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# Exploring the efficacy of *Ayurvedic* interventions in managing Chronic Kidney Disease: A Pilot Study

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## ABSTRACT

**Introduction:** Chronic Renal Failure (CKD) refers to a continual, irreversible reduction in nephron count. Identifying risk factors for CKD, even in those with normal GFR, is crucial factors include hypertension, diabetes, autoimmune issues, older age, African ancestry, family history of renal disease, previous acute renal failure, and indications like proteinuria or structural urinary tract irregularities. **Materials and Methods:** Study was conducted at the O.P.D. of Dept. of Kayachikitsa, State Ayurveda College & Hospital Lucknow. A total 34 patients were screened out of which 30 Patients meeting inclusion criteria were registered. The patient was given *Gokshuradi Guggulu*, *Mutraghata Har Yoga (MGH Yoga)* & *Trina Panchmula Kwatha*. **Results:** Out of 26 participants, 57.7% reported relief, 15.4% noted moderate improvement, and 7.7% reported mild improvement. Additionally, 19.2% stated no change, and none reported worsened health. These percentages indicate the intervention's potential effectiveness, with the majority experiencing relief. **Discussion:** Ayurvedic formulations, such as *Trinpanchmool Kwath*, *Gokshuradi Guggulu*, And *MGH Yoga*, exhibit promise in CKD management by addressing oxidative stress, diuretic action, and nephroprotective qualities.

**Key words:** Ayurveda, CKD, Gokshuradi Guggulu, MGH Yoga & Trina Panchmula Kwatha

## INTRODUCTION

The *Samhita* period (2000-1000 B.C) is supposed to be the golden period when *Ayurveda* flourished as a scientific and systemic system of physiology, etiopathogenesis, classification and management of disease of the urinary system are available. Ancient Acharya detailed about the 13 types of *Mutraghata* (Obstructive and suppressive uropathies), 8 types of *Mutrakrichha* (dysuria), and 20 types of *Prameha* (metabolic disease) but no one has a complete

resemblance to CKD. Only *Mutrasada* and *Mutrakshaya* have some similarities in the features of oliguria and anuria which are the characteristics of the advanced stage of CKD and ESRD. Chronic kidney disease (CKD), refers to an irreversible deterioration in renal function in which the body's ability to sustain metabolic fluid and electrolyte balance fails, which usually develops over a period of years. Initially, it manifests 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, resulting in uremia or Azotemia. It is considered a long-term form of kidney disease and is differentiated from acute kidney disease in that the reduction in kidney function must be present for over 3 months.<sup>[1]</sup>

The modern management of CKD is not satisfactory and the ultimate goal is renal transplant. It seeks attention from nephrologists and researchers to find out suitable remedial measure from other alternative resources. *Ayurvedic* medicine may provide new therapeutic options for patients with CKD and may

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mitigate symptoms and improve health-related Quality of life (QOL), which conventional therapies such as drugs and dialysis may not achieve. However, the short-term as well as possible long-term complications attributed to their use are presently unknown.

## REVIEW OF THE LITERATURE

**Modern Review:** Chronic Renal Failure refers to a continual, irreversible reduction in nephron count. Identifying risk factors for CKD, even in those with normal GFR, is crucial - factors include hypertension, diabetes, autoimmune issues, older age, African ancestry, family history of renal disease, previous acute renal failure, and indications like proteinuria or structural urinary tract irregularities.

According to KDOQI, CKD encompasses kidney abnormalities or damage markers, with or without decreased GFR, persisting for  $\geq 3$  months, with a GFR  $< 60$  ml/min/1.73 m<sup>2</sup>. NKF's classification divides CKD into 5 stages based on GFR: from physiological decompensation (stage I) with GFR  $> 90$  ml/min to End-Stage Renal Failure (ESRD - stage V) with GFR  $< 15$  ml/min.<sup>[2]</sup>

Stages 1 and 2 CKD typically show no GFR-related symptoms, but underlying renal issues like oedema or hypertension may manifest. In stages 3 and 4, complications become more apparent - manifesting across multiple organ systems - including anaemia, malnutrition, mineral and hormone imbalances, and disturbances in electrolyte and fluid balance. By stage 5 CKD, toxin buildup severely impacts daily life, causing marked disturbances in well-being, nutrition, and overall health, culminating in the uremic syndrome.<sup>[3]</sup>

**Ayurvedic Review:** Acharya Charaka wisely noted that naming diseases isn't always the key. What truly matters is understanding symptoms and effectively treating them.

