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CASE REPORT

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Management of Chronic Kidney Disease - An Ayurveda **Case Study**

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ABSTRACT

CKD has become a common disease with a high Prevalence rate of nowadays [1] in people including young individuals, with dialysis and renal transplant as its mainstream healing treatment, but due to low financial backgrounds among large percentage of individuals in India, everyone cannot afford to live a good quality of life. Hence, every individual is not a candidate for renal transplant or dialysis. So, to overcome this issue, an alternate has to be taken keeping in mind a healthy life which is the need of hour. CKD, i.e., Chronic Kidney Disease itself indicates chronicity with irreversible damage to the kidneys due to main leading factor in many cases nowadays as a major cause which is Hypertension and Diabetes mellitus type 2, which clinically presents as symptomless sometimes in initial stages and further presents with pedal edema, decreased appetite, nausea, difficulty in micturition/decreased urine output, frothy/foamy urine, fatique. [2] Usually it is manifested through various lab investigations such as kidney function test in which increase in serum urea levels, serum creatinine and other are seen i.e., a waste product made by our muscles, also Kidney's one of the vital function is production of erythropoietin^[3] gets hampered due to underlying cause results in decline in Hb levels. So, to overcome this Punarnavadi Mandoor along with other were advised to the patient. Here the focus is on improvement in various Hematological levels before and after treatment of CKD, by giving Renogrit tablet, Punarnavadi Mandoor, Corighan Vati etc., having special effect on kidneys/as renoprotective.

Key words: Serum Creatinine, Serum Urea, Renogrit, Corighan Vati

INTRODUCTION

India like any other developing country is facing a silent epidemic of chronic renal failure (CRF-A) facet of the health transition associated with industrialization partly fuelled by increase in sedentary lifestyle, low birth weight and malnutrition.[4]

Chronic renal failure (CRF) refers to an irreversible

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deterioration in renal function, which develops over a period of years. This initially manifests only as a biochemical abnormality. CRF is considered when glomerular filtration rate (GFR) falls below 30 ml/min.[5]

Type 2 diabetes mellitus is one among the main causative factor of CKD. The presence of high glucose levels for prolonged period leads to the thickening of the glomerular basement membrane and mesangial expansion which further affects the glomerular filtration rate (GFR).[6]

According to National Kidney foundation (NKF), Kidney has seven vital functions such as removal of toxins, control of blood pressure, water balance including production of Erythropetin etc. Thus, here in CKD, the levels of Haemoglobin gets reduced due to the same underlying cause as mentioned. Normally, kidney filter creatinine from blood, which is further excreted out through urine.

CASE REPORT

A 61 years old male patient named XYZ reported first time in *Kayachikitsa* department OPD of Patanjali Bhartiya Ayurvigyan Evum Anusandhan Sansthan, Haridwar in April 2023 as a diagnosed case of Chronic kidney disease with chief complaints of -

Table 1: Chief complaints

SN	Chief complaints	Duration
1.	bilateral swelling in foots	4 months
2.	difficulty in walking due to swelling	
3.	frothy urine	
4.	Decreased appetite	3 months
5.	Nausea	
6.	Fatigue	
7.	Reduced frequency of micturition	2 months

Table 2: General examination

Pedal edema	2+	
Pallor	1+	
Blood pressure	144/90 mmHg	
Built	Obese	
Weight	72kg	

As per the patient, he was a chronic hypertensive patient who was controlled by the prior medications since many years and the above symptoms appeared 4 months ago. For these complaints he visited nearby hospital for the management but no improvement was seen in his symptoms and was advised for renal transplant as soon as possible. He denied for renal transplant and visited our hospital for a conservative treatment.

