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ORIGINAL ARTICLE

OPEN LABEL SINGLE CENTRIC CLINICAL EXPLORATORY OF EFFICACY STUDY ON NEPHROFIT CAPSULE, AN AYURVEDIC PROPRIETARY FORMULATION

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S. Suman¹, P. Karthikeyan², S. Moulishankar³, S. Sridhar^{4,} G. Raaja⁵*, G.S. Aathithiah⁶, M. Vetriselvan⁷, Joemon⁸, R. Pachiyappan⁹, B. Devendran¹⁰

Authors:

1Managing Director, Vijayani Nutraceuticals Pvt Ltd, 2Director, Vijayani Nutraceuticals Pvt Ltd, 3Director, Vijayani Nutraceuticals Pvt Lt, 4Principal Research Investigator, Ashram Siddha Research Institute, 5Medical Officer, Vijayani Nutraceuticals Pvt Ltd, 6Medical Officer, Vijayani Nutraceuticals Pvt Ltd, 7General Manager, Vijayani Nutraceuticals Pvt Ltd, 8Manufacturing Incharge, Vijayani Nutraceuticals Pvt Ltd, 9Product Development, Oriens Global Marketing Pvt Ltd, 10Pharmacologist, Vijayani Nutraceuticals Pvt Ltd

Corresponding Author:

^{*}Dr. G. Raaja, Medical Officer, Vijayani Nutraceuticals Pvt. Ltd., Chennai, Tamil Nadu, India.

Email ID: raaja.ayurdoctor@gmail.com

ABSTRACT

Introduction: Chronic kidney disease (CKD) and urinary tract disorders such as Mutraghataroha (Urinary Tract Infection - UTI), Mutrakshyam (Anuria), Mutrakriccharam (Dribbling Urination), and Mutrashmari (Renal Calculi) are prevalent health concerns that significantly impact renal function and overall well-being. Conventional treatments, including antibiotics, diuretics, and dialysis, often lead to side effects and complications. Ayurvedic medicine offers a holistic and natural approach to maintaining kidney health and managing urinary disorders. This study clinically validates Nephrofit Capsule, a proprietary Ayurvedic formulation, for its efficacy in supporting renal function, alleviating urinary disorders, and improving prostate health. The primary objective of this Phase-II-A, single-center, open-label, therapeutic exploratory clinical trial was to assess the safety and efficacy of Nephrofit Capsule in managing kidney and urinary tract disorders. Methods: A total of 20 patients diagnosed with kidney and urinary disorders were recruited following ethical clearance. Patients were administered 1-2 capsules twice daily with lukewarm water for 30 days. Clinical and laboratory investigations were conducted on Day 1 (Baseline) and Day 30 (End of Trial) by qualified AYUSH practitioners. Symptoms such as frequent urination, painful urination, urinary retention, and kidney function markers were closely monitored. Results: After 30 days of treatment, 75% (15 patients) exhibited very good improvement, 15% (3 patients) showed moderate improvement, 5% (1 patient) had mild improvement, and 5% (1 patient) had no significant improvement. The study also found notable improvements in prostate health in male patients. **Conclusion:** The findings confirm that Nephrofit Capsule is an effective Ayurvedic intervention for kidney health, urinary tract infections, and prostate health. The formulation demonstrated significant symptom relief and improved renal function, making it a promising natural alternative for managing renal and urinary disorders. Further large-scale trials are recommended for broader validation.

Keywords: Mutrakriccharam, Urinary tract disorders, Mutraghataroha, Chronic kidney disease

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INTRODUCTION

The kidneys play a crucial role in maintaining homeostasis by filtering waste products, regulating electrolyte balance, and managing fluid levels in the body¹. However, chronic kidney disease (CKD), urinary tract infections (UTIs), renal calculi (kidney stones), and prostate-related urinary disorders are becoming increasingly prevalent due to factors such as hypertension, diabetes, sedentary lifestyles, and poor dietary habits². The global burden of kidney-related ailments is rising, with millions affected annually, leading to increased hospitalizations, dependence on dialysis, and reduced quality of life³.

Conventional Treatment Challenges

The conventional management of kidney and urinary disorders primarily involves antibiotics for infections, diuretics for fluid retention, lithotripsy for kidney stones, and renal replacement therapies for advanced CKD⁴. However, these approaches often have side effects, significant including gastrointestinal disturbances, antibiotic resistance, nephrotoxicity, and dependency on long-term medication⁵. Moreover, treatments such as dialysis and kidney transplantation pose financial burdens and are not accessible to many patients worldwide⁶.

Given these challenges, Ayurvedic medicine offers a promising natural and holistic approach to kidney health. Ayurveda, an ancient system of medicine, attributes renal dysfunction and urinary disorders to imbalances in the Doshas (Vata, Pitta, and Kapha), improper digestion, and toxin accumulation (Ama) in the body⁷. The Ayurvedic perspective focuses on detoxification, strengthening kidney function, and restoring urinary tract health through herbal formulations, dietary modifications, and lifestyle changes⁸.