CRF is an entity of varied etiology; it is also termed as a syndrome and is considered as *Sannipataj Vyadhi*. CRF may be termed as a *Vyadhi Sankar* consisting of various conditions e.g. *Prameha* (Diabetes Mellitus), *Shotha* (oedema), *Pandu* (Anaemia), *Udavart*, *Vata Vyadhi*, *Mutraghata*, *Mutra Jathar*, *Mutrakshay*, *Mutra Kriccha* etc.<sup>[4]</sup>

*Hetu* (cause) behind vitiated *Raktavaha*, *Medovaha*, *Mutravaha*, and *Svedavaha Srotas* are responsible for the etiology of *Vrikka Vikar* (Nephropathy). In CRF there is *Asthi Vaha Srotas Dusti* present in *Sookshma* form. It is corroborated by the modern concept of Hypocalcaemia occurring in CRF due to a deficiency of hormone calcitriol-D3. Anemia is a prominent characteristic of Chronic Kidney Disease (CKD), and the principles of *Pandurog Chikitsa* and *Shotha Chikitsa* can be effectively applied in the management of both anemia and swelling associated with CKD.

### Hetu (Causes) as per Ayurveda

- *Bija Doṣa*
- *Vega Dharana* (esp. *Apana* Related)
- *Marmabhighata*
- *Viśamasana*
- Diseases Of *Mutravaha Srotas* e.g. *Mutrakṛcchra*, *Mutraghata*, *Asmari*, *Arbuda*, *Granthi*, *Prameha* especially *Madhumeha*
- *Bala Bhramsa*
- *Ama*
- *Jirna Jvara*
- *Daiva*

### Samprapti Ghatak

- **Dosas:** May vary according to basic etiopathogenesis. However, a *Tridosaja* condition often dominance of *Kapha* later *Vata* involvement takes place.
- **Duṣyas:** *Mutra*, *Rasa*, *Udaka*, *Sveda*, *Rakta*, *Sira* are the basic *Duṣyas*. Later all *Dhatus* and *Upadhatus* may get involved. Clinical conditions related to *Snayu*, *Mamsa*, *Asthi*, and *Sukra* are often observed
- **Srotas:** *Mutravaha*, *Medovaha*, *Udakavaha*, *Svedavaha*, *Rasavaha*, *Raktavaha* as disease advances becomes multi-srotas (multi-system).
- **Srotoduṣṭi** in *Mutravaha Srotas* *Kharatava*, *Kathinya*, *Gaurava*, *Rauksya*

- **Agni & Ama:** Generally, Agni is Manda at every level mostly Malasamcayatmaka Ama is present
- **Udbhavasthana:** Pakvasayottha
- **Rogamarga (Route):** initially Madhyama Marga but later all three Marga, which increases its incurability.

