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MANAGEMENT OF CHRONIC KIDNEY DISEASE THROUGH AYURVEDA- A CASE STUDY

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ABSTRACT

Chronic Kidney disease (CKD) is a progressive and irreversible condition has become a common disease with high mortality rate worldwide.[1] Globally, Chronic Kidney Disease (CKD) affects approximately 700 million individuals. In India, the burden is substantial, with over 100 million people estimated to be living with CKD.[2] In its early stages, it often presents no symptoms or may only show subtle signs of underlying conditions, such as the presence of protein in the urine. Gradually, the patient may begin to experience symptoms such as mild fatigue, loss of appetite, and increased urination at night. In the later stages of chronic kidney disease (CKD), more severe symptoms may appear, including nausea, vomiting, reduced urine output, swelling (edema), and shortness of breath mainly disturbance in wellbeing. In, Ayurveda CKD is addressed under the concept of Mutravahasrotas vikar also as Prameha upadravam. This case study highlites about a 35 years old male patient from Guwahati visited the Outpatient Department (OPD) of Roganidana, Govt. Ayurvedic College and Hospital, Sundarbari, Guwahati, Assam for an Ayurvedic intervention. The treatment approach done with analysing the root cause and the underlying pathophysiology involved in specific clinical conditions. Shamanaushadhis are administered to reduce the elevated serum creatinine and associated symptoms found in the patient. Specific Ayurvedic medications known for their nephroprotective and diuretic properties were prescribed, including Gokshuradi Gulugulu, Varunadi kwatham, Katak beej churna and Ajomodadi churna. The holistic Ayurvedic approach aimed to alleviate symptoms and slow down CKD progression. By addressing underlying imbalances and supporting

kidney health, The present case is totally treated through Ayurvedic approach and it seems to be effective and safe.

KEYWORDS: CKD, Shamana Ousadhi, Mutravaha Srota, Prameha Upadrava.

INTRODUCTION

The kidneys serve a crucial function filter waste, toxins, and excess fluids from the blood, helping to form urine. They regulate fluid and electrolyte balance, blood pressure, acid-base levels, and produce hormones like erythropoietin and active vitamin D. These functions are essential for maintaining overall health and internal stability.

Factors such as Hypertension, Diabetes mellitus, auto-immune disease, older age, a family history of renal disease, a previous episode of acute renal failure and the presence of proteinuria, abnormal urinary sediments or structural abnormalities of the urinary tract etc increases the risk for CKD even in individuals with normal GFR.[3]

Chronic kidney disease (CKD) is now recognized as a serious global health concern. In its early stages, it often presents no symptoms or may only show subtle signs of underlying conditions, such as the presence of protein in the urine. Gradually, the patient may begin to experience symptoms such as mild fatigue, loss of appetite, and increased urination at night. In the later stages of chronic kidney disease (CKD), more severe symptoms may appear, including nausea, vomiting, reduced urine output, swelling (edema), and shortness of breath mainly an overall sense of unwellness. Due to its subtle onset, CKD is often referred to as a “silent disease”.

In Ayurveda, CKD is not identified as a separate disease entity. However, based on the similarity in clinical features, it can be correlated with disorders involving mutravaha srotas dusti such as Mutrakrichha, Mutrakshya, Mutraksad etc or as an upadrava of Prameha roga.

CASE REPORT

A 35 years old male patient named XYZ reported first time in Roga Nidan department OPD of Government Ayurvedic College & Hospital, Guwahati, Assam in November 2024 as a diagnosed case of Chronic kidney disease with chief complaints of-

Table 1: Chief Complaints.

Sl No	Chief Complaints	Duration
1	Decreased appetite	3 Months
2	Nausea	3 Months
3	Fatigue	3 Months
4	Burning micturition	2 Months
5	Decreased frequency of micturition	2 Months

On general examination his weight was 70 kg, B.P-130/80 mm of Hg, P/R-76bpm, R/R-18/min and Temp-98.6°F. Pallor, clubbing, cyanosis, pedal edema were absent.

His laboratory reports were serum creatinine 2.0 mg/dl, ESR-20 mm/h and albuminuria(+).