Ayurvedic Perspective on Kidney and Urinary Disorders

Avurveda classifies kidney and urinary disorders under MutravahaSrotasVikara of (diseases the urinary system). Mutraghataroha (UTI), Mutrakshyam (Anuria or low urine output), Mutrakriccharam (Painful urination), and Mutrashmari (Renal calculi or kidney stones) are common conditions addressed through herbal formulations that act as diuretics (Mutravirechana), lithotriptics (Ashmarighna), and anti-inflammatory agents⁹.

One such formulation is Nephrofit Capsule, a proprietary Ayurvedic medicine formulated to enhance renal function, prevent urinary infections, support prostate health, and reduce kidney stone formation. The key ingredients in Nephrofit Capsule include Punarnava (Boerhaviadiffusa), Gokshura (Tribulus terrestris), Varuna (Crataevanurvala), Pashanbheda (Bergenia ligulata), and Chandraprabha Vati, all of which have been traditionally used for their nephroprotective, anti-inflammatory, and antimicrobial properties¹⁰.

Scientific Evidence Supporting Ayurvedic Herbs in Renal Health

Several scientific studies have validated the role of Ayurvedic herbs in promoting kidney health and managing urinary disorders. Punarnava (Boerhaviadiffusa) is a potent diuretic and anti-inflammatory herb that helps in reducing fluid retention, improving renal function, and alleviating swelling caused by kidney dysfunction¹¹. Clinical trials have shown that Punarnava is effective in reducing serum creatinine and blood urea levels, making it beneficial for patients with early-stage CKD¹².

Gokshura (Tribulus terrestris) is widely known for its diuretic and lithotriptic properties, which help in breaking down kidney stones and flushing out toxins from the urinary tract¹³. It also supports prostate health by reducing inflammation in benign prostatic hyperplasia (BPH) and improving urinary flow¹⁴.

Another crucial ingredient, Varuna (Crataevanurvala), has been traditionally used in Ayurveda to dissolve renal calculi, prevent stone recurrence, and support urinary function¹⁵. Studies indicate that Varuna extracts reduce the crystallization of calcium oxalate, which is responsible for kidney stone formation¹⁶.

Pashanbheda (Bergenia ligulata) is another important herb known for its antiurolithic and nephroprotective effects. It helps in reducing inflammation in the urinary tract, preventing infections, and breaking down kidney stones¹⁷.

In addition, Chandraprabha Vati, a classical Ayurvedic formulation, is commonly prescribed for urinary disorders, prostate enlargement, and kidney function enhancement¹⁸. It acts as a general urinary tonic, promoting overall kidney health and improving urine output.

The Need for Clinical Validation

Although Ayurveda has been practiced for centuries, modern clinical validation is necessary to integrate traditional knowledge with contemporary healthcare. Clinical trials on Nephrofit Capsule aim to establish scientific evidence for its efficacy in treating urinary disorders, improving renal function, and supporting prostate health¹⁹.

The present study, a Phase-II-A, single-center, open-label, therapeutic exploratory clinical trial, was conducted to assess the effectiveness and safety of Nephrofit Capsule over a 30-day treatment period. The study evaluated key parameters such as urine output, serum creatinine levels, relief from urinary discomfort, and reduction in kidney stone symptoms²⁰.

With the increasing burden of chronic kidney disease and urinary tract disorders, it is essential to explore safe, effective, and natural treatment alternatives. Nephrofit Capsule, formulated with clinically validated Ayurvedic herbs, offers a promising solution for renal support, urinary health, and prostate function. This clinical validation study aims to provide scientific evidence supporting its efficacy, bridging the gap between traditional Ayurveda and modern medicine²¹.

METHOD AND MATERIALS

Description of the population to be studied

The population of Salem city is more than 10,00,000, and the estimated prevalence rates of patients with "Uttanabrikkaroha (Chronic Renal disease), Mutraghataroha (Urinary Tract Infection). Mutrakshyam (Anuria), Mutrakriccharam (Dripping of urine), Mutrachmari (Renal calculi), etc." shall be more than 10 % in the area. To recruit the participants, we had advertised in the Social media (friend's groups, Local groups, Private Siddha/Ayurveda doctor groups, and on the Facebook pages of Siddha/Ayurveda hospitals and creating awareness in public exhibitions.

Responsibility of potential risks and benefits, if any, to human subjects.

As per Siddha/Ayurveda textual references found in First schedule (section 3a) of Drugs and cosmetic act 1940, and scientific research studies done anywhere regarding the herbal ingredients found in the formula supplied by the manufacturing unit, an Undertaking has been obtained from the Manufacturer of the product that the Sample supplied for clinical trials contains only the herbal ingredients mentioned in the references found in first schedule Siddha/Ayurveda classical texts.

The Clinical research center has recruited the patients willing for the study after obtaining their written consent and provided the medicine in the prescribed dosage indicated in the package under the supervision of qualified Siddha/Ayurveda physician.

It has been clarified to the manufacturer that any Metals if included in the formula should conduct Toxicity studies and Pre-clinical animal studies before conducting clinical trials, and it was also clarified that the Manufacturer of the product is solely responsible for potential risk if any, to human subjects undergoing this clinical study.

Quality control and quality assurance: The Manufacturing Unit of the drug is responsible for the hygienic packaging of the dose of the herbal product to be dispensed to the participant. The label should necessarily contain the word "For Clinical studies only".

