

**“A CLINICAL STUDY THROUGH AYURVEDA IN THE MANAGEMENT OF
MUTRAGHATA W.S.R. CHRONIC KIDNEY DISEASE (CKD) – A CASE STUDY.”**

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ABSTRACT:

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 oedema, decreased appetite, nausea, difficulty in micturition/decreased urine output, frothy/foamy urine, fatigue. 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. Ayurveda has played an essential role in the early stages of renal failure in the hunt for this effective and safe treatment. Mutra is a kleda product, according to Ayurveda. *Acharya Sushruta*, a world-renowned surgeon, has a good description of *Mutravrutti*. Creatine and Creatinine are not the same substances. Creatine from liver transported to other tissues. Creatine are 98% present in skeletal and heart muscles. In these muscles it gets converted to high energy source creatine phosphate. In skeletal muscle approximately 1/4th of Creatine exists as free Creatine and 3/4th exists as Creatine phosphate compound. It acts as a storage form of energy in the muscle. The amount of C. phosphate in the body is proportional to the muscle mass

Key words: CKD, Mutrghat, Sr. Creatinine.

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INTRODUCTION

CKD has become a common disease with a high Prevalence rate of nowadays. 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 oedema, decreased appetite, nausea, difficulty in micturition/decreased urine output, frothy/foamy urine, fatigue. 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. Haemodialysis and peritoneal dialysis are the most common treatments for chronic kidney failure, followed by kidney transplantation. Kidney failure treatment is highly costly and out of reach for most Indians. Ayurveda has played an essential role in the early stages of renal failure in the hunt for this effective and safe treatment.

Mutra is a kleda product, according to Ayurveda. *Acharya Sushruta*, a world-renowned surgeon, has a good description of *Mutravrutti*.

Creatine and Creatinine are not the same substances. Creatin is found of muscle and it is a breakdown product of Creatin phosphate in muscles and is usually produced at a fairly constant rate by the body depending on mass-muscle. Creatin is a nitrogenous acid that is synthesized in liver and kidney. Distribution of body Creatine from liver transported to other tissues. Creatine are 98% present in skeletal and heart muscles.in these muscles it gets converted to high energy source creatine phosphate. In skeletal muscle approximately 1/4th of Creatine exists as free Creatine and 3/4th exists as Creatine phosphate compound. It acts as a storage form of energy in the muscle. The amount of C. phosphate in the body is proportional to the muscle mass.

DIAGNOSTIC FUNCTION OF CREATININE

If the kidney are damaged or impaired and can't work normally the amount of Creatinine in urine goes down while it's level in blood goes up. Creatinine has been found to be a fairly reliable indicator of kidney function. In renal failure the kidney will not be able to excrete Creatinine in urine thus the level of S. creatinine in blood is high. Levels of Creatinine of blood serum depends mainly on renal function but other factors also may affected as-----

- ❖ The amount of muscle tissue in body men to have higher level of blood Creatine because they have more skeleton muscle tissue than women.
- ❖ Vegetarian have shown lower Creatinine level in blood.

CREATININE IN URINE AND PLASMA

- Normal S. Creatinine level is 0.7 – 1.4 mg/dl in male and 0.6 – 1.1 mg/dl in female
- Normal S. Creatine level is 0.2 – 0.4 mg/dl
- S. Creatinine is sensitive indicator for kidney disease.

METHOD

The modern method is not satisfactory for the completely cure CKD and has caused many adverse reactions. In modern view Hemodialysis or Kidney transplant is the only treatment for CKD. Many Nephrologists and experts advised for other suitable alternate therapy for this disease. Ayurvedic therapy is unique option for that. Ayurveda therapy completely effective and causes minimal side effects. According to Ayurvedic aspect the symptoms of CKD is very similar to the disease *mutrakshaya* which is a type of *mutraghat vyadhi*.

