

Single Drug Treatment for Chronic Kidney Disease – A Case Study

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Abstract Punarnava matured whole plant of Boerhaavia diffusa Linn. (Fam Nyctaginaceae), trailing herb found throughout India and collected after rainy season, herb is diffusely branched with stout root stock and many long slender, prostrate or ascending branches. The name says “pun-nava” means new again; Punarnava can rejuvenates the dying cells and helps to revive the dying organs of the body. Kidneys are the organs that have numerous biological roles. They maintain the homeostatic balance of body fluids by removing waste out of body. Chronic Kidney disease (CKD) or Chronic Renal Failure (CRF) refers to an irreversible deterioration in renal function, which develops over a period of years. The conventional approach of management includes dialysis and renal transplantation, which are involving the high costs and complexity so very few patients are able to obtain adequate treatment for kidney disorders because of financial limitation. Therefore, exploration of a safe and alternative therapy is needed, which proves to be helpful in reducing the requirement of dialysis and in postponing the renal transplantation. The use of herbal drugs for the prevention and treatment of various diseases is constantly developing throughout the world. In present study a case was taken of chronic kidney disease with chronic nephritis. He was Punarnava swaras daily with orally. This treatment approach has significantly improved condition of patient eliminating dialysis requirement.

Keywords *Chronic Kidney Disease; Punarnava Swaras*

1. Introduction

Chronic Kidney Disorders have always remained a major area of concern for physicians since a long time. It is the 9th leading cause of death in United States. Incidences of kidney diseases leading to kidney failure are increasing day by day. Some people develop irreversible kidney disease called Chronic Renal Failure (CRF) or Chronic Kidney Disease

(CKD), the most common type of kidney disease today which can most of time terminate into final stage called End Stage Renal Disease (ESRD) [2].

CKD affects about 175 to 200 millions in India (roughly 17.4%), says the latest study by the Indian Society of Nephrology and University of Harvard. Nearly 18,000-20,000 patients (10% of new ESRD cases) in India get renal replacement therapy. It is estimated that over 10% of the adult population in developed countries have some degree of CKD. CKD is a progressive and irreversible deterioration of the renal excretory function that results in implementation of renal replacement therapy in the form of dialysis or renal transplant, which may also lead to death. CKD poses a growing problem to society as the incidence of the disease increases at an annual rate of 8% [1].

The treatment of Chronic Kidney Disorders consists of treatment of the underlying cause if possible, and other symptoms, liquid and diet control, cessation of smoking, use of various pharmacological drugs. But with progressive end-stage disease, restoration of kidney function can only be possible with dialysis or a kidney transplant. So, the treatment modalities are very costly and may not be affordable by all.

Ayurveda is ancient traditional approach of medicine in India. It can complement with western medicines. Ayurveda treatments are based on balance of body, mind and spirit. They work on principles of tridosha. The advantage of using Ayurvedic medicines in CKD is that in most patients, the kidney damage can be either partly or fully reversed, the frequency of dialysis can be reduced, and the increased risk of death can be significantly reduced. Thus, Ayurvedic medicines have the potential for an important therapeutic contribution in all the stages of this condition [3].

2. Aims and Objective

To Evaluate Role of Punarnava as a Single Drug Treatment for Chronic Kidney Disease

2.1. Drug Profile

Punarnava [5]

Family - Punarnava kula, [Nyctaginaceae]

Latin Name - Boerhavia diffusa. Linn.

Habitate - All over India

Constituents - Alkaloid (Punarnavine)

Properties and Action [4]

Rasa: Madhura, Tikta, Kashay

Virya: Ushana

Vipaka: Madhura

Karma: Anulomana, sothahara

2.2. A Case Study

A case detail is taken from Department of Kayachikitsa, Dr. D.Y. Patil College of Ayurved and Research Institute & Hospital Nerul Navi Mumbai, India. The patient is male and having 49 years of

age and residing at Kalyan, Occupation- Business Thane, Maharashtra having OPD reg. no. 53311/13 and IPD Reg. no. 9983/13. He was diagnosed with CKD in 2012.

C/o Oliguria, weakness, since 2012 (on and off)

Loss of appetite,
Oedema,
Dyspnoea.

H/O Chronic Alcoholic since last 10 years

H/O Past Illness-Patient was all right 3 years ago but suddenly he was started to developed generalized oedema with Oligouria. For same he went to Inlaks and Budhrani Hospital, Koregaon, Pune, and Maharashtra but not got relief and he was advised for regular renal dialysis, but patient refused for same and came to us for Ayurvedic treatment.