## DRUG REVIEW

**Trina Panchamoola Kwatha**, renowned for its Vata-Pitta pacifying, diuretic, kidney-stimulating, and hemopoietic properties, holds promise in chronic kidney disease treatment. Its ingredients, outlined in *Mutra Virechniya Dashemani*, are traditionally used for asthma, anemia, and diuretic purposes. In vitro studies indicate its potential in scavenging free radicals, suggesting a role in conditions involving oxidative stress.<sup>[5]</sup> **Gokshuraadi Guggulu**, known for its diuretic action, not only reduces fluid overload in renal impairment but also strengthens the renal and cardiac systems.<sup>[6]</sup> With its focus on *Mutravaha Srotas*, it addresses conditions like *Mutrakrichhra*, *Mutraghata*, *Ashmari*, and *Prameha*. Possessing *Tridosahara*, *Madhura*, *Tikta*, and *Katu Rasa Pradhan* properties, it is effective against pain during micturition, UTIs, edema, BPH, and chronic renal failure.<sup>[7]</sup> Its broad-spectrum anti-inflammatory and nephroprotective qualities, along with lymphatic detoxification, make it a potent herbal remedy for kidney health.<sup>[8]</sup> **Mutraghata Har Yog**<sup>[9]</sup> contains *Punarnava* and *Makoi* work synergistically to protect the kidneys from damage induced by diabetes, particularly safeguarding the nephrons. *Kaasni* contributes to electrolytic homeostasis by enhancing Na<sup>+</sup> K<sup>+</sup> ATPase activity, rectifying serum electrolyte imbalances, and maintaining Glomerular Filtration Rate (GFR).<sup>[10]</sup> *Shigru* is rich in antioxidant, anti-inflammatory and diuretic phytoconstituents, potentially prevent renal damage and reducing the frequency of renal dialysis significantly.<sup>[11]</sup> *Shigru*, along with *Saariva*, aids in preserving cellular integrity and kidney architecture, preventing renal injuries, and improving hemopoiesis.<sup>[12]</sup> *Varun's* nephroprotective properties stem from the antioxidant and free radical scavenging attributes of its lupeol alkaloid. *Guduchi* exhibits

antioxidant, hypoglycemic, and hypolipidemic effects, addressing dyslipidemia and cardiac disorders, common complications in Chronic Kidney Disease (CKD).<sup>[13]</sup> *Pravaal Pisthi*, a source of calcium carbonate, helps prevent bone demineralization and acidosis, addressing late-stage complications of CKD.<sup>[14]</sup>

## AIM AND OBJECTIVES

1. To Evaluate the Effect of Ayurveda Regimen In The Cases of Chronic Kidney Disease.
2. To Evaluate the Effect of Indigenous Formulations In The Management Of CKD.
3. To Assess the Effectiveness of The Drugs On Selected Subjective And Objective Parameters.
4. To Assess the Side Effect of Trial Drugs If Any

## MATERIALS AND METHODS

**Selection of the patients:** Study was conducted at the O.P.D. of Dept. of Kayachikitsa, State Ayurveda College & Hospital Lucknow. A total 34 patients were screened out of which 30 Patients meeting inclusion criteria were registered.

**Method of Treatment/Intervention:** The patient was given *Gokshuradi Guggulu*, *Mutraghata Har Yoga (MGH Yoga)* along with *Trina Panchmoola Kwatha* as *Anupana*.

- **Dose of Gokshuradi Guggulu:** 2 Tab each 250mg, (Twice daily) after the meal
- **Dose of MGH Yoga:** 2 Tab 500mg (Twice Daily) after a meal
- **Dose of Trina Panchmoola Kwatha:** 40ml (Twice daily) as *Anupana*

**Type of Study:** Pilot Study

**Period of Study:** 90 Days

**Sample Size:** 30 patients

**Duration:** 90 days

**Follow Up During Treatment:** D15, D30, D45, D60, D75, D90

**Follow-Up After-Treatment:** 7 days (without drug) after treatment is completed.

**Ethics Committee Clearance and Consent:** As this was clinical research, Institutional Ethics Committee (IEC) approval was taken. Its approval number is SAC/IEC/2021/28 dated 17/09/2021.

**CTRI:** This research study was registered in the Clinical Trials Registry - India. The CTRI registration number of the present study, CTRI/2022/09/045326 registered on 08/09/2022 prior to the initiation of research work.

### Inclusion Criteria

- Age- 35-65 years
- History of reduction of kidney function must be present over 3 months.
- Serum Creatinine level above 1.4 mg/dl and below 4.6 mg/dl
- Serum Urea level above 40mg/dl and below 101mg/dl
- Patient having Hb level >8gm/dl
- GFR 30- 90ml/min/1.73m<sup>2</sup>
- BUN [Blood urea Nitrogen] above 18.6mg/dl and below 46.8mg/dl

### Symptoms

#### A. Essential Criteria

##### Objective Criteria

1. Blood Urea
2. Serum Creatinine
3. GFR (Glomerular filtration rate)
4. Blood Urea Nitrogen

#### B. Non-Essential Criteria

##### Subjective Non-Essential

1. *Mutravarodha* (obstructed Micturition)
2. *Mutrakruchra* (difficulty micturition)
3. *Mutradaha* (burning micturition)
4. Anorexia
5. Vomiting
6. Pruritis