PATIENT DATA

- **Name– Mr. XXX**
- **Age– 59 years**
- **Sex– Male**
- **Religion– Hindu**
- **Socio-Economic status– LIG**
- **Marital status– Married**
- **Education– High**
- **Occupation– Field worker**
- **Residence– Ashwini Nagar, Dist- Gariyaband (C.G.)**
- **Habitation -- Urban**
- **Trail starting date– 18-11-2022**

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CHIEF COMPLAIN

- **C/O** – A 59 years male patient came to Ayurvedic college hospital on 18/11/2022 with complaining Oedema over both foot, Facial puffiness, Weakness, Fatigue and Anorexia. He was known case of CKD since 2 years and was taken treatment from AIIMS Raipur. He is unable to urinate properly without self-catheterization. His subjective and objective parameters were suitable for my case study.
- **H/O** – Patient was injured on spinal cord due to RTA about 02 years back and thereafter he complained for trouble in holding capacity of urine with gradually increase pedal Oedema, Breathlessness, Weakness. After Blood investigation found that S.Cretinine and Blood Urea level was increased. The Doctors of CMC velour, Karnataka diagnosed as CKD. The Nephrologist of AIIMS Raipur suggested him for self-catheterization for proper output of urine and for prevents Hydronephrosis in

kidney. His parameters are as following—

HISTORY TAKING AND GENERAL EXAMINATION

- **H/O Past Illness**– Yes HTN. NO other disease.
- **Treatment History**- Yes, Tab. Cblock 10 mg for HTN
- **Family History** - Not any History for Related CKD. His father was dead due to PTB.
- **Personal History**- Urine Habit- 03 times in a day through self-catheterization, 01-time natural urination in morning and 02 times at night through catheter.
- **Diet** -- NonVegetarian **Bowel** – Irregular
- **Addiction** – Gudakhu and Tea **Sleep** – Disturbed
- **Physical Exercise** – No

GENERAL EXAMINATION

Pulse - 79/min

Temp. – 97.8 F

BP – 150/90 mmHg

R/R – 21/MIN

Tongue – Coated

Conjunctiva – Mild Yellowish

Nails – Pale

Clubbing -- NP

SYSTEMIC EXAMINATION

Per Abdomen- Inspection

- Shape of abdomen – Mild Distended
- Umbilicus – Normally Inverted, centrally placed

Palpation

- Soft palpable
- Tenderness - Left iliac, Right hypocondrium
- No Organomegaly

Percussion and Auscultation – NAD

Kidney and Urinary system–

Costovertebral Tenderness -- +

Frequency -- +

Dysurea-- ++

CVS –

- S1 & S2 heard, No added sound

CNS –

- Conscious
- Oriented
- SLR-- -ve
- Rest NAD Clinically

R/S –

- B/L clear
- No Crepts or Rhonchi Present.

ROG-ROGI PAREEKSHA

DASHVIDHA PAREEKSHA		
I.	Prakruti	Vata-Pitta
II.	Vikriti	Vata pravara, Pitta avara
III.	Sara	Rakta, Asthi
IV.	Samhanana	Madhyam
V.	Pramana	Madhya
VI.	Satyma	Madhyam
VII.	Satva	Avara
VIII.	Ahara Shakti	Madhyam
IX.	Vyayama Shakti	Avara
X.	Vaya	Madhyam
ASHTAVIDHA PAREEKSHA		
1.	Naadi(Pulse)	Sama/Pitta/84/min
2.	Mutra	Ishat pitaabh/Durgandhi
3.	Mala	Ishat pitaabh/ Samyak malgandhi/Baddha
4.	Jivha	Khara/Shubhra
5.	Shabda	Prakrita

6.	Sparsha	Ruksha, Ushna
7.	Drika	Shwetabh
8.	Akriti	Madhyam

SELECTION OF MEDICINES AND PLAN OF MANAGEMENT

The patient will be treated with following Medicines -

- Trikantakadi Guggullu
- Ervarubijadi Kwath + Punarnawa + Mulethi + Corn Silk.
- Sarpghandha Ghan Vati
- Punarnawasava