Description of, and justification for, the route of administration, dosage, dosage regimen, and treatment period(s).

Route of Administration Dosage - Oral usage Dosage - 1-2 capsules bds with 100 ml lukewarm water. Dosage regimen - Morning and night, after food. Treatment period - 30 days.

Trial study center: The centre of study is, Outpatient department. CRO - Ashram Siddha research institute, Swarnapuri, Salem city, Salem district.

IEC clearance: The prospective Phase-II-A, Single center, Open label, Therapeutic exploratory clinical trials is duly approved by the INSTITUTIONAL ETHICAL COMMITTEE FOR CLINICAL RESEARCH OF THE CRO, Ashram Siddha Research Institute, constituted under Rule-7 and registered under Rule-8 of The Central Drugs Standard Control Organization (CDSCO) under Directorate General of Health Services, Ministry of Health and Family welfare, Govt. of India as per Ethical guidelines for Biomedical Research on Human subjects 2006 issued by AYUSH-ICMR guidelines. All patients were obtained with written informed consent.

Sample size and Period of study

Enrollment: 20 patients

Study Start Date: 29.11.2024

Study Completion Date:31.12.2024

Screening of Patients for study: In the present study, patients suffering from symptoms like "Uttanabrikkaroha (Chronic Renal disease), Mutraghataroha (Urinary Tract Infection), Mutrakshyam (Anuria), Mutrakriccharam (Dripping of urine), Mutrachmari (Renal calculi), etc." was taken for study. The Inclusion and exclusion were made by recording their past history and through clinical examination. After recruitment, all follow-up visits were performed at the same hospital by qualified Siddha/Ayurveda graduate investigators in keeping with the protocol.

Obtaining patient consent: Whenever a patient is included in the study a consent form in his mother tongue (enclosed) detailing the procedures with side effects if any, benefits from the treatment, was explained and details of the follow up visit was also explained. The procedure for referral clause, withdrawal, and adverse effects was explained thoroughly.

Criteria for Inclusion: Patients above 20 years and below 60 years, suffering from clinical symptoms like "Uttanabrikkaroha (Chronic Renal disease), Mutraghataroha (Urinary Tract Infection), Mutrakshyam (Anuria), Mutrakriccharam (Dripping of urine), Mutrachmari (Renal calculi), etc." was taken for study.

Criteria for Exclusion: Participants will be excluded if they are above 60 years, experiencing or have a history of the following: Osteo arthritis, history of drug/alcohol abuse, night/shift-work employment, Diabetic complications, Psoriatic arthritis and any endocrine disorders.

Criteria for withdrawal: During the course of the trial, if any serious conditions develop (or) the symptoms aggravate which requires urgent

treatment, such subjects may be withdrawn from the trial.

Outcome measure: Routine Examination and assessment as per Indian Medicine Physiology

The complete History and physical examination of the patients along with Envagaithaervu, tridoshanaadi, saptha dhatu thaervu etc. were recorded in a case sheet on first day. The second Clinical assessment were done on 30th day of treatment.

Blood Test: Blood samples were obtained the same day when each session was initiated. Participants reported to the hospital between 09:00 am and 10:00 am, after overnight fasting, for blood withdrawal from the antecubital vein. Samples were analyzed using routine automatic techniques in the prescribed laboratory. All follow-up visits scheduled for this trial were performed at the referral hospital by the registered investigators.

Intervention: The patients were provided with Proprietary Ayurvedic Medicine — NEPHROFIT CAPSULE, and advised to take 1-2 capsules, Morning and evening.

As Lifestyle management with diet and exercise can improve the condition and patient self- management life style changes were advised.

Success Indicators: Reduction of minimum 10 percent in symptoms at baseline and at the completion of treatment in the words of the patient, and measured as per the physician's conscience, can be taken as Success indicator.

Laboratory Investigations and discussion:

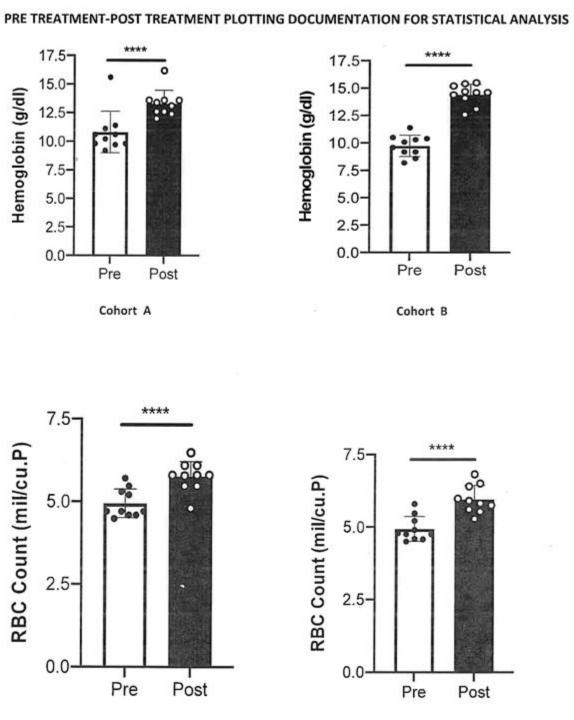
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SPECIMEN	TEST NAME	METHOD	VALUE	UNITS	REF.RANGE	
HAEMATOL	.OGY					
Dland					40.0.47.0	
Blood	Hemoglobin	Sysmex XS 8ooi		g/dl	13.0-17.0	
Blood	RBC count	Sysmex XS 8ooi		mil/cu.P	4.5-6.5	
Blood	Haematocrit (PCV)	Sysmex XS 8ooi		%	40-54	
Blood	MCV	Sysmex XS 8ooi		fl	75-95	