TREATMENT PROTOCOL

After a detailed clinical examination (dasavidha and sadvidha pariksha) the patient was diagnosed to have manifestation of ama and vitiation of vata dosha predominatly.

As the patient presented with complaints of loss of appetite, fatigue, and nausea, it indicates the presence of Ama, which has led to Agnidushti. The patient also reported complaints of burning micturion and kshina mutra (reduced or scanty urination) over a period of time which can be considered as mutravaha srotas vikar.

In this study, the treatment for idiopathic CKD is based on the use of Amapachaka, Mutrala, Kledahara, and Mutraśodhaka ouṣadhis.

Table 2: Treatment Details.

Sl no	Name of the Medicine	Dose	Frequency and Time	Main Ingredients	Karma	Anupana
1	Gokshuradi Guggulu[4]	2 tab	BD- After meal	Gokshuru	Mutrala, Rasayana Vata-pattahara[8]	Water
2	Varunadi Kwatham[5]	20 ml	BD-Before meal	Varuna	Dipana, Medoghna Kapha-vatahara[9]	Water
3	Katak Beej Churna[6]	1 tsf	BD-After meal	Katak	Mutra dosha hara Kaphavatahara[6]	Honey
4	Ajamodadi Churna[7]	1 tsf	BD-After meal	Ajamoda	Dipana, Vrsya Kaphavatahara[10]	Luke warm water

RESULTS

The patient's kidney profile showed significant improvement within one month of treatment. A marked decline in serum creatinine levels was observed in each follow-up. Additionally, other associated laboratory parameters returned to normal ranges. These improvements were

achieved through the administration of appropriate medications in conjunction with a strictly followed Pathyapathya. Clinically, the patient also reported a noticeable reduction in symptoms. A detailed account of the improvements in creatinine and other laboratory investigations is provided below.

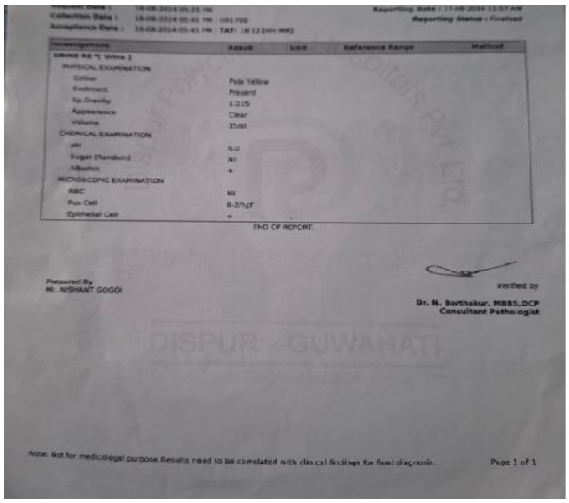
Table 3: Before Treatment.

Date	Serum Creatinine	Proteinuria
17-08-2024	2.0 mg/dl	+
17-10-2024	2.0 mg/dl	Trace

Table 4: After Treatment.

Date	Serum Creatine	Proteinuria
22-11-2024	1.7 mg/dl	Trace
06-01-2025	1.5 mg/dl	Trace
25-02-2025	1.3 mg/dl	NIL

BLOOD INVESTIGATION BEFORE TREATMENT



END OF REPORT.

Verified by
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Consultant Patho-logist

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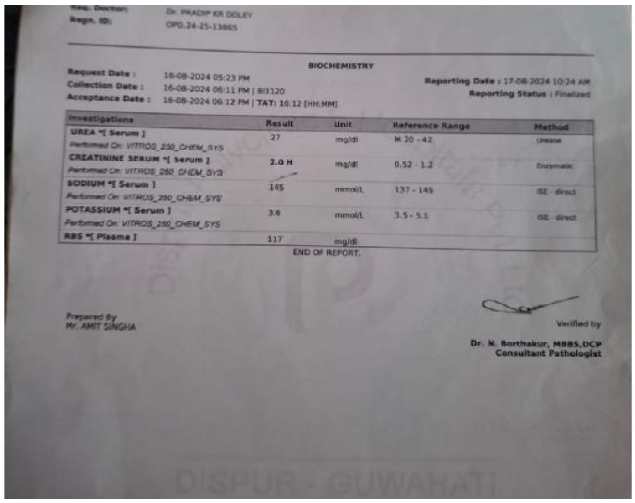