7. Oedema
8. Nocturia
9. Thirst
10. Dozing & Sleeplessness
11. Dyspnoea

##### Objective Non-Essential

1. Anaemia
2. Lipid Profile
3. *Mutralpata* (Oliguria)

### Exclusion Criteria

1. Age below 35 and above 65 years.
2. Blood Urea more than 100mg/dl and below 41mg/dl
3. Serum creatinine level above 4.5 mg/dl and below 1.5mg/dl
4. BUN [Blood urea Nitrogen] above 46.7mg/dl and below 18.7mg/dl
5. GFR < 30ml/min/1.73m<sup>2</sup> and > 90ml/min/1.73m<sup>2</sup>
6. Patients under frequent dialysis
7. Uncontrolled Diabetes mellitus
8. Malignant Hypertension
9. Grade III Prostate
10. Prostate Carcinoma
11. Tubercular Nephritis
12. Hypovolemia
13. Liver Failure
14. Heart Failure
15. Acute Myocardial Infarction
16. Severe Valvular Disease
17. Tense Ascites
18. Sepsis
19. Hemorrhage
20. Pancreatitis

- 21. Renal artery/ vein obstruction
- 22. Microangiopathies like DIC, TTP
- 23. Systemic Diseases like lupus, lymphoma, Leukemia, sarcoidosis
- 24. Congenital Disease of kidney: Polycystic kidney disease
- 25. Transplant allograft failure

**Objective Parameters**

▪ **Essential Criteria**

**1. Blood Urea**

Grade	mg/dl
0	≤ 40mg/dl
1	41-60mg/dl
2	61-80mg/dl
3	>81 mg/dl

**2. Serum Creatinine**

Grade	mg/dl
0	Below 1.5
1	1.5-3.0
2	3.1-4.5
3	Above 4.5

**3. GFR (Glomerular filtration rate)**

Grading	Features	GFR ml/min/1.73m <sup>2</sup>
0	Kidney damage with normal or ↑ GFR	≥ 90
1	Kidney damage with mild ↓ GFR	60 – 89
2	Moderate ↓ GFR	30 – 59
3	Severe ↓ GFR	< 30

**4. Blood Urea Nitrogen (BUN) mg/dl**

Grade	BUN (mg/dl)	Severity
0	<18.7	Normal
1	18.8-28.0	Mild
2	28.1-46.7	Moderate
3	>46.7	Severe

▪ **Non-Essential Criteria**

**1. Mutralpata (Oliguria)**

Grade	ml/24hr
0	> 400ml/24hr
1	400-250ml/24hr
2	249-100ml/24hr
3	100ml/24hr

**2. Anaemia (Hb %)**

Grade	Gm/dl
0	≥ 12.1 (Normal)
1	10.1-12.0
2	8.1-10.0
3	≤8.0

**3. Lipid profile**

Grade	Severity	Serum Cholesterol (mg/dl)	LDL (mg/dl)	HDL (mg/dl)	Triglyceride (mg/dl)
0	Ideal	< 200	<100	>60	<150
1	Borderline	201-239	101-159	40-59 ♀ 50-59 ♂	151-199
2	High/low	240-499	160-189	39-20 ♀ 49-30 ♂	200-499

3	Very High/ Very low	≥500	≥190	≤ 20 ♀ ≤ 30 ♂	≥500
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**Subjective Parameters**

▪ **Non-Essential Symptoms**

**1. Mutravarodha (Obstructed Micturition)**

Grade	Features
0	No obstruction during the act of micturition
1	Rare obstruction during micturition or at start of micturition
2	Obstruction at the start and/ or during the whole act of micturition most of the time.
3	Complete obstruction of voluntary act of micturition but dribbling or incontinence may present

**2. Mutrakrichrata (Difficulty in micturition)**

Grade	Features
0	No Difficulty
1	Difficulty present at the beginning of act
2	Difficulty present at the beginning of act and partially during the rest of act
3	Difficulty present throughout the act

**2. Mutradaha (Burning micturition)**

Grade	Features
0	No Burning
1	Mild- rare burning in morning / at start of act
2	Tolerable burning at starting, during micturition
3	Not tolerable at starting, during micturition and sustained after micturition.