	0			0/	
Blood	RBC count	Sysmex XS 8ooi		mil/cu.P	4.5-6.5
Blood	Haematocrit (PCV)	Sysmex XS 8ooi		%	40-54
Blood	MCV	Sysmex XS 8ooi		fl	75-95
Blood	МСН	Sysmex XS 8ooi		picogram	27-32
Blood	МСНС	Sysmex XS 8ooi		g/dl	32-36
Blood	Red cell width	Sysmex XS 8ooi	.,	%	11-16
Blood	Platelet counts	Sysmex XS 8ooi		lakhs/cumm	1.5-4.0
Blood	Total WBC count	Sysmex XS 8ooi		cells/cumm	4000-11000
Blood	Differential count (DC)	VESMATIC ESAY			
	Neutrophils			%	40-80
	Lymphocytes			%	20-40
	Eosinophils			%	01-06
	ESR			mm/hr	0-10

CLINICAL PATHOLOGY URINE COMPLETE

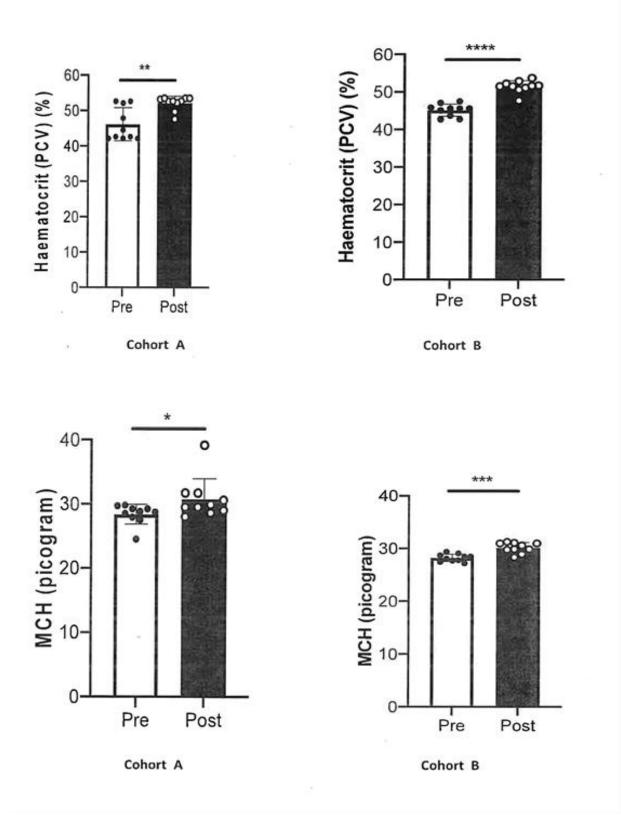
Urine	Protein	Combur UX strip (ROCHE)	
Urine	Ketone		
Urine	Pus cells		 /Hpf
Urine	Epithelial cells		 /Hpf