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Reporting Date : 17-08-2024 10:24 AM
Reporting Status : Finalized

Investigations	Result	Unit	Reference Range	Method
UREA *[Serum]	27	mg/dl	M 20 - 42	Urease
CREATININE SERUM *[Serum]	2.0 H	mg/dl	0.52 - 1.2	Enzymatic
SODIUM *[Serum]	145	mmol/L	137 - 145	ISE - direct
POTASSIUM *[Serum]	3.6	mmol/L	3.5 - 5.1	ISE - direct
RBS *[Plasma]	117	mg/dl		

END OF REPORT.

Prepared By
Mr. AMIT SINGHA

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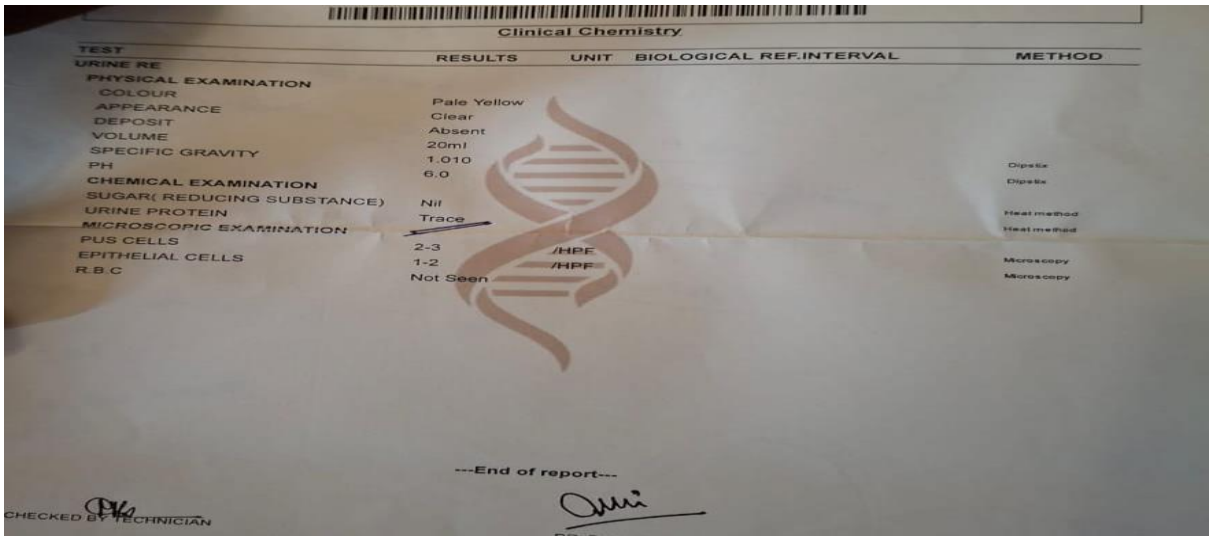
Consultant Pathologist



Clinical Chemistry

TEST	RESULTS	UNIT	BIOLOGICAL REF.INTERVAL	METHOD
URINE RE				
PHYSICAL EXAMINATION				
COLOUR	Pale Yellow			
APPEARANCE	Clear			
DEPOSIT	Absent			
VOLUME	20ml			
SPECIFIC GRAVITY	1.010			
PH	6.0			Dipstix
CHEMICAL EXAMINATION				Dipstix
SUGAR(REDUCING SUBSTANCE)	Nil			
URINE PROTEIN	Trace			Heat method
MICROSCOPIC EXAMINATION				Heat method
PUS CELLS	2-3	/HPF		
EPITHELIAL CELLS	1-2	/HPF		Microscopy
R.B.C	Not Seen			Microscopy