**3. Anorexia**

Grade	Features
0	Absent
1	Reduced Appetite
2	Very reduced Appetite
3	Almost complete loss of appetite

**4. Vomiting**

Grade	Features
0	Absent
1	1 Episode in 24 hrs
2	2-5 episodes in 24 hrs
3	>5 episodes in 24hrs

**5. Dozing or Sleepiness (EPWORTH Sleepiness Scale)**

Grade	Score	Features
0	0 -10	Normal Range in healthy adults
1	11-14	Mild Sleepiness
2	15-17	Moderate Sleepiness
3	18 or higher	Severe sleepiness

**6. Nocturia**

Grade	Features
0	No Voids / night
1	Mild (1-2 Voids/ night)
2	Moderate (3-4 voids/ night)
3	Severe (> 4 voids/ night)

**7. Thirst**

Grade	Features
0	Feeling of thirst (7-9 times/ 24hrs) and relieved by drinking water
1	Feeling of moderate thirst (>9-11 times/24hrs) and relieved by drinking water
2	Feeling of excess thirst (>11-13 times/24hrs) not relieved by drinking water
3	Feeling of severe thirst (>13 times) not relieved by drinking water

**8. Pruritis**

Grade	Features
0	No Pruritis (Absent)

1	Mild (Pruritis is episodic and localized without disturbance in routine work)
2	Moderate (Pruritis is generalised and continuous without any sleep disturbance)
3	Severe (Pruritis is generalised and continuous disturbing sleep)

9. Oedema

Grade	Features
0	No Oedema
1	Oedema over eyelids
2	Oedema over eyelids + face + ankle
3	Generalised oedema

10. Breathlessness (NYHA New York Heart Association)

Grade	Features
0	No symptoms and no limitation in ordinary activity e.g., shortness of breath when walking climbing stairs etc.
1	Mild symptoms (mild shortness of breath and or angina and slight limitation during ordinary activities)
2	Marked limitation in activity due to symptoms even during less than ordinary activity e.g., walking short distances (20-100meters) comparable only at rest
3	Severe limitation (experience symptoms even while at rest mostly bed bound patients)

Investigations

- Renal Function Test [Blood urea, Sr. Creatinine, GFR, BUN] / Fortnightly
- Following test will be done monthly
  - CBC
  - HB%
  - Erythrocyte’s sedimentation rate (ESR)

- Liver Function Test [Sr. Bilirubin, SGOT, SGPT, Alkaline Phosphatase (ALP)]
- Serum Uric Acid
- Lipid profile [Total cholesterol, Total glycerides, LDL, HDL]
- Urine routine and microscopic /M
- Following 3 Test will be done before and after treatment.
  - Blood Sugar (Fasting & Postprandial) in non-diabetic patients
  - HBA1C in both diabetic and non-diabetic patients
  - USG - Whole abdomen/ KUB region
- FBS, PPBS twice a week in a Diabetic patient.
- Serum Na+, K+, Cl-, Phosphorus as per requirement of patients condition
- X-ray chest PA View (if required)
- Echocardiography (if required)
- Doppler Ultrasonography (if required)
- Renal Biopsy (if required)
- Prostate-specific Antigen (PSA) (if required)
- PTH (if required)
- Culture sensitivity (if required)

Assessment of objective criteria

Criteria for assessment of Creatinine - To calculate the % relief in creatinine, the formula used was

$$\% \text{ relief in Creatinine} = (B.T. - A.T.) / (B.T. - 1.5) \times 100$$

Criteria for assessment of blood urea - To calculate the % relief in blood urea, the formula used was

$$\% \text{ relief in blood urea} = (B.T. - A.T.) / (B.T. - 40) \times 100$$

Total effect of therapy

The total effect of therapy of this trial will be grouped as follows



**1. Relieved**

- Patients having 76-100 % relief in terms of symptoms
- ≥ 50% improvement in the initial value of essential objective criteria.

