A Case Study of Chronic Kidney Disease

Vijay Vaishnav1, Tarana Ameta2, Purushottam Das Sharma3, Dinesh Kumar Sharma4, Deepa5

INTRODUCTION

*Mutra* is a *kleda* product, according to Ayurveda. Acharya Sushruta, a world-renowned surgeon, has a good description of *Mutrapravrutti*. Chronic renal failure is another name for chronic kidney disease. Chronic kidney disease progresses slowly and steadily year after year. Chronic renal disease is divided into five stages. The function of kidney is to expel the waste products from blood of human body and balance the electrolyte, make red blood cells by releasing erythropoietin hormone. When the kidneys' functions are hampered, waste products are produced. Electrolyte imbalance, increased creatinine, urea, and albuminuria are all symptoms of being saturated in the body. Chronic kidney disease is caused by a variety of factors including a change in lifestyle, diabetes, hypertension, excessive use of painkillers, certain medications, infection, accident injury, congenital, and...
inherited. Chronic kidney disease, according to Ayurveda, is similar to Mutraghat/Aama in Mutra vaha Srotas. The function of the kidney is hampered by ama in the mutravaha srotas. Excess toxins build up in the body as a result of this. It mostly involves the doshas Vata and Kapha. Katu, Tikt Rasatmak, Agnidipan, Pachan, and Rasayan are the therapy plans (Rejuvenate). Ayurvedic medication should be planned according to the patient's situation.

CASE STUDY
A 35 year old Male Patient came in OPD with the symptoms of
- Pitting edema on leg, face, eye's
- Breathlessness
- Frothy Urine
- Anorexia
- Constipation

History of Present Illness
Patient was apparently alright 4 year before. He had history of osteoarthrities. For that he has taking pain killer medicine since 2 year. Gradually he experience pitting edema on face, leg and frothy urine

Past History
HTN-Known Case
DM-Non Diabetic
CVE-No History Stroke in Past
IHD-No History of IHD
TB-No History of TB
BA-No History of Bronchial Asthma

Personal History
Marital status-Married
Smoker-No History
Tobacco-No History
Alcohol-No History

Family History
Father-HTN
Mother-NAD

O/E (On Examination)
GC -Fair
Pulse-90/min
Bp-150/90 mm/Hg
Spo2-95
RR-20
Pallor- ++
Icterus-Absent

Asthvidh Pariksha
Nadi-Vata-Kaf

Mala-Malavstambh
Mutra-Frothy
Jiva-Sam
Shabd-Prakrut
Sparsh-Ushna
Druka-Pallor(++)
Aakruti-Madhyam

S/E (Systemic Examination)
RS-AE=BS
CVS-S1S2 NORMAL
CNS-Conscious Oriented
GIT-Liver, Spleen, kidney Not Palpable
After Examination Patient was sended for USG, KFT, and CBC

Investigation: Blood Urea-72.90 MG/DL, Serum Creatinine-3.70 MG/DL, sodium-134mEq/L, Potassium-4.30mEq/L; Hb-14.2 gm%; Phosphorus 3.67mg/dl; Ionized Calcium 4.61 mg/dl; USG- Bilateral kidney shows increased echogenicity with poor cortico-medullary differentiation S/O Grade 11 R.M.D, Relatively small size right kidney.

MATERIAL AND METHODS
Presenting Complaints of Patient Treatment Plan as shown in Table 1

RESULT (Table 2)
Investigation Wise Results (Table 3)

DISCUSSION
According to Ayurveda Vasti (Vrukka) come under Trimarma (Three fold of Life). Dosha (Vata and Kapha) circulates in body, where is kha-Vaigunya (empty channel) present (in Kidney) Vyadhi (Kidney Disease) Developed. The Sang (obstruction) type Vikruti present in Chronic Kidney Diseases. The Nomenclature of Chronic Kidney Disease is not available in Ayurveda, but According to Charak Acharya the nomenclature of any disease is not possible for every disease, we must understand the Dosh Dushya Samurchana. By observing Prakruti, Adhishthan, Hetues of disease can start the treatment.in Ayurveda a group of Kidney Disease is directly related with Mutraghat, Mutrakrucha, Ashmari and indirectly related with Prameha, Somaaroga, and Shopha.
**Action of Medicine**

1) **Punarnava Mandur**


*Punarnva mandure* is useful for iron deficiency and formation of red blood cells. It act as *mutrail* (Diuretic). *Punarnava* as name suggests regenerate the tissue and cell.

2) **Vrukkadoshantak Vati**

*Vrukkadoshantak Vati* is a medicine to treat kidney problems such as stones, renal colic, retention of urine, burning urination etc. It is also beneficial in chronic renal failure. *Vrukkadoshantak Vati* is prepared from medicinal herbs which have diuretic and anti-urolic action. *Chandanadi Vati*, *Gokshuradi Guggal*, *RaswantiTriphala GuggalHajrat*, *Berpiishi*, *Kankol*, *MirchKakdi*, *Beej Nimali Shwet Parpati*, *Malichhar*, *Shilajeet*, *Mutra Kruchhantak Ras*, *Prawal Pishthi*, *Udamber Ghan*, *Jasad Bhasma*.