PLAN OF MANAGEMENT

Serial No.	Medicine Name	Dose	Duration	Medicine Reference
1.	Trikantakadi Guggulu	500 mg tab 2 tablet QID on	60 days	Yogratnakar Mutrakrichh Chikitsa 4 page No. 58
2.	Erwarubijadi Kwath +Punarnawa+ Corn Silk	40 ml liquid QID as ANUPAAN	60 days	Ashtaang Hriday Chikitsa Sthaan 11/8 page no.708, B.P. Nighantu Guduadi Varg Sh.No. 231, Shaaligram Nighantu Dhanyavarg Pg. No. 859
3.	Sarpghandha Ghan Vati	250 mg Tab, 2 tab BD\	60 days	Sidhha Yog Sangrah
4.	Punarnawasava	15 ml BD with water	60 days	Bhaishajya Ratnawali, Shoth Rogadhikar (197- 201)

MODE OF ACTION OF DRUG REVIEW

According to Ayurveda *Mutraghat* (CKD) is a *vatapittaj vyadhi*. So that the Properties of Medicine must be following—

- Medicine should be properties of *Deepan-paachan* for proper Metabolism of Creatinine and Urea from Blood.
- Medicine should have *Anti-inflammatory, Diuretic, Shroto-visfaarak and Rasayan* properties.
- *Trikantakadi guggullu* (*yog ratnaakar mutraskrichha chikitsa* 4 page no. 58) – *Vatapitta Shaamak, Deepaniya, Anti-inflammatory, Rasayana*.

- *Ervarubijaadi kwath (Astaang Hridaya Chikitsa Sthaan Mutraghat Chikitsa 11/8 page no. 708) – Pittashaamak, Diuretic, Blood Purifier and Mutramarg Snehak.*
- **Corn Silk Extract** – the part of Stye or Stigma of Zea mays (*Makai*) contains potassium salts. Maize Silk (styles or stigmas) is used as a Diuretic in the treatment of Heart Disease, Hypertension, Cystitis, Urethritis, Urinary Lithiasis and Diabetes Mellitus etc. It is also used in combination with Vitamin K as a Hemostatic. (A HAND BOOK OF MEDICINAL PLANTS, A COMPLETE SOURCE BOOK, PRAJAPATI/PUROHIT/SHARMA/KUMAR, AGROBIOS, INDIA 2003 Edition page no. 551)

Stigma or Corn Silk contains the silky Stigmas are used in Decoction in disease of the bladder and in America under the name of Corn Silk of which a liquid extract used in irritable conditions of the Bladder with Tide and irritating urine. It has a marked Diuretic action. (Dr. K. M. Nadkarni's Indian Materia Medica third edition revised and enlarged by A.K. Nadkarni Volume-1, Forwarded by R. N. Chopra, DHOOPTAPESHWAR PRAKASHAN LTD. PANVEL page no. 1307)

Punarnawa—Punarnawa is a well-known medicinal plant packed with essential nutrients, vitamins such as vitamin C and other constituents. Punarnawa helps increase urine production due to its Diuretic activity and reduce the risk of Urinary Related complications.

Punarnawa helps to correct Digestive fire and reduce “AMA” due to its DEEPAN (Appetizer) and PAACHAN (Digestive) properties. It also has *Vata* balancing and a *Mutral (Diuretic) property which gives relief from the symptoms of pain and swelling of body.* The Extract from the plant can help with both preventing and managing kidney disease.

APPROACH OF MANAGEMENT –

In *Trikantakadi Guggulu Gokshur* is *Sheet Veerya, Balya, Basti Vishodhak, Madhur Vipaki, Deepana, Vrushya, Pushtikara and Ashmarihara, Pramehara, Shvashara, Kasahara, Arshaharea.* Also useful in *Hridroga* and *VataHara* in nature. *Punarnawa* is *ShophaHara* in nature. *Gokhura* is one among the drug of *MutraVirechaniya Gana* and it act as *Anulomaka of Apana Vaayu.* *Punarnawa* has *Ushna Veerya* property which corrects *Shrotosang* in *Vrukka*. It is Anti-inflammatory and helps in regeneration of Kidney tissues.