MATERIAL AND METHODS

As far as Chronic Kidney disease is concerned, in *Ayurveda* texts, CKD is not separately mentioned so,

can be taken under disorders of *Mutra Vaha Srotas Dushti Vikaras* such as *Mutrakriccha* or *Vrikk Nishkriyata* due to similarity of major symptoms are seen. Here, the patient was given oral medications under the following way;

Table 3: Treatment schedule

SN	Shamana Aushadhi	Matra and Sevan Kaala
1.	Sarvakalp Kwath, Vrikkdoshhar Kwath, Gokhru Kwath	100 ml x BD- Empty stomach
2.	Renogrit tablet (500mg)	2 tab X BD-Before meals
3.	Corighan tablet (500mg)	1 tab X BD-Bfeore meals
4.	Punarnavadi Mandoor tablet	2 tab X BD-After meals
5.	Mukta Vati extra power tablet (500mg)	2 tab X BD-after meals
6.	Haritaki Churna	1 Tsf-HS with lukewarm water

RESULTS

Patient's kidney profile was improved with decline in Serum Creatinine level, Haemoglobin level was increased and other associated lab investigations got normal in 1 month of medications followed by strict *Pathya* diet, marked decline in symptoms were seen.

Decline in the levels of creatinine along with improvement in other lab investigations are mentioned below-

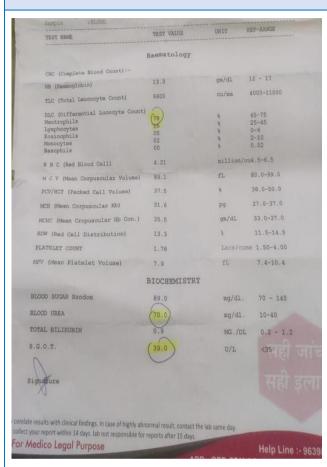
Table 4: Before treatment

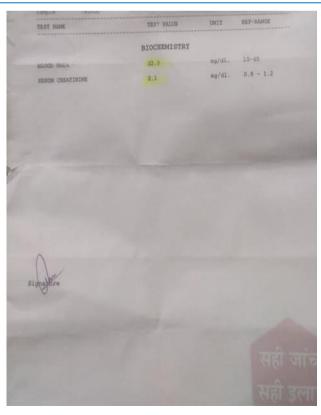
Date	Haemogl obin	Neutrop hils	S.Creatin ine	B.Urea	SGO T
28/3/2 023	13.3 gm%	78%	2.1mg/dl	62.0mg /dl	39U /L

Table 5: After treatment

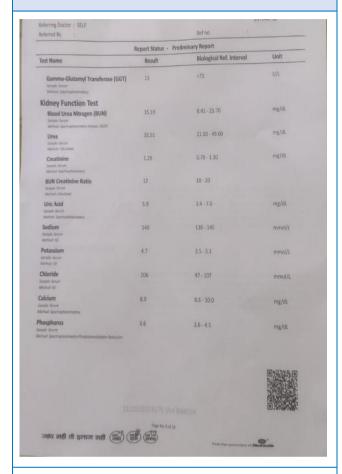
Date	Haemogl obin	Neutrop hils	S.Creati nine	B.urea	SG OT
04/05/2 023	14.3gm%	53%	1.2mg/d I	32.51m g/dl	18U /L

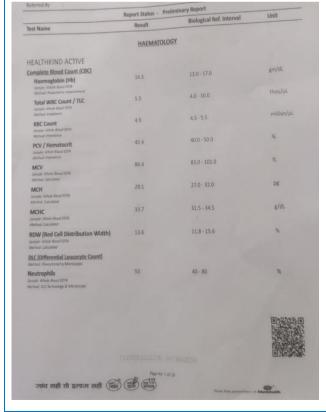
Blood investigations before treatment





Blood investigations after treatment





DISCUSSION

As mentioned earlier, CRF/CKD is specific form of renal disease. According to *Ayurveda*, CRF is a disease of *Mutravaha Srotas*. Though all the three *Doshas* as well as all the *Dushyas* are involved in the disease, *Kapha* is responsible in blocking microvessels and developing microangiopathy. *Vata* is responsible for degeneration of the structure of the kidney.^[7]

So, to prevent the resistance of tissues, *Rasayana* drugs were chosen such as *Renogrit*, containing *Gokshur*, *Punarnava*, etc. so as to prevent and repair the tissue damage and enhance the quality of tissues.