3) **Ark Punarnava**

*Punarnava* (Boerhavía diffusa) is an ayurvedic medicine that is primarily used for the treatment of Diabetes. Secondary and off-label uses of *Punarnava Ark* have also been mentioned below. The key ingredients of *Punarnava Ark* are *Punarnava*. The properties of which have been shared below. The correct dosage of *Punarnava Ark* depends on the patient’s age, gender, and medical history. This information has been provided in detail in the dosage section.

4) **Ark makoe**

*Ark* *makoe* (also known as *Kakamachi* *Ark*) is a Unani Medicine prepared with distillation method from *Solanum Nigrum* plant. It is used for the diseases of abdominal organs including stomach, intestine, liver, and spleen. It has hepatoprotective action. Generally, it is given in combination with *Ark Kasni* in liver disorders for reducing hepatic inflammation and jaundice.

**CONCLUSION**

Although the Nomenclature of Chronic Kidney Disease is not available in Ayurveda but the Ayurvedic Medicine show remarkable effect in the kidney diseases. *Punarnava Mandur*, *Vrukkadoshantak Vati*, *Ark Punarnava*, *Ark makoe* through their pharmacological action helps in the restoration of kidney functions So, it can be concluded that the condition of the patients was markedly improved according to the symptoms with this medicines.

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Table 1 Shows Ingredients of Drugs

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Name Of Drug</th>
<th>Dose Of Drug</th>
<th>Kala</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Punarnava Mandur</td>
<td>2 tab.</td>
<td>After Food</td>
<td>Twice a day</td>
</tr>
<tr>
<td>2</td>
<td>Vrukadoshantak Vati</td>
<td>2 tab.</td>
<td>After Food</td>
<td>Twice a day</td>
</tr>
<tr>
<td>3</td>
<td>Ark Punarnava</td>
<td>10 ml</td>
<td>After Food</td>
<td>Twice a day</td>
</tr>
<tr>
<td>4</td>
<td>Ark Makoe</td>
<td>10 ml</td>
<td>After Food</td>
<td>Twice a day</td>
</tr>
</tbody>
</table>

Table 2 Shows Symptoms Wise Results

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Symptoms Before Treatment</th>
<th>First Follow Up</th>
<th>Second Follow Up</th>
<th>Third Follow Up</th>
<th>Fourth Follow Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pitting Edema On Face,Eyes,Leg</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>Breathlessness</td>
<td>+++</td>
<td>++</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Frothy Urine</td>
<td>++</td>
<td>++</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Anorexia</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>Constipation</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 3 Investigation Wise Results

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Investigation</th>
<th>Before Treatment</th>
<th>After Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HB (gm%)</td>
<td>14.2</td>
<td>14.3</td>
</tr>
<tr>
<td>2</td>
<td>Blood Urea (mg/dl)</td>
<td>85</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Serum Creatinine (mg/dl)</td>
<td>3.16</td>
<td>2.99</td>
</tr>
<tr>
<td>4</td>
<td>S.Sodium(mEq/L)</td>
<td>140</td>
<td>134</td>
</tr>
<tr>
<td>5</td>
<td>S.Potassium(mEq/L)</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>6</td>
<td>Albumin</td>
<td>3.85</td>
<td>3.25</td>
</tr>
</tbody>
</table>

Before Treatment

![Test Report]

1. eGFR calculated using the 2009 CKD-EPI creatinine equation and eGFR category reported as per KDIGO guideline 2012
2. In patients, with eGFRcreat between 45-59 ml/min/1.73 m2 and without any marker of kidney damage, it is recommended to measure eGFR with cystatin C for confirmation of CKD.
After Treatment

### Biochemistry

<table>
<thead>
<tr>
<th>Test</th>
<th>Value Observed</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Urea</td>
<td>72.9 mg/dl</td>
<td>10-50</td>
</tr>
<tr>
<td>Creatinine</td>
<td>2.99 mg/dl</td>
<td>0.6-1.20</td>
</tr>
<tr>
<td>Sodium</td>
<td>134.0 mEq/L</td>
<td>136.00 - 145.00</td>
</tr>
<tr>
<td>Potassium</td>
<td>4.3 mEq/L</td>
<td>3.50 - 5.00</td>
</tr>
<tr>
<td>Ionized Calcium</td>
<td>4.65 mg/dl</td>
<td>4.00-5.40 mg/dL</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>3.67 mg/dl</td>
<td>2.5-5.0 mg/dL Adults 4.6-7.0 mg/dL Children</td>
</tr>
</tbody>
</table>

**Notes:**

1. eGFR calculated using the 2009 CKD-EPI creatinine equation and GFR category reported as per KDIGO guideline 2012.

2. In patients with eGFR < 60 mL/min/1.73 m² and without any marker of kidney damage, it is recommended to measure eGFR with cystatin C for confirmation of CKD.