Study will be carried out to find the efficacy of *trikantakadi guggulu* in management of CKD. As the symptoms of CKD resembles *Rasavaha Shrotas Dushti. Agnimaandya* and *Amotpatti* are two closely associated features in the pathogenesis of disease. *Trikantakadi Guggulu, Ervarubijadi Kwath* with *Punarnawa* and *Corn Silk* not only helps in correcting *Agnimandya* but also removal of *Morbid Doshas*.

OBJECTIVE PARAMETER

Date	Hb(Gm %)	Blood Sugar (R)	S. Bilirubin	S. Creatinine	S. Uric Acid	Blood Urea	eGFR (ml/min ²)
18-11-2022	10.8	178 mg/dl	0.86 mg/dl	2.98 mg/dl	5.6 mg/dl	54 mg/dl	29
27-11-2022	10.9	156 mg/dl	--	3.03 mg/dl	5.6 mg/dl	64 mg/dl	29
09-12-2022	10.9	169 mg/dl	--	2.11 mg/dl	5.7 mg/dl	60 mg/dl	41
22-12-2022	11	143 mg/dl	0.54 mg/dl	1.95 mg/dl	5.7 mg/dl	54 mg/dl	45
19-01-2022	11.2	108 mg/dl	0.76 mg/dl	1.66 mg/dl	5.6 mg/dl	41 mg/dl	53

SUBJECTIVE PARAMETER

S.No.	Parameter	Score B/T	7 day A/T	14 day A/T	21 days A/T	28 days A/T	45 days AT	60 days A/
01.	Oedema	++	++	+	+	+	-	-
02.	Blood Pressure(mmHg)	150/90	148/86	150/86	140/84	134/84	132/84	130/80
03.	Dyspnea (NYHA Scale)	++	+	+	-	-	-	-
04.	Constipation	++	++	+	+	+	-	-
05.	Stage of Anemia	+	+	+	+	+	+	-

06.	Breathlessness	++	++	+	+	-	-	-
07.	Stage of Kidney Disease	++	++	+	+	+	-	-
08.	Frothy Urine	+	+	-	+	-	-	-
09.	Troublesome / Small Quantity of Urine	+	+	+	-	-	-	-

GRADING ASSESSMENT

Assessment of Symptoms --

G₀ -- No Symptom

G₁ -- Mild Symptoms

G₂ -- Moderate Symptoms

G₃ -- Severe Symptoms

G₄ -- Very Severe Symptoms

1. Oedema

Grade	Depth	Rebound time
	No Clinical Oedema	No Clinical Oedema
	Up to 2mm depression or Slightly Pitting	Immediate
	>2mm – up to 4mm depression or Somewhat Deeper Pit.	< 15 sec.
	>4mm – up to 6mm depression or Noticeably Deep Pit.	< 30 sec.

2. Blood pressure: -

Grade	Systolic Pressure	Diastolic Pressure
	120-129 mmHg	80-84 mmHg
	130-139 mmHg	85-89 mmHg
	140-159 mmHg	90-99 mmHg
	160-179 mmHg	100-109 mmHg

	≥ 180 mmHg	≥ 110 mmHg
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3. Breathlessness: -

Grade	Description
	No Breathlessness except on strenuous exercise
	Shortness of breath when hurrying on level ground or walking up a slight heel
	Walk slower than people of same age
	After walking about 100 yards or after few minute on level ground
	Breathlessness to leave the house or when dressing.

4. Constipation: -

Grade	Constipation
	No Constipation
	Passes stool as per normal schedule.
	Passes stool with strain, sometime takes purgative.
	Passes stool after more than 24 hours, frequently takes purgative.
	Passes stool after gap of one day, normal purgatives does not work.