Also, Lekhan Dravyas such as Apamarg, Gokshur, Kasni etc. having Tikta Rasa and Rooksha Guna which help in drying of Ama, bring out a clear Rasa Dhatu and clear the Srotus, further helping in good circulation making way for proper Dhatu nourishment.

Especially *Punarnava, Gokshura* are recommended exclusively in the disorders of *Mootravaha Samsthana*. These drugs should be accepted as *Naimittika Rasayana* for kidney and other organs of *Mootravah Srotas. Rasayana* drugs bear the property of antioxidant and work as free radical scavengers.^[8]

Also, the above mentioned drugs have *Mutral* properties which resolve the problem of *Mutrakriccha*.

Renogrit tablet - Since, chronic kidney disease has a Pitta dominant Tridosha in its pathology, Renogrit is a compound containing extracts of Varun, Kasni, Pashanbheda, Punarnavamoola, Gokshur, Varuna, Apamarg specifically has Pitta Shamaka properties, Tridoshahara Guna, Madhur Vipaka with Mutral properties and having Tikta Rasa predominant drugs, having properties of igniting Jatharagni to correct out the invariably presenting Mandagni in CKD; thus, brings Niramata.

Keeping in mind, *Haritaki Churna* have *Anuloman* property, thus helps in balancing *Apana Vaayu*, which relives a symptom of constipation. The use of such *Mridu Virechan Dravya* is recommended in *Vata* predominant disorders and diseases situated in central locations of *Vata Dosha*. ^[9]

Punarnavadi Mandoor - Since Panduta (Paleness) as well as Shotha (Edema) with Alpa Rakta is also a major sign of patients with kidney failure, to combat this, Punarnavadi Mandoor was advised to the patient which also acts as Rasayana for Vrikkas.

Though, *Punarnavadi Mandoor* is the best formulation told by *Acharyas* specifically on *Pandu*. Key ingredients of *Punarnavadi Mandoor* are useful in *Pandu Roga Chikitsa*. It also contains drugs that improve liver functioning which is very useful to remove toxins from the body. So, there is proper functioning of *Rasa Dhatwagni* and *Raktadhatwagni* which is a very important factor to cure the disease.^[10]

Vrikkdoshhar Kwath - As the name says, it contains drugs such as Dhak (Butea monosperma), Pittpapda (Fumaria indica), Punarnavamool (Boerhhaavia diffusa), Pashanbhed (Saxifraga ligulata), Varun (Crataeva nurvala), Kulthi (Dolichos biflorus), Apamara (Achyranthus aspera), Kasni (Cichorium intybus), Peepal (Ficus religiosa), Neem (Azadirrachta indica), Makoy (Solanum nigrum), Gokharu (Tribulus terrestris), Dhamasa (Fagonia arabica), Kush (Desmostachya bipinnata), Kas (Saccharum spontaeum), Dhan (Oryza sativa), Sarkanda (Saccharum officinarum), Ekh (Saccharum munja), Untkatara (Echinops echinatus), Giloy (Tinospora cardifolia), Arni (Premna integrifolia), Amaltas (Cassia fistula), Bala (Sida cordifolia), Shatavari (Asparagus racemosus), Vidari (Puerarua tuberosa), Kateri Chhoti (Solanum xanthocarpum), Kateri Badi (Solanum indicum), Jou (Hordeum vulgare), Kutaki (Picrorhiza kurroa) which have effect on Vrikka (Kidneys).

