AYURVEDIC MANAGEMENT OF CHRONIC KIDNEY DISEASE: A CASE STUDY

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ABSTRACT

In recent years, chronic kidney disease (CKD) has received increasing attention owing to its enhancing rate of prevalence. Patients with CKD are at increased risk for cardiovascular morbidity and mortality. Furthermore, patients with CKD may progress to end-stage renal disease. To increase the awareness of CKD and improve treatment of patients with CKD, the Kidney Disease Outcomes Quality Initiative (K/DOQI) from the US National Kidney Foundation has developed guidelines for the diagnosis and classification of CKD. But so far as its treatment is concerned, it is very unsatisfactory in mainstream healing system. Kidney transplantation offers the best outcomes and the best quality of life. However, not everyone is a candidate for a kidney transplant. Extensive testing to ensure the suitability for transplantation, shortage of organs for transplantation, prerequisite several tests to identify suitable immunologic characteristics. Transplant surgery is a major procedure and generally requires 4 to 7 days in the hospital. All transplant recipients require lifelong immunosuppressant medications to prevent their bodies from rejecting the new kidney. These medications require careful monitoring of blood levels and increase the risk of infection as well as some types of cancer. A schedule of regular follow-up visits is mandatory in such cases. As another option dialysis is not effective in view of risk benefit ratio. Obviously there is an urgent need of help from alternative therapy to counter these difficulties. This article is a small beginning in this regard wherein the potential of Ayurveda can be peeped vividly.
KEYWORDS: chronic kidney disease, kidney transplant, immunosuppressant medications, Ayurveda.

INTRODUCTION

Chronic kidney disease (CKD) is a progressive loss in kidney function over a period of months or years. The symptoms of worsening kidney function are not specific and might include feeling generally unwell and experiencing a reduced appetite. Often, chronic kidney disease is diagnosed as a result of screening of people known to be at risk of kidney problems, such as those with high blood pressure or diabetes and those with a blood relative with CKD. This disease may also be identified when it leads to one of its recognized complications, such as cardiovascular disease, anemia, or pericarditis. It is differentiated from acute kidney disease in that the reduction in kidney function must be present for over 3 months.

Chronic kidney disease is identified by a blood test for creatinine, which is a breakdown product of muscle metabolism. Higher levels of creatinine indicate a lower glomerular filtration rate and as a result a decreased capability of the kidneys to excrete waste products. Creatinine levels may be normal in the early stages of CKD and the condition is discovered if urinalysis (testing of a urine sample) shows the kidney is allowing the loss of protein or red blood cells into the urine. To fully investigate the underlying cause of kidney damage, various forms of medical imaging, blood tests and sometimes a kidney biopsy (removing a small sample of kidney tissue) are employed to find out if a reversible cause for the kidney malfunction is present.

CKD poses a growing problem to society as the incidence of the disease increases at an annual rate of 8%. The incidence of chronic kidney disease in India, which is a densely populated country with low income, different food, cultural traditions and lifestyle habits, is 7.85 million CRF patients of its 1 billion population and the prevalence rate is 0.78%. The United States Renal Data Systems 2011 Annual Data Report determined that 15.1% of all adults above the age of 20 years have chronic kidney disease. It is estimated that more than 10% of adults in the United States - more than 20 million people - may have CKD at varying levels of seriousness. Chronic kidney disease resulted in 956,000 deaths in 2013 up from 409,000 deaths in 1990. Screening of at-risk people is important because treatments exist that delay the progression of CKD.
Severity-based stages
All individuals with a glomerular filtration rate (GFR) <60 ml/min/1.73 m² for 3 months are classified as having chronic kidney disease, irrespective of the presence or absence of kidney damage. The rationale for including these individuals is that reduction in kidney function to this level or lower represents loss of half or more of the adult level of normal kidney function, which may be associated with a number of complications such as the development of cardiovascular disease.[1]

Following are the 5 stages of CKD
Stage 1
Slightly diminished function; kidney damage with normal or relatively high GFR (≥90 ml/min/1.73 m²). Kidney damage is defined as pathological abnormalities or markers of damage, including abnormalities in blood or urine tests or imaging studies.[1]

Stage 2
Mild reduction in GFR (60–89 ml/min/1.73 m²) with kidney damage. Kidney damage is defined as pathological abnormalities or markers of damage, including abnormalities in blood or urine tests or imaging studies.[1]

Stage 3
Moderate reduction in GFR (30–59 ml/min/1.73 m²):[1] British guidelines distinguish between stage 3A (GFR 45–59) and stage 3B (GFR 30–44) for purposes of screening and referral.[15]

Stage 4
Severe reduction in GFR (15–29 ml/min/1.73 m²).[1] Preparation for renal replacement therapy.

Stage 5
Established kidney failure (GFR <15 ml/min/1.73 m²), permanent renal replacement therapy,[1] or end-stage kidney disease.

TREATMENT OF CKD
At present no satisfactory treatment is available in modern healing system where kidney transplantation and dialysis are introduced.
Kidney Transplantation and Follow-up

However, not everyone is a candidate for a kidney transplant. People need to undergo extensive testing to ensure their suitability for transplantation. Also, there is a shortage of organs for transplantation, requiring waiting times of months to years before getting a transplant.

A person who needs a kidney transplant undergoes several tests to identify characteristics of his or her immune system. The recipient can accept only a kidney that comes from a donor who matches certain of his or her immunologic characteristics. The more similar the donor is in these characteristics, the greater the chance of long-term success of the transplant. Transplants from a living related donor generally have the best results.