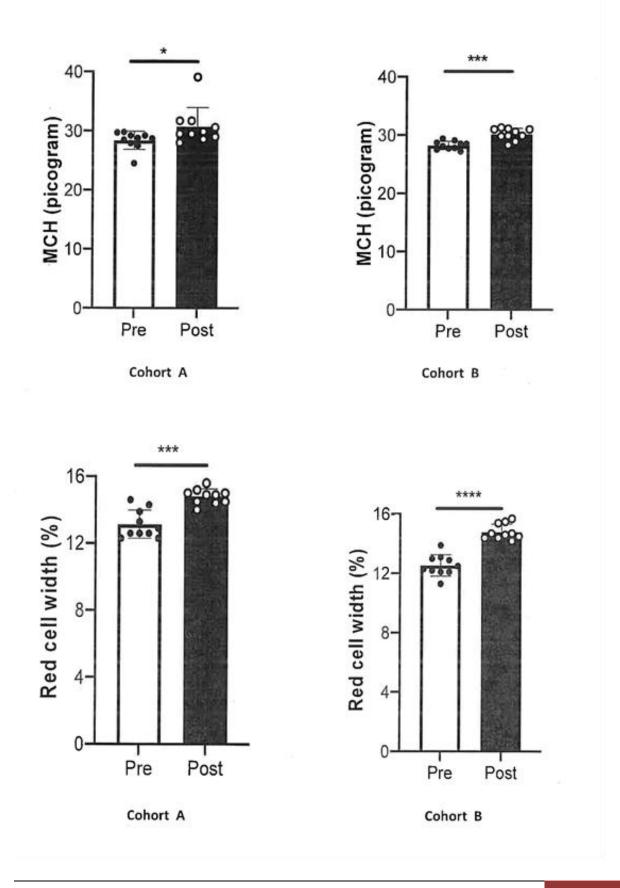
Cohort A

IMPROVEMENT IN LABORATORY FINDINGS

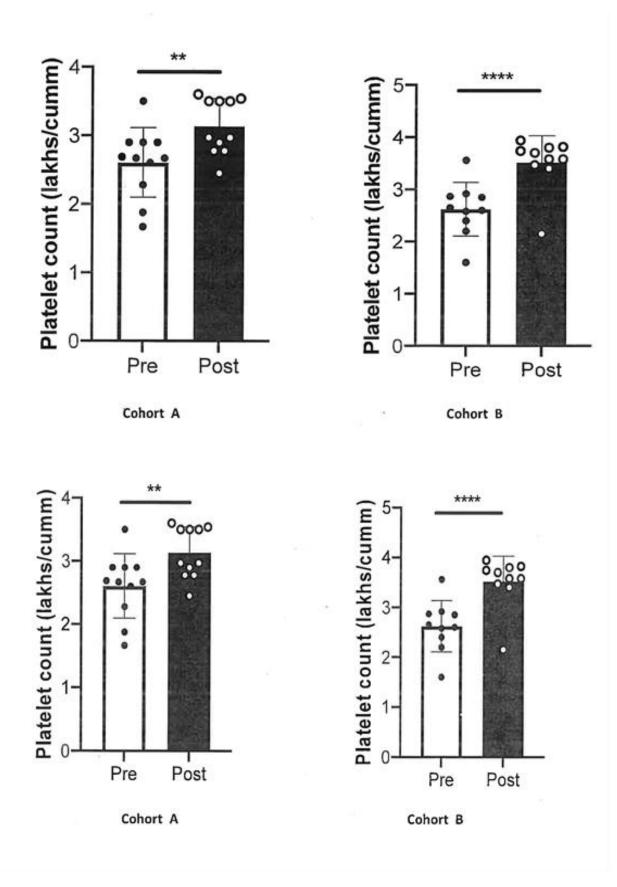
Cohort B

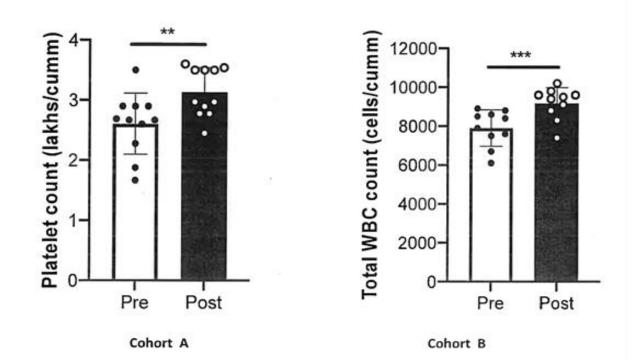


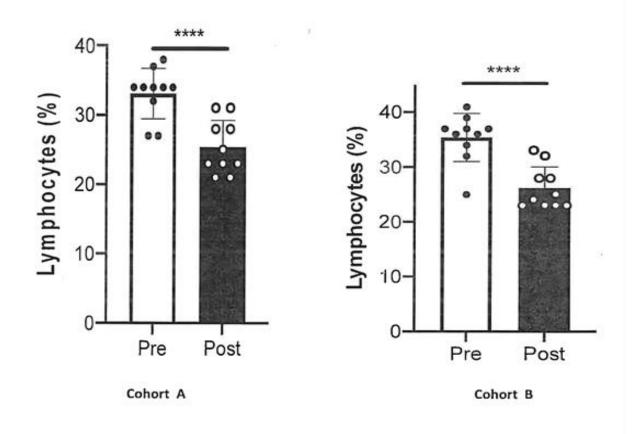


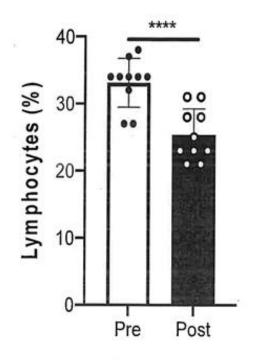


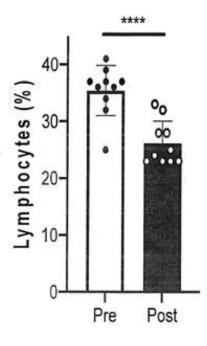
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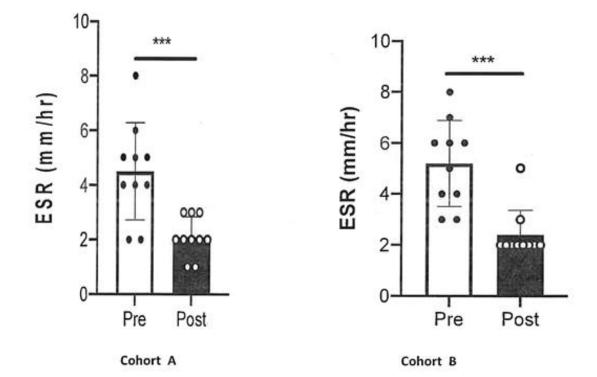






Cohort A

Cohort B



Discussion and Statistical analysis of the Results Obtained

TABLE - 1.0 ; Sex ratio of the Patients	(20)
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Sex	Total	%
Male	11	52%
Female	09	48%

