EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 8
Issue: 11
194-198
Year: 2021

ROLE OF *PANCHAKARMA* IN CHRONIC KIDNEY DISEASE –CASE STUDY

Dr. Shashikala*[1], Dr. Lolashri S.J.[2], Dr. Kiran M. Goud[3]

[1]PG Scholar, Department of PG Panchakarma, Sri Kalabyraveshwara Swamy Ayurvedic Medical College and Research Centre, Bangalore, Karnataka, India.
[2]Associate Professor, Department of PG Panchakarma, Sri Kalabyraveshwara Swamy Ayurvedic Medical College and Research Centre, Bangalore, Karnataka, India.
[3]Professor and Principal, Department of PG Panchakarma, Sri Kalabyraveshwara Swamy Ayurvedic Medical College and Research Centre, Bangalore, Karnataka, India.

***Corresponding Author: Dr. Shashikala**
PG Scholar, Department of PG Panchakarma, Sri Kalabyraveshwara Swamy Ayurvedic Medical College and Research Centre, Bangalore, Karnataka, India.

Article Received on 25/08/2021 **Article Revised on 15/09/2021** **Article Accepted on 05/10/2021**

ABSTRACT
Kidneys plays a vital role in homeostasis by maintaining the body fluid and removing the harmful toxins out of the body through urine formation. *Ayurveda* through its holistic line of management, either in the form of *Shamana* & *Shodhana* or in the form of dietary advices stand distinct and it seems to be effective and safe. In *Charak Samhita* it is said that Kidney and bladder are the root of the channels carrying urine and fat, the opening of these channels get affected by *Meda*, *Mamsa* and *Jala Dhatus* of the body. The vitiated *Doshas* while coming in contact with the opening of these channels obstructs them. This result in the manifestation of kidney disease. In *Ayurveda*, *Vrikka-Vikara* may be considered as an end stage induced by *Prameha*, where the urine becomes turbid. It is expressed that, the turbidity of *Mutra* (urine output) is because of the infiltration of the *Prameha - Dushya`s* which include *Medo-Rakta-Mamsa-Majja-Shukra-Udaka-Rasa-Lasika-Oja*. The affliction of *Rasa, Rakta, Mamsa, Meda & Kleda* in *Prameha* can be viewed in Chronic Kidney Disease (CKD) in terms of proteinurea, elevated level of blood urea and Serum creatinine. There is involvement of *kapha* and *medhas* in this disease, hence there is a necessary in adopting *rookshana karma* for the *kapha medha vishodanarta* i.e., *Udwartana* and *Takradhara* has adopted followed by *shaman aushadi*.

KEYWORDS: Chronic Kidney Disease, udwartana, takra dhara, Shamana Aushadi.

INTRODUCTION
Chronic kidney disease previously termed chronic renal failure, refers to an irreversible deterioration in renal function which usually develops over a period of years. It is a multi factorial condition that results in destruction of normal structure and initiating abnormality in normal function of kidney. Initially it is manifest only as a biochemical abnormality but eventually loss of the excretory, metabolic and endocrine functions of the kidney leads to the clinical symptoms and signs of renal failure, collectively referred to as uraemia. Disease is diagnosed by elevated serum creatinine and blood urea & nitrogen. it has been noted that higher levels of creatinine indicate a lower glomerular filtration rate and as a result a decreased capability of the kidneys to excrete waste products. Creatinine levels may be normal in the early stages of CKD and the condition is discovered if urine analysis shows that the kidney allowing the loss of protein or red blood cells into the urine.[1]

Chronic kidney disease encompasses a spectrum of different pathophysiologic processes associated with abnormal kidney function and a progressive decline in glomerular filtration rate. In most of the countries, estimates the prevalence of CKD stage 3-5 are around 5-7%, mostly affecting people aged 65 years and above. The prevalence of CKD in hypertension, diabetes and vascular disease is substantially higher.[2]