Transplant surgery is a major procedure and generally requires 4 to 7 days in the hospital. All transplant recipients require lifelong immunosuppressant medications to prevent their bodies from rejecting the new kidney. Immunosuppressant medications require careful monitoring of blood levels and increase the risk of infection as well as some types of cancer.

Chronic Kidney Disease Follow-up

If a patient has chronic kidney disease, their health care practitioner will recommend a schedule of regular follow-up visits.

Prognosis

The prognosis of patients with chronic kidney disease is guarded as epidemiological data have shown that all cause mortality (the overall death rate increases as kidney function decreases). While renal replacement therapies can maintain patients indefinitely and prolong life, the quality of life is severely affected. Kidney transplantation increases the survival of patients with stage 5 CKD significantly when compared to other therapeutic options; however, it is associated with an increased short-term mortality due to complications of the surgery. Transplantation aside, high-intensity home hemodialysis appears to be associated with improved survival and a greater quality of life, when compared to the conventional three-times-a-week hemodialysis and peritoneal dialysis.

CASE REPORT

A 28 years old male patient reported first time in the Swasthya Rakshana OPD of Patanjali Ayurved Hospital, Haridwar in July 2014 as a diagnosed case of Chronic Kidney Disease
(CKD). Nocturia, fluid retention, fatigue and weakness, loss of appetite, itching, shortness of breath, disturbed sleep, altered mental status, etc were his chief complaints. As per the patient he has developed these symptoms in past 3-4 years. In an attempt to get rid of these problems he consulted many renowned doctors, but owing to no improvement in the condition the patient was advised to go for kidney transplantation. The patient reluctant to kidney transplantation visited our hospital for a conservative treatment.

AYURVEDIC MANAGEMENT
So far as Ayurved is concerned, Kidney disease (Vrikka-Vikara) as such has not been described. But as per the presentations, it can be very well included in disorders of Mutravaha Srotasa. The patient was switched on to following Ayurvedic medicines in this way.

1. A specific decoction prepared with drugs like Trinapanchamoola Kwath, Ashmarihar Kwath, barks of Peepal and Nimba. (30 ml x BD empty stomach).
2. Ashmarihar Rasa-250 mg/day,
   Shweta Parpati-250 mg/day,
   Hazrulyahud Bhasma-250 mg/day,
   Punarnava Mandura -500 mg/day
3. Chandraprabha Vati-1 tab TDS,
   Gokshuradi Guggulu-1 tab TDS,
   Vrikkadosahara Vati-1tab TDS
4. Mahamanjishtharishta-10 ml x BD
   +Usheerasava 10 ml x BD

RESULTS
So far as subjective parameter is concerned, the patient’s response towards the treatment was in superlative degree. All his symptoms were mostly reduced upto minimum level.

GFR of the kidneys of the patient before and after the commencement of Ayurvedic treatment were taken as the objective parameter for the assessment of the results of the treatment given. The results obtained are as following.

<table>
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<th>Left Kidney</th>
<th>Right Kidney</th>
<th>Total</th>
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<tbody>
<tr>
<td>BT(Before treatment)</td>
<td>09.61</td>
<td>65.23</td>
<td>74.84</td>
</tr>
<tr>
<td>AT(After treatment)</td>
<td><strong>19.52</strong></td>
<td><strong>82.22</strong></td>
<td><strong>101.74</strong></td>
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DISCUSSION
Ayurvedic treatment given judiciously can certainly relieve the patient from CKD. According to Ayurveda, CRF is a disease of Mutravaha Srotas. Though all the three Doshas as well as all the Dushyas are involved in the disease, Kapha is responsible in blocking microvessels and developing microangiopathy. Vata is responsible for degeneration of the structure of the kidney. According to Ayurvedic principles of management of the disease, tissue damage can be prevented and repaired by Rasayana 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 drugs having scraping effect on blocked channels.

Goksuradi guggulu.\(^{[12]}\) (Ayurvedic preparation) is Rasayana for Mutravaha Srotas and it has also Lekhana (scraping) effect because of Guggulu.\(^{[13]}\) (Commiphora mukul). It is good diuretic leading to increased sodium excretion. Being a compound of ingredients with properties similar to that of Goksuradi guggulu Chandraprabha Vati and Vrikkadoshahara Vati enhance the effect of Goksuradi guggulu.

As the patient was a case of end-stage kidney disease and was recommended for kidney transplantation, it was essential to add more drugs in the treatment protocol and it was done in the form of Punarnava Mandura, Shweta Parpati, Hazrulyahud Bhasma, Giloy sat, Manjishtarishta, Usheerasava and the above decoctions. Obviously, it resulted into the subsidence of symptoms owing to its synergistic actions to other medicines.

CONCLUSION
In this case study, the patient has shown encouraging results during the management of Chronic Kidney Disease. One of the best investigations i.e. GFR was enhanced from 09.61ml/min. to 19.52ml/min. In other words, the end stage kidney disease was converted into stage IV CKD within few months with great relief in all the signs and symptoms. In addition, the treatments also improved the general condition of the patient. With this treatment requirement of dialysis is eliminated in patient.

Therefore on the basis of observations and results of this case study, it can be iterated that Ayurveda has the potential to treat the CKD and arrest its progression and hence masses
should be promoted to get benefitted from the boon of Ayurved and lead an enthusiastic and happy life.

REFERENCES