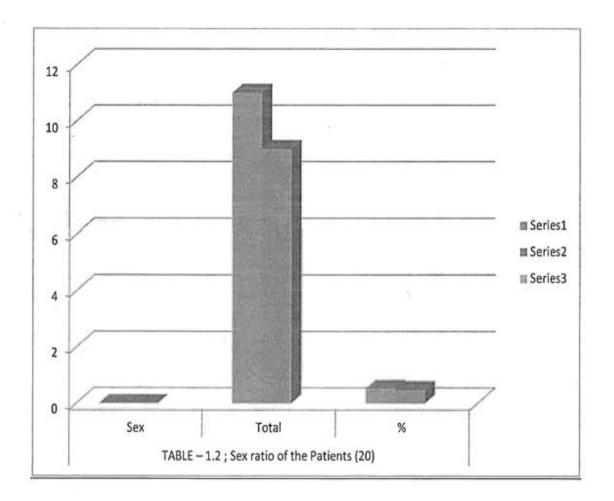


TABLE -1.1 ; Age group of Patients (20)

Age group	Total	%
45-60	14	72%
21-44	6	28%

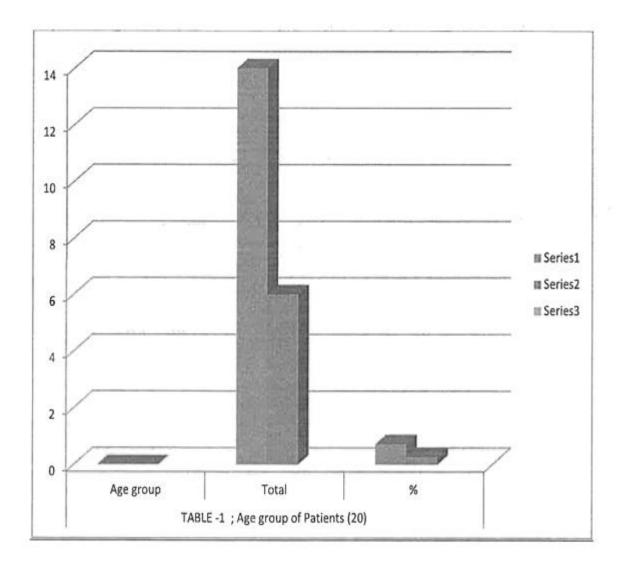


TABLE - 2, Improvement of Uttanabrikkaroha(ChronicRenal disease)

in One month (20)

Age group	Improvement in 2 weeks ,	symptoms 4 weeks.	% of Improvement
21-45	6	10	80 %
45-60	2	4	55 %

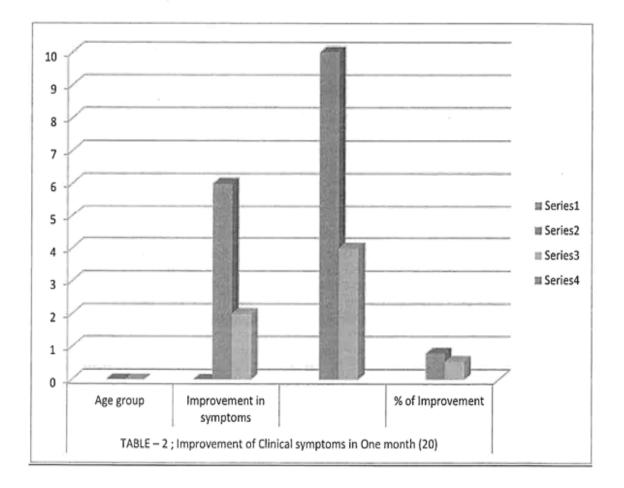
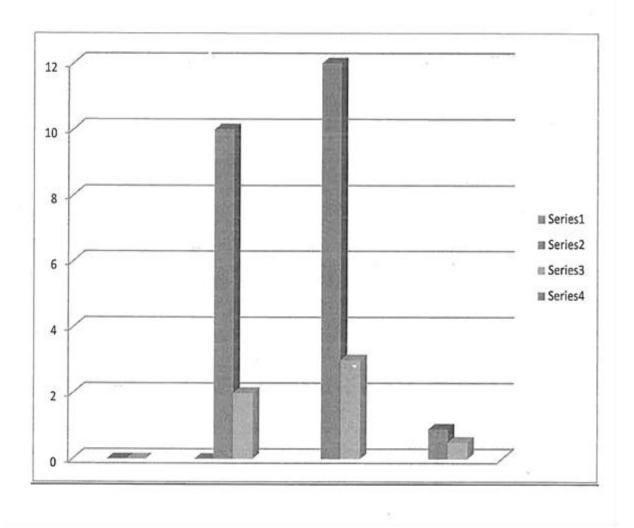


TABLE - 3 ; Improvement of Mutraghataroha(Urinary Tract Infection)

in One month (20)

Age group	Improven 2 weeks	nent in symptoms , 4 weeks.	% of Improvement
21-45	10	12	90 %
45-60	2	3	50 %



Age group	Improvement in 2 weeks ,	n symptoms 4 weeks.	% of Improvement
21-45	6	10	85 %
45-60	2	5	60 %