Since this *Kwath* includes *Mutral Dravyas* mentioned as *Mutravirechaniya Dashemani* of *Charak Acharya* are considered as best diuretics. It is helpful in treating the infections inside the kidney and other kidney related diseases.^[11]

Sarvakalp Kwath - It contains Punarnava (Boerhaavia diffusa), Bhumi Amla (Phyllanthus niruri), Makoy (Solanum nigrum) helps in conditions of reduced urine content, stomach and pelvis pain, indigestion, lack of appetite and others. Since these drugs are considered as best hepatoprotective agents as per Ayurveda texts,

thus helps in strengthening liver which results in proper formation of *Aadhya Rasa Dhatu*. *Phyllanthus niruri* is one of the commonly used species of this family for the treatment of liver and kidney disorders. *S. nigrum* L. also known as "*Makoy*" contains several steroidal glycosides, steroidal alkaloids and steroidal oligoglycosides that also act as antioxidants reducing hepatic injuries through amelioration of oxidative stress [13,14]

Mukta Vati extra power - It contains Gajwa (Onosma bracteatum), Brahmi (Bacopa monnieri), Shankhpushpi (Convolvulus pluricaulis), Ghodbach (Acorus calamus), Ashwagandha (Withania somnifera), Malkangani (Celastrus paniculatus), Saunf (Foeniculum vulgare), Pushkarmool (Inula recemosa), Ustekhaddus (Lavandula stoechas), Fine Powders of Jata Manasi (Nardostachys jatamansi), Sarpgandha (Rauwolfia serpentina), Mukta Pishti. Among these, Brahmi and Shankhpushpi possess antihypertensive, antidepressant and antianxiety properties. Antihypertensive activity of reserpine which is major phyto-constituent of Sarpagandha. Significant reduction in systolic and diastolic blood pressure with Malkangani. Vacha possesses anti-hypertensive effect mediated through Ca⁺² antagonism pathways.[15]

Overall, this drug cures high blood pressure or heart disease caused by the disorders of the kidneys etc. So, this was chosen to control hypertension which ultimately prevents kidneys.

Corighan Tablet - It contains extract of *Coriandrum* sativum, an important medicinal plant, is known for its hepatoprotective, diuretic, carminative, digestive and Antihelminthic potential. Moreover, the plant was also reported to treat jaundice.

Treatment with *Coriandrum sativum* extract prevented a rise of urea, creatinine and blood urea nitrogen in serum. *Coriandrum sativum* is a potential source of nephroprotective phytochemical activity, with flavonoids and polyphenols as the major components.^[16]

Gokhru Kwath - contains Yavakuta powder of Gokhru.

Its ethanolic extract has already proved as

hepatoprotective and nephroprotective action.[17]

Pathya-Apathya diet[18]

Pathya diet was recommended by keeping in mind the dietary plans for Mootravaha Sroto Vikaras-

Table 6: Pathya-Apathya

Pathya diet	Apathya diet
Mudgarasa -once weekly	Protein diet - including milk/dairy products except <i>Takra</i>
Yava Anna Sewan	Godhum
Patol Sewan, Urvaruk (snake cucumber) and boiled vegetables	Heavy pulses
Saindhav Lavana	Packed items
Fruits - Apple, Papaya	Citrus fruits
Strict fluid intake - 1 to 1.5litres/day	Spice and pickles

CONCLUSION

In this case, treatment of the patient was also focused on strictly following *Pathya* diet, thereby preventing from *Nidana* and further possibility of *Dushti* of *Dhatus* and *Doshas*, which lead to tremendous results in small period of time.

The disorder of *Mutravaha Srotas* has resemblance with the description of urological disorders of modern parlance. On the basis of history and clinical presentation, the patient was diagnosed as case of CKD, it's treatment with *Ayurveda* was found encouraging. ^[19] In all types of urine disorders, *Vata dosha* is the prime causative factor collaborating with *Pitta* and *Kapha*. Hence, general treatment is applied considering *Tridoshas*, drug and disease, ^[20] especially *Vata* and *Kapha Shamak Dravyas* were chosen for management of this case to break the *Samprapti Chakra*, hence emitting the symptoms, thus preventing kidneys from its failure to perform its vital functions. Also, the drugs chosen showed promising results in parameters pertaining to quality of life. So, it shows

that the patient must strictly follow proper dietary habits with proper *Dincharya* and *Rituchraya* which is equally important along with the conservative treatment. As the disease nowadays has to be focused due to its high prevalence rate, this case study becomes a ray of hope for the patients suffering from the same.

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