Chronic kidney disease (CKD) is not clearly mentioned in *Ayurveda* classical texts, but While mentioning the description of *Vrukka* (kidney), *Acharya Sushruta* in *Sharir Sthana* told that it is a *Matruj Avayava* and it is formed of *Rakta* and *Meda Dhatus*.[3] In *Ayurveda* - CKD, can be considered as a *Mootra Dosha Vikara* which causes oedema. Both Kidney are root of *Medovaha Srotas*.[4] Most of sign and symptoms present in CKD matched with signs and symptoms of *Rasapradoshaja Vyaadhi*. Sign and symptoms of *Rasapradoshaja Vyaadhi* are loss of desire of food, anorexia, distaste in mouth, loss of taste sensation, nausea, heaviness, drowsiness, body ache, fever, feeling of darkness, paleness, obstruction in channels, impotency, malaise, leanness, loss of digestive power,

untimely wrinkles and grey hairs.[5] In *Charak Samhita*, it is said that Kidney and bladder are the root of the channels carrying urine and fat, the opening of these channels get affected by *Meda*, *Mamsa* and *Jala Dhatus* of the body. The vitiated *Doshas* while coming in contact with the opening of these channels obstructs them. This result in the manifestation of kidney disease.[6]

CASE REPORT

A female patient of 58 years old with a known case of hypertension since 16 years and diabetes mellitus since 12 years with a family history of PKD was said to be healthy at the time of birth with no presenting complains. She was diagnosed with ADPKD when she was 34 years old as she had family history with their siblings were also diagnosed with ADPKD [both brother and sister]. Patient complains of pedal edema and puffiness of face after 4 years from when she was diagnosed. But as such no major complains was said by patient from the past years. She had a history of GERD in the mean time and took medications for that. At the age of 35 years, she was diagnosed with Iron deficiency anaemia with megaloblastic change grade II with a complaint of tiredness when does little household works. She also had a history of pharyngitis 20 years back and took medications for that and it was cured. During the following years she was regularly doing the blood investigations where there was normal levels and suddenly in 2016 all test results were normal except serum creatinine level which was high and her Hb% was dropped down to 9.7 and was also diagnosed as hypertensive. So she started taking medicines for hypertension. She use to get low back pain often in flanks and low back. Then after 3yrs her blood glucose level was increased and so started taking medicines for the same. But after sometime her blood sugar level was more so started taking insulin. Patient complains of suffering of leg and shoulder pain sometimes and pedal edema when she indulges in heavy work or while travelling for a distance in vehicle. Patient had a history of UTI 3 times in the gap of 2 years and got treatment for that. In 2020 patient had complaint of bleeding stools and was diagnosed as hemorrhoids grade II.

Patient also complains of abdominal lump in the midline of umbilicus which was diagnosed as umbilical hernia and complains of decreased appetite since 1 year. She also complains of skin lesions in bilateral lower limb associated with itching all over the body since 3 years and shortness of breath if walked for a short distance or do any more work than usual. Patient also complains of reduced urine output since 1 month Patient had visited other hospitals for the treatment but there was no improvement so visited SKAMC and RC, Bengaluru for the further treatment.

Past history: Haemorrhoids Grade II- 3 o'clock and 11 o' clock position.

Family history: Patient mother was k/c/o hypertension, Diabetic, and kidney problrms. And

All other family members are said to be healthy.

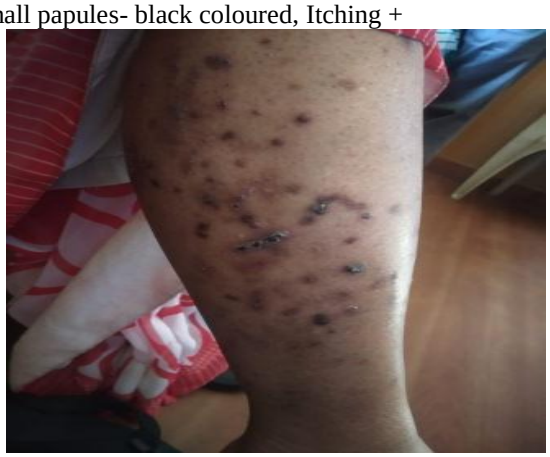
General Examination

On the day of examination patient found to be well built,moderately nourished, afebrile, other parameters like pallor, cyanosis, icterus, lymphdenopathy was absent.

SYSTEMIC EXAMINATION

CVS: S1,S2 Heard, no murmur
CNS: well oriented, conscious.
RS: Normal vesicular breathing, no added sounds.
P/A: Distended abdomen, Stretch marks present in lower abdomen, Soft, tenderness Present more over right flank and less severe over left, bowel sounds hear.

