Kadha* 10gm BD before meal. *TabRenal Plus* contains *Gokshura* (*Tribulus terrestris L.*) as one of its main ingredients & owing to *rasayana* action it is capable of decreasing serum creatinine levels.^[8] It is helpful in relieving the *kapha* and *vata doshas* and possesses excellent diuretic properties. The ingredients of

Renplus ultra kvatha are *Trina panchamoola*, *punarnava*(*Boerhavia diffusa*), *gokshru* (*Tribulus terrestris*), *shatavari* (*Asparagus racemosus*), *giloy*(*Tinospora cordifolia*), *yava*(*Hordeum vulgare*) etc . *Trnapanchmoola kvatha* possess *Vata pitta shamaka*, diuretic, kidney stimulant and hemopoietic properties. In vitro studies are indicative of its free radical-scavenging activity, thereby justifying its potential in treating ailments in which free radical production is observed. [9] CKD involves *vata* vitiation, causing kidney tissue degeneration, hence it is utmost essential to comprehend *rasayana* drugs in treatment owing to their special tissue healing capabilities. *Punarnava*, *shatavari* by virtue of their *rasayana* action also depicted par excellence in CKD, therefore included in the treatment. Not only *shatavari* is a rejuvenating herb, but also adds on to the nutrient value and In vivo studies further support the fact that *shatavari* decreases the serum creatinine levels.[10] *Yava* is *pitta shamaka* (pacifying *Pitta*), *sheeta virya* (cold potency), useful in dysuria. *Arka Nephrowin* was prepared from distillates of *punarnava* etc. Patient was diabetic since past 20 yrs owing to which *DOD kvatha churna* was advised having ingredients such as *gudmar* (*Gymnema*

sylvestre), *karela* (*Momordica charantia*), *nimba* (*Azadirachta indica*), *jambu*(*Syzygium cumini*), *guduchi* (*Tinospora cordifolia*) etc which help in maintaining normal glucose levels [11] [12] [13] [14] Patient was hypertensive since past 4 yrs. owing to which *Tab SPGV* was advised, having unique combination & its key ingredient as *sarpagandha* (*Rauwolfia serpentina*)which contains reserpine thereby accounting for blood pressure lowering efficacy. [15]

CONCLUSION

CKD patient was administered *Ren Plus Ultra Kwatha churna* (10 g) before meal, *Tab Renal Plus* (400mg) 2Tab TDS after meal, *Arka Nephrowin* 20ml BD with equal amount of water after meal, *Tab SPGV*(250mg) 2 Tab BD after meal, *DOD Kadha* (10gm) BD before meal and in a span of 4 months patient depicted significant improvement in signs and symptoms such as fatigue, constipation, pedal oedema. Sr. Creatinine levels declined from 3.6 mg/dl. (19-1-2023) to 0.61(3-5-2023) mg/dl. Hence it is well evident that Ayurveda treatment modality possess a treasure of kidney rejuvenating herbs which are proficient in redressing troubled kidney functions.

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