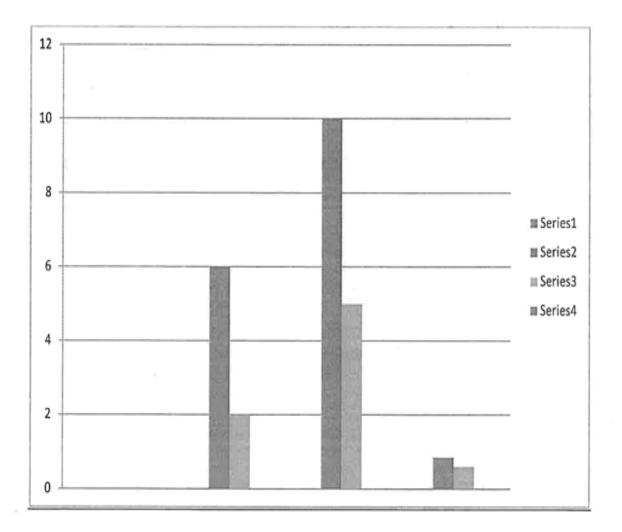
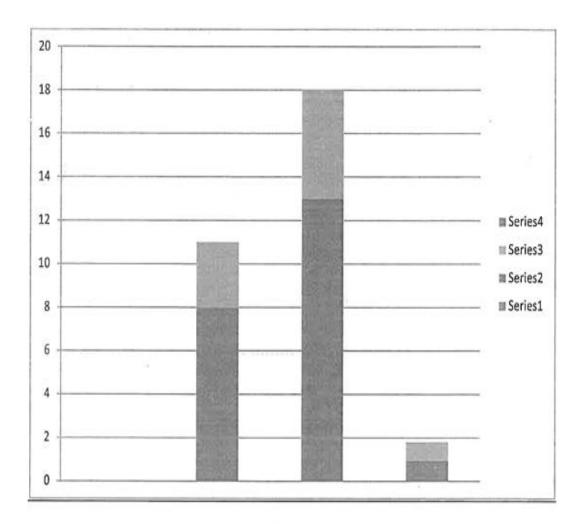


TABLE - 5 ; Improvement of Mutrachmari(Renal calculi) in One month (20)
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Age group	Improver 2 weeks	nent in symptoms , 4 weeks.	% of Improvement
21-45	8	13	95 %
45-60	3	5	85 %



Improvement in symptoms 2 weeks , 4 weeks.		% of Improvement
6	10	60 %
3	4	65 %
	2 weeks	2 weeks 4 weeks. 6 10

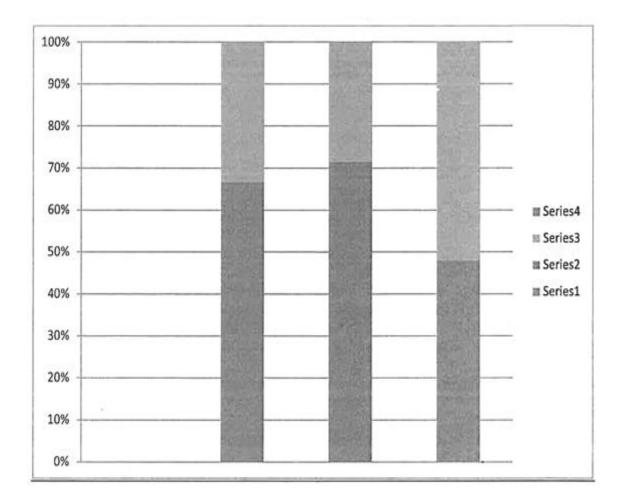
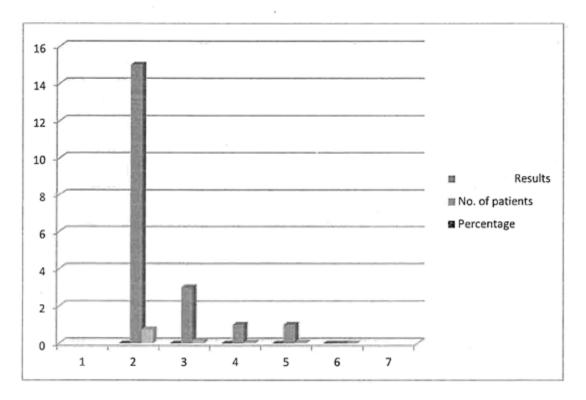


Table - 7 ; Overall results of Treatment in reduction of Clinical symptoms and

Results	No. of patients	Percentage
Very good improvement of all symptoms	15	75 %
Moderate improvement	03	15 %
Mild improvement	01	5 %
No significant relief	01	5 %
Drop out	0	0 %

Laboratory investigations in Patients treated (Total 20 patients)



After the treatment of 30 days, 15 patients (75%) had very good improvement of symptoms, 3 patients (15%) had moderate improvement, 1 patient (5%) had mild improvement and 1 patient (5%) had no significant improvement from the study.

Direct access to source data/documents: We hereby agree that the investigator(s)/ institution will permit trial-related monitoring, audits, institutional review board/independent ethics committee review, and regulatory inspection(s), by the Research Council/ Department of AYUSH providing direct access to source data/documents.