INTEGUMENTARY SYSTEM: Xerosis
Small papules- black coloured, Itching +



INVESTIGATION

Urinalysis showed 1+ blood, 2+ protein and 1+ glucose with microscopic studies reveals of presence of 2-3 pus cells and epithelial cells 6-8. (21/12/2021).

Serum biochemistry including renal and liver functions, electrolytes, calcium, phosphorus, and alkaline phosphatase was normal. Serum urea, creatinine and uric acid level – increased value from the normal ranges.

Abdominal ultrasonography showed that both kidneys were larger than normal with multiple cysts.

Ashta Vidha Pariksha
Nadi - 70/min
Mutra - 4-5times/ day 2 times/ night Frothy like
Mala - Once /day (Hard)
Sparsha - Anushna sheeta
Drik – Prakruta
Akruthi - Madhyama
Jihwa – Alipta
Shabda - Prakruta

DIAGNOSIS

It was done with the help of blood examination, i.e Hemoglobin, serum urea, creatinine, uric acid. and symptoms like Tiredness, pedeal edema, Breathlessness, forthy urine.

INTERVENTION

Table 1: Treatment planed.

Advised	Duration
Sarvanga Udwartana	Performed for 30mins } x 14days
Sarvanga Takradhara	Performed for 30mins }
1) *Gadharva Hasthadi taila* 2) *Veerataradi Kashaya* 3) *Varunadi Kashaya* 4) *Bhringarajasava* 5) *Pipplayasava*	20 ml with one cup of warm milk. } 8tsp – TID

1. Sarvanga udwartana with *Triphalachoorna, Kolakulatthadi Choorna* and *Manjista choorna*
2. *Sarvanga Takradhara* with *Musta Qwatha choorna Amalaki Qwatha choorna Asanad Qwatha Choorna*(1/2ltr), Takra (1,1/2 liter).

OBSERVATION AND RESULT

Sl. no.	Symptoms before treatment	First follow up after 1 day	After 15days of treatment
1	Pitting type of Oedema noticed in legs	+++	++
2	Breathlessness	+++	+
3	Frothy urine	+++	+
4	Loss of appetite	+++	-

INVESTIGATION WISE RESULTS

Sl. no.	Investigation	Before treatment	After treatment
1	Hb %	8.2 gm %	11gm%
2	Blood urea	85mg/dl	36mg/dl
3	Uric acid	8.6mg/dl	3.2mg/dl
3	Serum creatinine	3.4mg/dl	0.8mg/dl

DISCUSSION

The typical presentation is with a raised urea and creatinine found during routine blood tests, frequently accompanied by hypertension, diabetes, proteinuria or anaemia. The rate of change in renal function varies between patients but is relatively constant for an individual and provides useful prognostic information. In *Ayurveda* CKD, can be considered as a *Mootra Dosha Vikara* which causes oedema. *Medovaha Srotas moola is Vrikka*.[7] CKD involves the *mutravaha srotas* primarily involving *vata* vitiation, further causing degeneration of kidney tissue and structure. *Acharya sushruta* described 12 types of *mutraghata*, CKD may be comparable to *mutrakshaya, mutrasada*. *Acharya Sushruta* opines that *mutrakshay*a occurs in *ruksha* and *klanta* person, when vitiated *pitta* and *vata* located in the urinary bladder causes decreased urine production with burning sensation and pain.[8] To treat CKD on *Ayurvedic* principles, it is necessary to identify the nature of disease in terms of its component *dosha, dushya* and *adhishtana*. In this disease derangement of *tridoshas* with predominance of *vata dosha, agnimandya, srotosanga, vimarga gamana*.

In *Ayurveda*, the etiopathogenesis of *Prameha* gives an idea regarding pathogenesis of Chronic Kidney Disease (CKD). The affliction of *Rasa, Rakta, Mamsa, Meda & Kleda* in *Prameha* can be viewed in Chronic Kidney Disease (CKD) in terms of proteinurea, elevated level of blood urea and Serum creatinine and involvement of *Vata* vitiating the bodily tissues which have the predominance of *Kapha dusti*.