5. Stages of Kidney Disease: -

Grade	eGFR in ml / min	Status of Kidney Function
	> 90	Good
	> 60 – Up to 90	A mild decline in kidney function
	> 30 – Up to 60	A moderate decline in kidney function
	> 15 – Up to 30	A severe decline in kidney function
	Up to 15	Kidney failure or end stage renal disease (Requiring dialysis)

6. Stages of Anemia:-

Grade	Hb in gm/dl	Severity of Anemia
	> 11	Good
	10.9 – 10	Mild
	9.9 – 7	Moderate
	6.9 – 4	Severe
	< 4	Very Severe (Life Threatening)

7. Dyspnea (NYHA Scale) :-

Grade	Description
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	No Dyspnea
	Dyspnea only with unusual exertion
	Dyspnea on doing ordinary activity
	Dyspnea on doing less than ordinary activity
	Dyspnea at rest

Criteria of Scoring according to Severity—Moderate -- ++ (Grade 2)

Date of Starting Trail -- 18/11/2022

Date of Completion Trail – 19/01/2023

RESULT

In this Patient the Trail Medicine shows good result. The level of S. Creatinine in blood falls within 15 days of therapy. After 15 days the parameters are found normal. The patient also follows the *Pathyapthya* protocol properly. Urine Output increased than previously but self-catheterization is continued.

DISCUSSION

- CKD is progressive disease is progressive loss in Renal function over a period of months or years and is caused by any condition which destroys the normal structural properties possibly help to transport the drug molecules in the systemic circulation through mucosa.
- The treatment modality adopted here based on *Dosha- Dushya* involvement.

CONCLUSION

- The patient is showing encouraging results during management of CKD with given Ayurvedic treatment.
- These medicines correct all cardinal feature of CKD and improve the renal function which is evident by reduction in S.Creatinine and other Blood parameters.
- In addition, the Treatment also improves general condition of patient. These medicines also decrease requirement of Dialysis and in some patient eliminated as well.
- In difficult condition like higher level of HTN and DM medicine shows marked improvement along with Dietary changes and life style modification.

FUTURE SCOPE OF STUDY

- The treatment approach is safe and effective in cases of CKD, Further studies to be

conducted to establish the facts with more statistical and scientific strength.

- It is recommended that the study should be carrying out enlarge number of patients to evaluate and analysis the result.
- Study should be done for longer duration for best result.

REFERENCES

1. Dr. Tripathi Bramhanand, Charak samhita, Choukhambha subharati Prakashan, Varanasi Punarmudrit sanskaran 2007, Charak Sidhhi Sthan Chapter 9/25, 9/34, Pg. No. 1278, 1281.
2. Dr. Tripathi Bramhanand, Charak samhita, Choukhambha subharati Prakashan, Varanasi Punarmudrit sanskaran 2007, Charak Viman Sthan Chapter 5/20 Pg. No. 700.
3. Shashtri Ambikadatt, Sushruta Samhita, Choukhambha Sanskrit Sansthaa, V. S. 2063, Utar Tantra Chapter 58/3-4, 58/17, 58/28 Pg . No. 423, 425, 427.
4. Shashtri Ambikadatt, Sushruta Samhita, Choukhambha Sanskrit Sansthaa, V. S. 2063, Sutra Sthaa, Chapter 15/15 Pg . No. 59.
5. Shashtri Ambikadatt, Sushruta Samhita, Choukhambha Sanskrit Sansthaa, V. S. 2063, Sharir Sthaa, Chapter 9/12 Pg . No. 72.
6. Dr. Tripathi Bramhanand, Ashtanga Hridaya, Choukhambha Sanskrit Pratishthaa, Delhi, Punarmudrit sanskaran 2012, Nidaan Sthan Chapter9/37, Pg. No. 493.
7. Dr. Tripathi Bramhanand, Ashtanga Hridaya, Choukhambha Sanskrit Pratishthaa, Delhi, Punarmudrit sanskaran 2012, Chikitsa Sthan Chapter 11/8, Pg. No. 708.
8. Shashtri shri Laxmipati, Yogratnaakar., Chaokhambha Prakashan, Varanasi, V.S. 2070, Uttaraardham Mutrakrichha Chikitsa, Chapter 1-2, Pg. No. 58.
9. Davidson Textbook of Medicine Vol – 1
10. A Handbook of Medicinal Plants (Prajapati / purohit / Sharma / Kumar Page No. 551)
11. Dr. K. M. Nadkarni's INDIAN MATERIA MEDICA Third Edition Revised and Enlared
 - a. By A.K. Nadkarni volume-1 Forwarded by R.N.Chopra , DHOOTAPAPESHWAR.

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