F/H/O- Not Significant

O/E-

Nadi-80/min, Manduk gati
Mal-Malavshambha
Mutra-Alpa-Mutrata, Avil Varna
Jiva - Saam
Shabda - Kshin
Sparsha - Anushna
Drukh - Netronmilin
Akruti - Madhyam

BP-140/90 Mm/Hg

S/E-

RS- AEBE, Clear
CVS-S1, S2- NAD
CNS-Giddiness

P/A- Soft

L0, S0, K0
No GTR

Dushta Shrotas Parikshan

- 1.Medovaha- Vruka Shoth (USG)
- 2.Mutravaha- Alpa Mutrata, Avil Varna

Vyadhi Vyavachedak

- 1.Pandu
- 2.Hrudrog
- 3.Shoth

4. Madhumeha
5. Vruka shoth janya vicar

Vyadhi Vinishchaya- Vruka shoth janya vicar (CRD)

Treatment Given

Punarnava swaras- 10 ml BD with Water –Daily –Orally from December 2013 to May-14.

3. Results

The laboratory diagnostic tests, radio-sonological investigation had confirmed the presence of chronic kidney disease. Patient was advised to take Punarnava Swaras 10 ml BD with water and patient renal function was assessed every 7th day.

3.1. Sign and Symptoms

Sign and Symptoms	Initial Value	After 6 Month Treatment
Urine output (ml)	400	900
Weakness	++	+
Loss of Appetite	+++	+
Oedema	++	0
B.P.(mmHg)	160/100	142/90
Dyspnoea	+	0

3.2. Laboratory Tests

Laboratory investigation	Initial Value	After 6 Month Treatment
Hb (13.5 - 17.5 g/dL)	12.8	13.8
S.Creatinine (0.2 - 2.2 mg/dl)	4.81	1.2
BI.Urea (7–21 mg/dL)	84.06	38
Urine Albumin	++	Trace
WBC(4000-11000 cmm)	10000	6200
RBC in Urine (0 – 2/hpf)	5-6	1-2
S. Electrolytes (In mM / L)	S. Na (142.9 ± 1.9)	140
	S. K ⁺ (4.2 ± 0.3 [†])	3.0
	S. Cl (104.6 ± 1.8 [†])	76.0

3.3. USG (Abdomen + Pelvis)

- (i) 12th Aug 13- Shows Raised Parenchymal echogenicity of both kidney S/o Bilateral Paranchymal diseases (CKD).
- (ii) During the treatment on 24th March 2014 Shows –Significant Parenchymal echogenicity decreased. B/L Kidney is in normal Size and Shape.

4. Discussion

The Punarnava Swaras treatment of CKD is based on three principles; treating the damage kidneys, treating the body tissues (dhatus) which make up the kidneys and treating the known cause. As mentioned earlier, CKD is microvessels and developing microangiopathy. *Vata* is responsible for degeneration of the structure of the kidney [3]. The kidneys are made up of principally the “Rakta” and “Meda” dhatus. Treating these two dhatus imbalance is also an effective way to treat the kidneys. So the herbal drugs which can modulate these dhatus are effective in kidneys disease.

According to Ayurvedic principles of management of the disease, tissue damage can be prevented and repaired by *Rasayana* for *Mutravaha Srotas* drugs because they have the capability to improve qualities of tissues and hence increase resistance of the tissues. It increases urine filtration by causing Rakta bhar vridhi whereby it acts as shothaghna and overcome muttrakrichha. On the other hand, blockage can be removed by *Lekhana* action having scraping effect on blocked channels. It is good diuresis accompanied by increase sodium excretion. Ethyle chloride extract showed anti-inflammation activity in CKD. Laboratory tests showed good improvement even within a six month and serum creatinine, blood urea and albuminuria were reduced to good extent. The patient had shown great relief in all the signs and symptoms.

Punarnava Swaras revitalizes kidneys weakened by vata, calms pitta inflammations, and reduces swelling due to excess kapha [4]. Punarnava is found to enhance the bioavailability of structurally and therapeutically diverse drugs, possibly by modulating membrane dynamics with cytoskeletal function, resulting in an increase in the small intestine absorptive surface, thus assisting efficient permeation through the epithelial barrier so it imparts bioavailability enhancing effect to the Punarnava Swaras.

5. Conclusion

In this single drug study, the patient has shown encouraging results during the management of Chronic Kidney Diseases with Punarnava swaras treatments. The improvement obtained may be attributed to the disease modifying effect of given Ayurvedic treatment by means of its *Rasayana* (Punarnava Swaras). These significantly correct uremia, which is the cardinal feature of CRF, and improve the renal function which is evident by reduction in serum creatinine and other blood parameters. In addition, the treatments also improve the general condition of the patient. With this treatment requirement of dialysis is eliminated in patient. Currently patient is living healthy and happy life. This treatment approach is a safe and effective alternative in case of CRF. In a difficult condition where conventional treatments are beyond the financial capacities of a common man of the country, this therapy can be hopeful and promising.

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