The patient was a diagnosed case of CKD, with elevated serum urea, uric acid, creatinine level with reduced heamoglobin level. Urea is nitrogenous end product produced from protein and aminoacid catabolism, there by excreted by the kidneys. The elevated levels are indicative of kidney hypofunction. Serum creatinine is a waste product produced as a result of muscle activity and removed by the kidney.[9] Similarly, uric acid level being end product of purine metabolism is elevated due to purine rich food intake, higher uric acid level is associated with rapid decrease in glomerular filteration rate and increasing risk of kidney failure.[10] Anemia is presented as major complications in CKD. In CKD, reduced production of intrinsic factor, i.e., erythropoietin by kidneys (due to destructed renal parenchyma), reduced red blood cells (due to uremic toxin and decreased RBC lifespan), and iron deficiency occurs. Decreased erythropoiesis leads to bone marrow space fibrosis and decreased platelet count, thereby increasing

the bleeding tendency while further lowering blood volume and hemoglobin levels.[11]

ACTION OF MEDICINE

Action of *udwartana*

***UDHWARATNA**: "Udvarm vartanam udvartanam"*[12]

Udvartana is a term used to denote rubbing of the whole body in opposite direction.

The properties of *udvartana* having *laghu, teekshna, rooksha guna, katu, tikta, kashaya, rasa*, and *ushna veerya*

According to *acharya sushruta*, there are totally 4 *tiryakagami siras*,which further divides into hundred and thousand times and thus become innumerable. These covers whole body like network and their ends are attached to *rooma koopa*. By the *udgharshana, veerya* of *abhyangadi dravya* is absorbed through *rooma koopa*. *Tiryakgata siras* which are present in *twacha* dilates, Stimulates the *bhrajaka pitta* with the help of *ushna guna*, Enter into the body after undergoing *paka* with *bhrajaka pitta* which is present in avabhasini layer and Show its action.

By performing *Udwarthana* there will be *Garshana* action, and it causes "*Viviktatava of siramukha"* in the *Srotas* through which the *Virya* of the drug get absorbs and activates *Twachasthaagnii*. *Brajaka pitta* get activates and helps in expulsion of *Dushithadoshas*. i.e., the drugs *Triphala, Manjishta, kolakulathadi churna* are having *Tiktha Kashaya rasa*, and the *Virya* of the drugs get absorb and does *Kapha Pitta Shamana*. *Udwarthana* by its action alleviates *Kandu*, and clears the *mala* by doing *Sweda hara* action.[13]

ACTION OF TAKRA DHARA

Acharya vaghbhata opines that *Takrakalpanas* are practiced effectively for the purpose of getting S*rotosodhana* effect.[14] As there is *Snigdhaguna* related *Kaphadushti* and *Kledapradhanyatha*, in this disease. *Musta, Amalaki* and *Asanadi qwathachoorna* are used for the preparation of *Takra Dhara* the property of *Takra* is enhanced by the drugs and helps in treating the disease, having *Kapaha hara, Kandugna, Krimihara* property and reduces *Kleda* in *Twak* and the healing process can be improved, there by it does *Sampraptivighatana*.

ACTION OF SHAMANA AUSHADHI USED IN THIS STUDY ARE

Veerataradi kashaya which is useful in combacting vata dosha (also Acharya Vagbhatta quotes- 'sarvata upayuktavya varga veerataradi' i.e in all mootra pathologies this varga is potent.[15]

- Varunadi kashaya which is ' kapha medo hanti, mandagni.... etc' promotes the non accumulation of kapha and meda there by preventing any obstruction to the flow of blood, and helps to promote the agni at the level of dhatu.[16]
- Bhringaraja asava- which is indicated in 'dhatu kshaya', 'prameha' is clear why it could be useful in CKD, as avila mootra means - mootra mixed with dhatu which being flushed out from body deprives nourishment to body.[17]
- Pippalyasava- Any aushadi taken internally required the jataragni to be functioning at its best. As patients of CKD have agnimandhya, pippalyasava which is useful in all GI related diseases help in promoting Agni for the digestion of other aushadhi.[18]

There was the improvement in Breathlessness, pedal edema, frothy urine, and appetite. There was a gradual increase in hemoglobin level from 8.2 to 11 mg/dl, while decrease observed in creatinine level from 3.4 to 0.8mg/dl, uric acid level from 8.6 to 3.2 mg/dl, and blood urea level from 85 mg/dl to 36 mg/dl.