**2. Improved**

Patients have improvement between 51-75% in clinical symptoms.

▪ **Mild Improvement**

- a) Improvement between 51-63.5% in clinical symptoms.
- b) Upto 24.9% improvement in the initial value of essential objective criteria.

▪ **Moderate Improvement**

- a) Improvement between 63.5-75% in clinical symptom
- b) ≥25% and <49.9% improvement in the initial value of essential objective criteria

**3. Unchanged**

- a) Patients having improvement of less than 50% in terms of clinical symptoms.
- b) Pathological findings (Blood Urea, Serum Creatinine, GFR, and BUN) remain the same as before the trial.

**4. Worsened**

- a) Patients have no improvement in terms of clinical symptoms.
- b) Pathological findings get disturbed (Blood urea and Creatinine level, BUN may get increased & GFR goes down).

**OBSERVATION**

In the present study, a total of 30 patients were registered out of which 26 completed the trial and 4 patients left the trial.

Among 30 participants, demographic analysis revealed a predominant age bracket of 55-65 years, with males constituting 63.3%. Hypertension was prevalent in

73.33%, and 46.7% Diabetic. About 26.7% were having obstructed micturition, 23.3% experienced difficulty in micturition, and 36.7% had burning micturition. Anorexia was prevalent, with 86.7% while vomiting was reported by 10.0% of subjects. 10.0% reported dozing or sleepiness, 23.3% experienced nocturia, and increased thirst was noted in only 3.3% of cases. Pruritis was reported by 36.7%, oedema by 93.3%, and breathlessness by 66.7%. Interestingly, no subjects reported oliguria, resulting in a 0.0% percentage. Anemia based on hemoglobin levels was prevalent, with 76.7% reporting it.

Observation on essential and non-essential criteria:

Essential Objective Criteria	% Change	Mean Change	P-Value
Blood Urea	37.22	7.56	0.015
Serum Creatinine	44.44	0.38	<0.001
eGFR (Estimated Glomerular filtration rate)	25.00	-11.10	0.003
Blood Urea Nitrogen (BUN) mg/dl	29.31	4.21	0.007

Non-Essential Subjective Parameters	% Change	P-Value
Obstructed Micturition	88.46	0.020
Difficulty in micturition	61.54	0.059
Burning micturition	100.00	0.002
Anorexia	75.71	<0.001
Vomiting	100.00	0.083
Dozing or Sleepiness	100.00	0.083
Nocturia	65.38	0.020
Thirst	100.00	0.317
Pruritis	100.00	0.005
Oedema	63.80	<0.001
Breathlessness	73.78	<0.001

Non-Essential Objective Criteria	% Change	P-Value
Anemia Hb% (Grade)	35.90	0.008
Lipid Profile (Grade)	6.25	0.414
Oliguria	NA	NA

Non Essential Objective Criteria	Mean Change	P-Value
Uric Acid (mg/dl)	-0.02	0.932
Hb (gm/dl)	-0.15	0.694
TLC Cells/mm3	215.04	0.706
Neutrophils %	-2.24	0.288
Lymphocytes %	-0.90	0.597
Monocytes %	0.58	0.650
Eosinophil %	0.51	0.488
Basophil %	-0.04	0.446
Total RBC Count	0.05	0.613
Total platelet count (x103)	-1.92	0.796
FBS mg/dl	9.21	0.323
PPBS mg/dl	18.12	0.279
HBA1C	0.32	0.070
Sodium mmol/L	-0.77	0.550
Potassium mmol/L	0.15	0.351
Total cholesterol mg/dl	4.05	0.562
HDL mg/dl	-2.41	0.324
LDL mg/dl	2.68	0.509
Triglycerides mg/dl	7.23	0.241
Serum Bilirubin mg/dl	-0.04	0.486
SGOT IU/ml	3.59	0.060
SGPT IU/ml	0.51	0.733

ALP IU/l	10.48	0.450
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### RESULT

Out of 26 participants, 57.7% reported relief, 15.4% noted moderate improvement, and 7.7% reported mild improvement. Additionally, 19.2% stated no change, and none reported worsened health. These percentages indicate the intervention's potential effectiveness, with the majority experiencing relief.