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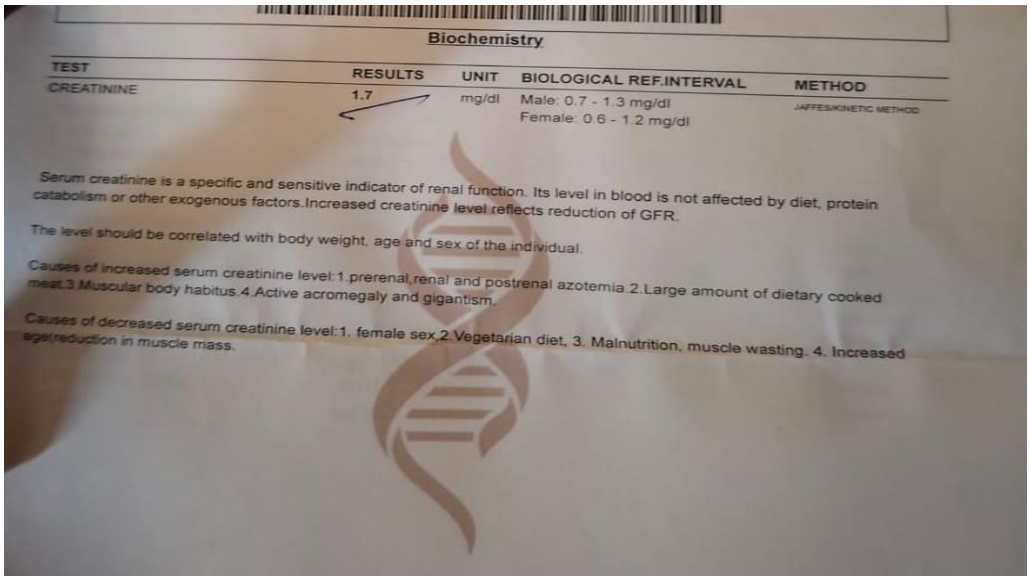
AFTER TREATMENT



Biochemistry

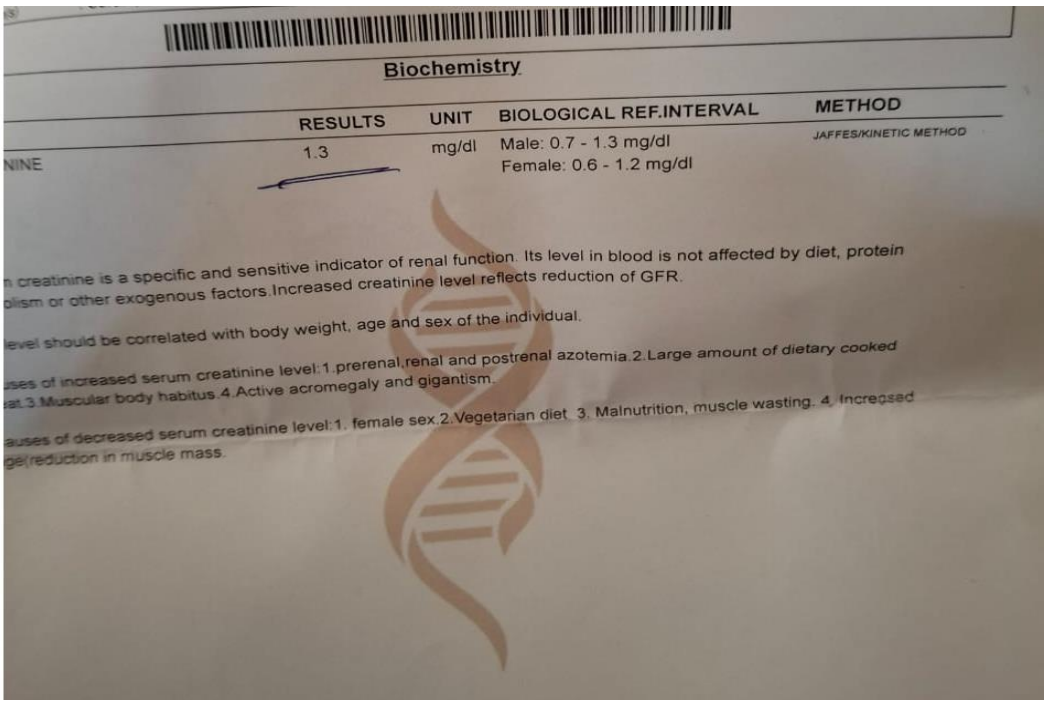
TEST	RESULTS	UNIT	BIOLOGICAL REF.INTERVAL	METHOD
CREATININE	1.7	mg/dl	Male: 0.7 - 1.3 mg/dl Female: 0.6 - 1.2 mg/dl	JAFFES/KINETIC METHOD