CONCLUSION

The kidneys are made up of the *"Rakta" and "Meda" dhatus*. Every physician will address to maintain the imbalance between these two *Dhatus* by using proper *shodhana* and *shamanaushadhis*. From this study it is clear that a patient of chronic kidney disease can be managed with Ayurvedic treatment. Early diagnosis and early starting Ayurvedic treatment can gives better result in chronic kidney disease. This is a single case study shows satisfactory results further more study needed in large scale with more number of chronic kidney disease patients for better conculsions.

REFERENCES

1. Anthony S. Fauci, Eugene Braundwald, Dennis L. Kasper, Stephen L. Hauser, Dan L. Longo, J. Larry Jameson, Joseph Loscalzo. Harrison's Principles of Internal Medicine. 17th edition. Volume- 2. Published by McGraw Hill, 2008; 2550.
2. Anthony.S Fauci, Eugene Braundwald, Dennis L. Kasper, Stephen L. Hauser, Dan L. Longo, J. Larry Jameson, Joseph Loscalzo. Harrison's Principles of Internal Medicine. 17th edition. Volume- 2. Published by McGraw Hill, 2008; 2550.
3. Sushruta, Dalhana, Sushruta Samhita with Nibandha Sangraha and Nyayachandrika Panjika Commentary, chikitsa Sthana 24:68, Reprint Edition, Chaukhamba Orientalia, 2019; 353.
4. Agnivesha, Charaka Samhita with Ayurveda Dipika commentary, Vimana Sthana 5:8,9Reprint edition, Chaukhambha Orientalia, 2015; 218.
5. Agnivesha, Charaka Samhita with Ayurveda Dipika commentary, Sustra Sthana 28:8,9 Reprint edition, Chaukhambha Orientalia, 2015; 189.
6. Agnivesha, Charaka Samhita with Ayurveda Dipika commentary, Vimana Sthana 5:8,9Reprint edition, Chaukhambha Orientalia, 2015; 218.
7. Agnivesha, Charaka Samhita with Ayurveda Dipika commentary, Vimana Sthana 5:8,9Reprint edition, Chaukhambha Orientalia, 2015; 189.
8. Sushruta, Dalhana, Sushruta Samhita with Nibandha Sangraha and Nyayachandrika Panjika Commentary,

Uttara Sthana 58:3,4 Reprint Edition, Chaukhamba Orientalia, 2019; 787.
9. Gowda S, Desai PB, Kulkarni SS, Hull VV, Math AA, Vernekar SN. Markers of renal function tests. *N* Am J Med Sci., 2010; 2: 170-3.
10. Kamal A. Estimation of blood urea (BUN) and serum creatinine level in patients of renal disorder. Indian J Fundam Appl Life Sci., 2014; 4: 199-202.
11. Tsai CW, Lin SY, Kuo CC, Huang CC. Serum uric acid and progression of kidney disease: A longitudinal analysis and mini-review. PLoS One., 2017; 12: e0170393.
12. Agnivesha, Charaka Samhita with Ayurveda Dipika commentary, Sustra Sthana 12:8 Reprint edition, Chaukhambha Orientalia, 2015; 80.
13. Sushruta, Dalhana, Sushruta Samhita with Nibandha Sangraha and Nyayachandrika Panjika Commentary, Chikitsa Sthana 24: Reprint Edition, Chaukhamba Orientalia, 2019; 353.
14. Vagbhatacharya, Ashtanga Hridaya, Pandit Bhishakacharya Hari Shastri Paradkar, Chaukhambha Orientalia, Varanasi, Chikitsa sthana, 8th chapter, verse – 45, 2002; 956: 137.
15. Sushruta, Dalhana, Sushruta Samhita with Nibandha Sangraha and Nyayachandrika Panjika Commentary, Sutra Sthana 38:12,13 Reprint Edition, Chaukhamba Orientalia, 2019; 353.
16. Sushruta, Dalhana, Sushruta Samhita with Nibandha Sangraha and Nyayachandrika Panjika Commentary, Sutra Sthana 38:11 Reprint Edition, Chaukhamba Orientalia, 2019; 353.
17. Sahasarayogama, written by Dr. Ramanivas Sharama and Dr. Surendra Sharama, Choukambha Samskrutha Prakashan, Delhi, reprint-, Asava Prakarana, 2004; 318: 174.
18. Sahasarayogama, written by Dr. Ramanivas Sharama and Dr.Surendra Sharama, Choukambha Samskrutha Prakashan, Delhi, reprint-, Asava Prakarana, 2004; 318: 169.