Quality control and quality assurance: The Manufacturing Unit of the drug is responsible for the hygienic packaging of the dose of the herbal product to be dispensed to the participant. The label should necessarily contain the word "For Clinical studies only".

Compensation to the Participant: As per GCP guidelines the subjects were compensated for the inconvenience and time present in connection with their participation in this clinical trial by signing a Voucher after payment of compensation.

Participant protections and ethics: To protect human participants, the protocol was written according to general ethical guidelines, such as the Declaration of Helsinki and Good Clinical Practice and was approved by the institutional ethical committee of the organization. The study participant consent process includes information about potential risks, benefits, alternatives, and responsibilities during the trial.

Before participants agree to participate in this trial, researchers will explain this information in detail in person.

Data and safety monitoring: Regular monitoring that will be clarified in a standard operating procedure will be conducted to ensure good data quality. Monitors from IEC will evaluate whether the case report forms are properly written and whether the recruiting and treatment procedures are adequately performed according to the protocol. Investigators will be contacted to discuss whether it is necessary to revise

the study protocol or inclusion criteria and other important issues. The investigators and independent researchers will assess the progress of the clinical trial and severe adverse events and determine whether they are acceptable and whether it will be necessary for the trial to be modified or stopped.

Case Sheets prepared for each patient and all the records and vouchers will be retained with the treatment centre for Three years.

CONCLUSION

Phase-II A, Single center, Open label, Therapeutic exploratory clinical trial The current Phase-II-A, Single center, Open label, Therapeutic exploratory clinical trials is designed to evaluate the efficacy of Proprietary Ayurvedic Medicine - NEPHROFIT Manufactured CAPSULE, bv VIJAYANI NUTRACEUTICALS PVT LTD, No.2B/1,2B/2, 6th street,3rd Main road, Ambattur Industrial estate South, Ambattur, Chennai-600058. Tamil Nadu. on patients suffering from clinical symptoms o/ "Uttanabrikkaroha (Chronic Renal disease), Mutraghataroha (Urinary Tract Infection), Mutrakshyam (Anuria), Mutrakriccharam (Dripping urine), of Mutrachmari (Renal calculi), etc."

By consolidating the results obtained in the investigations and clinical laboratory investigations, it is hereby concluded that the Proprietary Ayurvedic Medicine - NEPHROF-IT CAPSULE, is highly effective in controlling Clinical symptoms of "Uttanabrikkaroha (Chronic disease), Mutraghataroha Renal (Urinary Infection), Mutrakshyam Tract (Anuria), Mutrakriccharam (Dripping of urine), Mutrachmari (Renal calculi), etc." in the recruited patients. It was also found to improve their Prostate health during the study.

REFERENCES

1. KDIGO Clinical Practice Guidelines for Kidney Disease. Kidney Int Suppl. 2021.

- 2. Luyckx VA, et al. Global Burden of Kidney Disease. Lancet. 2020.
- 3. Levin A, et al. CKD Management and Challenges. Kidney Int. 2017.
- Palmer SC, et al. Conventional Therapies for CKD. Cochrane Database Syst Rev. 2019.
- 5. O'Callaghan CA, et al. Antibiotic Resistance in UTI Treatment. Clin Infect Dis. 2021.
- 6. Jha V, et al. Economic Burden of Dialysis. Nephrol Dial Transplant. 2018.
- 7. Sharma PV. Charaka Samhita: Ayurveda and Renal Health. Chaukhambha Publications. 2010.
- Mishra S, et al. Ayurvedic Approach to Kidney Disorders. J Ayurveda Integr Med. 2018.
- 9. Kothari SL, et al. Herbal Diuretics in Ayurveda. J Ethnopharmacol. 2019.
- 10. Patwardhan B, et al. Ayurvedic Nephroprotective Formulations. J Altern Complement Med. 2020.
- 11. Dhuley JN. Punarnava and Kidney Health. Phytomedicine. 2017.
- 12. Singh R, et al. Gokshura in Urology. J Tradit Complement Med. 2019.

- 13. Sharma A, et al. Varuna in Renal Calculi. J Herb Med. 2021.
- 14. Baliga MS, et al. Bergenia Ligulata in Urolithiasis. J Ayurveda Med Res. 2019.
- 15. Mukherjee PK, et al. Chandraprabha Vati: A Classical Urinary Tonic. J Ethnopharmacol. 2020.
- Guarner F, et al. Herbal Interventions for Kidney Health. NutrMetab Insights. 2016.
- 17. Slavin JL. Anti-Inflammatory Role of Ayurveda in CKD. Nutr Rev. 2013.
- Kar SS, et al. Scientific Validation of Ayurvedic Urological Medicines. J Herb Med. 2016.
- 19. Verma S, et al. Standardization of Ayurvedic Medicines. J Tradit Complement Med. 2019.
- 20. Mukherjee PK, et al. Integration of Ayurveda in Nephrology. J Ethnopharmacol. 2020.
- 21. Srivastava S, et al. Natural Compounds in Renal Health. Nephrol Rev. 2018.

S. Suman, P. Karthikeyan, S. Moulishankar, et.al (2025). Open Label Single Centric Clinical Exploratory of Efficacy Study On Nephrofit Capsule, An Ayurvedic Proprietary Formulation, ijmaes; 11(1); 2120-2141.