Serum creatinine is a specific and sensitive indicator of renal function. Its level in blood is not affected by diet, protein catabolism or other exogenous factors.Increased creatinine level reflects reduction of GFR.

The level should be correlated with body weight, age and sex of the individual.

Causes of increased serum creatinine level:1.prerenal,renal and postrenal azotemia.2.Large amount of dietary cooked meat.3.Muscular body habitus.4.Active acromegaly and gigantism.

Causes of decreased serum creatinine level:1. female sex.2.Vegetarian diet. 3. Malnutrition, muscle wasting. 4. Increased age(reduction in muscle mass.



Biochemistry

	RESULTS	UNIT	BIOLOGICAL REF.INTERVAL	METHOD
NINE	1.3	mg/dl	Male: 0.7 - 1.3 mg/dl Female: 0.6 - 1.2 mg/dl	JAFFES/KINETIC METHOD

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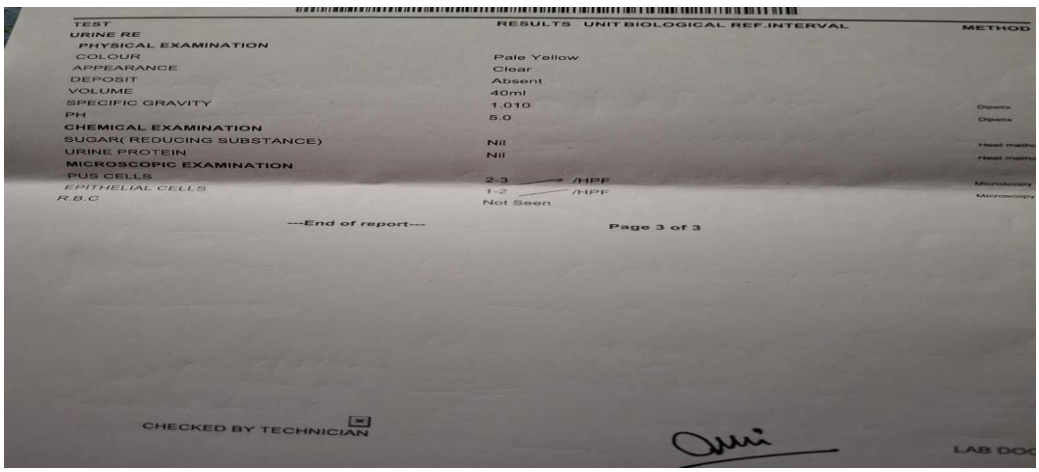

TEST	RESULTS	UNIT	BIOLOGICAL REF.INTERVAL	METHOD
URINE RE				
PHYSICAL EXAMINATION				
COLOUR	Pale Yellow			
APPEARANCE	Clear			
DEPOSIT	Absent			
VOLUME	40ml			
SPECIFIC GRAVITY	1.010			Dipstick
PH	5.0			Dipstick
CHEMICAL EXAMINATION				
SUGAR(REDUCING SUBSTANCE)	Nil			Heat metho
URINE PROTEIN	Nil			Heat metho
MICROSCOPIC EXAMINATION				
PUS CELLS	2-3 /HPF			Microscopy
EPITHELIAL CELLS	1-2 /HPF			Microscopy
R.B.C	Not Seen			

---End of report---

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DISCUSSION

According to Ayurveda, Chronic Renal Failure (CRF) is not specifically mentioned but taken as a disorder of the *Mutravaha Srotas***.** Although all three *Doshas* and various *Dushyas* are involved in its pathogenesis, *Kapha* plays a dominant role by obstructing the microvessels, leading to microangiopathy. On the other hand, *Vata* is chiefly responsible for the degeneration and deterioration of kidney structure.[11] Agnidushti, Ama has been said to be as the prime cause of any disease. For that deepaniya and amapachaniya dravya should be given to the CKD patient. Dhatuposhan dravya or the rasayan was given to strengthen mutravaha srotas in chronic inflammation and microvascular damage. Mutrajanan and mutral drugs were choosen for the patients for less formation of urine due to continuous dhatukshay.