Final Status	No. (N=26)	%
Relieved	15	57.7%
Moderate Improvement	4	15.4%
Mild Improvement	2	7.7%
Unchanged	5	19.2%
Worsened	0	0.0%

### DISCUSSION

Chronic Kidney Disease (CKD) poses a global public health crisis, impacting quality of life and economies. Ancient *Ayurvedic* texts indirectly reference CKD through conditions like *Mutrasada* and *Mutrakshaya*, offering insights into its recognition and progression. Ayurveda interprets CKD as *Mutravaha Srotas* disorders, focusing on personalized treatments based on Dosha, Dhatu, and Mala imbalances. Ayurvedic formulations, such as *Trinpanchmool Kwath*, *Gokshuradi Guggulu*, and *Mutraghata Har Yoga*, exhibit promise in CKD management by addressing oxidative stress, diuretic action, and nephroprotective qualities.

### CONCLUSION

This pilot study aimed to evaluate the impact of an Ayurvedic regimen on Chronic Kidney Disease (CKD), providing valuable insights for future research. Key conclusions include the recognition of CKD as a complex disorder with varied etiology, highlighting the prevalence and demographics of CKD globally and in India. The study a safe and effective Ayurvedic regimens, with the combination of *Trinpanchmool*

*Kwath, Gokshuradi Guggulu, and Mutraghat Har (MGH) Yoga* and emerging as promising for CKD management.

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### REFERENCES

- Walker BR, Colledge NR. Davidson's principles and practice of medicine e-book. Elsevier Health Sciences; 2013 Dec 6.
- Guidelines – KDIGO [Internet]. Kdigo.org. 2016. Available from: <https://kdigo.org/guidelines/>
- National Kidney Foundation. Kidney basics [Internet]. National Kidney Foundation. 2020. Available from: <https://www.kidney.org/kidney-basics>
- Gaikwad, S.P. (2020) 'Samprapti (Pathology of C.R.F) in Ayurvedic point of View', in P.Y. Gaikwad (ed.) Chronic Renal Failure and Ayurveda. First. Chinchwadgoan, Pune: Manakarnika Publication, pp. 110.
- Jayalakshmi S, Mishra A, Mishra A, Singla RK, Ghosh AK. In-vitro Evaluation of antioxidant activity of five drugs of Trinpanchmool. Pharmacologyonline. 2011 Jan 1;2:1153-9.
- Dwivedi D, Mishra PK, Pandey AK. Management of chronic kidney disease through ayurveda: a case study.
- Tripathi B, editor. Sharangdhara Samhita of Sharangdhara, Madhyam Khanda; Gokshuradiguggulu

vatakkalpana. Ch. 7. Verses 84-87. Varanasi: Chawkhamba Subharti Prakashana; 2017

- MuhammedS.V., SAMS, urinary system diseases, mutrakrcha & mutraghata chapter 1 Volume 1 third edition page no 393
- Sharma, M. and Sahu, S. (2022) Gallery of medicinal plants: Dravyaguna Vigyan. Noida, Uttar Pradesh: THIEME
- Sastry, J.L. (2018) 'Kasni', in T. m Nesari (ed.) A Textbook of Dravyaguna Vijnana. Varanasi, Uttar Pradesh: Chaukhambha Orientalia, p410
- Sastry, J.L. (2018) 'Shigru', in T. m Nesari (ed.) A Textbook of Dravyaguna Vijnana. Varanasi, Uttar Pradesh: Chaukhambha Orientalia, p272
- Ravishankara MN, Shrivastava N, Padh H, Rajani M. Evaluation of antioxidant properties of root bark of Hemidesmus indicus R. Br.(Anantmul). Phytomedicine. 2002 Jan 1;9(2):153-60.
- Shirwaikar A, Setty MM, Bommu P, Krishnanand B. Effect of lupeol isolated from Crataeva nurvala Buch.-Ham. stem bark extract against free radical induced nephrotoxicity in rats.
- Jha, C. (2012) 'Praval', in Ayurvediya RasaShastra (A Textbook of Rasashastra). 2012th edn. Varanasi, Uttar Pradesh: Chaukhambha Surbharti, pp. 401–404.

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