Gokshuradi Guggulu is a classical polyherbal formulation contents are Goksura (Tribulus terrestris), Shudha Guggulu (Commiphora mukul), Shunthi (Zinziber officinale), Maricha (Piper nigrum), Pippali (piper longum), Haritaki (terminalia chebula), Bibhitaki (Terminalia bellirica), Amalaki (Emblica officinalis), Mustaka (Cyperus rotundus). It has combination of Madhura, tikta, katu and Kashaya rasa with sitoshna virya. It acts as mutrakrichra har, vastisodhak, ati kleda hara and depana-pachaniya in some extent.[4] It overall possesses anti-inflammatory, antioxidant, immunomodulator and diuretic properties. The ethanolic extract obtains from dried Gokhru fruit demonstrates nephroprotective effects, alongside possessing anti-inflammatory and antioxidant properties.[12]

Varunadi Kashaya contains Varuna (Crataeva religiosa), Sairyaka (Strobilanthes ciliates), Shatavari (Asparagus racemosus), Dahana (Plumbago zeylanica), Morata (Chenomorpha fragrans), Bilwa (Aegle marmelos), Vishanika (Aristolochia bracteolate), Brihati(Solanum melongena), Bhadra (Aerua lanata), Karanja (Pongamia glabra), Pooti Karanja (Holoptelia integrifolia), Jaya (Premna corymbose), Pathya (Terminalia chebula), Darbha (Desmostachya bippinata), Bahalapallava (Moringa olifera), Rujakara (Semicarpus anacardium) acts as mainly kapha-medohara with lekhana gunas. It has a combination of katu, tikta, kashaya rasa pradhana dravyas with ushna virya and katu vipak. It corrects dhawagnimandya. It acts as srotasanga hara, mutrala, sopha hara etc.[5]

Katak beej churna contains Katak (Strychnos potatorum) has Rasa-madhura, kashaya, tikta Guna-laghu and vishada, Virya-Sheeta, Vipak-Madhura. It mainly acts as kapha-vata shamak. It purifies the urine and has diuretic action, helps to increase urine production.[6]

Ajamodadi churna contains Ajamoda (Trachyspermum roxburghianum), Vidanga (Embelia ribes), Saindhava lavana (rock salt) Devadaru (Cedrus deodara), Chitraka (Plumbago zeylanica), Pippali moola (root of Piper longum), Shatapushpa (Anethum sowa), Pippali (Fruit of Piper longum), Maricha (Piper nigrum), Haritaki (Terminalia chebula), Vriddhadaruka (Argyreia speciosa), Nagara (Zingiber officinale) mainly kaphavata shamak. It acts on dipan-pachan, srotasodhana and has srotosanga hara gunas. Mainly the formulation has combination of katu, Kashaya, tikta rasa, laghu and ruksha gunas. ushna virya and samyoga Prabhava karma.[7]

CONCLUSION

The Ayurvedic approach to treating a patient with idiopathic CKD begins with addressing the Pakwasaya, the site of urine formation. Mutravirechaniya, Mutravirajaniya, and Mutrasangrahaniya drugs, described under the Dashemani Gana in the Charaka Samhita, are employed in managing disorders of the Mutravaha Srotas. Ama-pachana ousadhis, mutrala ousadhis those are aid in the formation of normal urine may contribute to the regeneration and restoration of kidney cells. The treatment administered to the patient resulted in notable clinical improvement within one month marked by a reduction in serum creatinine, proteinuria. Moreover, the patient experienced considerable symptomatic relief in each follow up. The judicious use of such Ayurvedic formulations can be effective in managing chronic kidney disease. Given the rising prevalence of such disorders, this case study offers a ray of hope for patients facing similar conditions.

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