Case Report
A Case Study of Chronic Renal Failure (Pediatric) Managed by Ayurvedic Treatment

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Abstract
A 10-year old girl was presented to our hospital with a confirmed diagnosis of chronic renal failure (CRF)-stage 5 for Ayurvedic treatment with a hope of postponing renal transplantation and if possible, dialysis. She was managed well with Ayurvedic treatment despite the first and only hemodialysis (till now), which was otherwise inevitable.

A 10-year old girl presented with the complaint of vomiting for about 1 month, excessive thirst, puffiness of face and occasional chest pain was admitted to the Hospital. She was a diagnosed case of chronic renal failure (CRF)-stage 5. Her creatinine was 7.36 mg/dL, urea (GLDH) 223.6 mg/dL and BUN (CALC) was 104.47 mg/dL. Her GFR was 8.7. She was advised renal transplantation by a leading urology hospital. After hospitalization her renal function tests (RFT) were done. She was clinically examined and put on Ayurvedic treatment which include oral medicines and also administered niruha basti (rectocolonic administration of the medicaments) daily. Her RFTs were repeated weekly once to check her renal function. After three weeks of treatment though her complaints were very much under control, hemodialysis was inevitable as her creatinine gradually shot up to slightly above 10 mg/dL. With continuation of Ayurvedic treatment she started showing improvement in her renal function. In more than two months period she did not require further hemodialysis or blood transfusion. Her creatinine ranges from 5.0 to 6.8 mg% and GFR ranges from 9.9 to 13.4 (ml/min/1.73 m²). She continues enjoying normal life with all her routine, and yoga and āsanas that have been taught to her when she was in the hospital.

Key words: CRF, Niruha basti, Punarnāvī kvāṭha, Kshirabasti

Introduction
A 10-year old girl was presented to Kaumarabhritya (Pediatric) Department with the complaints of vomiting for about one month-duration, excessive thirst, puffiness of face, fatigability and clinical depression. She used to have chest pain, which was not severe enough to warrant any medical intervention. She was a diagnosed case of chronic renal failure (stage 5) and was advised renal transplantation. Though we could not prevent her first and only hemodialysis till date, she subsequently continued to show improvement in her renal function (GFR). In pediatric population renal dysgenesis is one of the reasons for chronic kidney disease and our experience shows that renal function can be improved and maintained with improved status without dialysis in selected cases and renal transplantation can be postponed. In other words life can be increased to some extent. Hence this case is presented here.

Case Presentation
In October 2015 this 10-year old girl was transfused one unit of blood as her Hb was extremely low (4.0 gm%). During evaluation of her extreme anemic condition, puffiness and lethargy following results were found. Her abdominal sonography revealed bilaterally small kidneys showing raised cortical echogenicity with altered cortico-medullary differentiation. Right kidney was 6.26x3.16 cm and left kidney was 6.15x3.19 cm. Her Hb was 8.9 gm%, RBC 3.35 m/cmm, PCV 25.6% and had RBC morphology of mild hypochromic, microcytic and anisocytosis. Reticulocyte count was 1.00% and ferritin was 388.10 ng/mL. LFT showed SGOT 26.46 U/L, SGPT 32.2 U/L, Alkaline phosphatise 608.0 U/L, total proteins 6.88 (4.59+2.3) gm/dL, and A/G ratio 2:1. Bilirubin was normal. She was also diagnosed as having renal osteodystrophy. Her electrolyte panel showed Na⁺ 131.30 mEq/L, K⁺ 4.80 mEq/L, Ca++ 7.3 mg/dL, phosphorus (inorganic) 7.44 mg/dL, HCO₃⁻ 16.3 mEq/L and LDH was 289.9 U/L. Her creatinine was 7.36 mg/dL, urea (GLDH) 223.6 mg/dL and BUN (CALC) was 104.47 mg/dL. Her GFR was 8.7 (calculated according to the formula given in Nelson’s Textbook of Pediatrics) and she was advised renal transplantation to alleviate her problem before she came to us. She was brought to our hospital with a hope of avoiding renal transplantation. All the treatment aspects, possible outcomes and lifelong diet and other restrictions were explained. It was also emphasized that in case of dissatisfactory response our hospital may advise the patient to discontinue treatment and go for either dialysis or renal transplantation. These conditions were readily agreed upon by the patient’s family members as the patient was minor to take decision on her own.

Management and Outcome
After admission (on 13th October, 2015) to our hospital her RFT and clinical examinations were...
done before starting treatment. On clinical examination the girl was having anemia, puffiness of face, typically dark complexion (not her original complexion), stunted growth, obesity, mild splenomegaly, extreme lethargy and clinical depression. Her BP was 100/70 mmHg and pulse was 106/mt. There was no pedal edema and her appetite was very poor. She was provided hospital-diet meant for kidney patients (consisting of rice-based diet with very little amount of Sāṁdhava lavana (rock salt), no additional sugar, jaggery, sour items or chillies). She was put on following treatment.

1. Gokshuradi Guggulu\(^{2}\) (compound Ayurvedic preparation of Gokshura, Guggulu, Triphala, Trikatu and Musta) – two tablets tid

2. Rasayana churna\(^{5}\) (a compound Ayurvedic preparation – a powder of Guduchi, Gokshura and Amalaki in equal amount) – 2 gm bid

3. Varunadi kwatha\(^{3}\) (Varuna tvak, Bilvamula, Apamarga, Chitrakamula, Arani, Shigru, Brihati, Kiratitikta, Karanja, Shatavari) – 20 ml bid

4. Uricare tablet (Punarvasu Pharmacy – NADIAD – a compound preparation of Guduchi, Gokshura and Shilajit) – 2 tablets tid

5. Tamalaki rasayana tablets (Punarvasu Pharmacy - NADIAD -Bhumyamalaki churna) – 2 tablets tid

6. Niruha basti\(^{5}\) (rectocolonic administration of the medicaments) – Punarnavadi kwatha (B.R. Udararoga Adhikara 40/43–44) – 100 ml – alternated with Shatavari kshirapaka\(^{6}\) (a classical preparation) 40ml

7. Alpha D3 (GlaxoSmithKline) (Alpha calcio1 D3) – 0.25 mcg - one tablet in three days

8. Tonoferon syrup (East India Pharamaceutical Works Ltd.) – 5 ml bid

9. Yoga and physical exercise – to remove the depression

After 12 days the child was completely in her cheerful mood with writing poems, jokes and drawing beautiful pictures. Though her vomiting and fatigue subsided completely her creatinine continued to rise slowly without showing any clinical signs of deterioration in her clinical condition. After 20 days (on 3\(^{\text{rd}}\) November, 2015) her creatinine was 10.4 mg/dL and it was decided to start hemodialysis, which was done on 4\(^{\text{th}}\) November, 2015. Since it was for the first time it was done through JVC. Next day her creatinine was 5.8 mg/dL. On 2\(^{\text{nd}}\) day of dialysis as per our advice she had undergone AVF in her left hand. On 8\(^{\text{th}}\) November she was discharged from the hospital on request as the biggest Hindu festival of Diwali was following and the patient is native of Madhya Pradesh. From 4\(^{\text{th}}\) of November till 16\(^{\text{th}}\) of November she continued taking all the oral medications. Niruha basti was discontinued during this period and was resumed when she got readmitted (on 16\(^{\text{th}}\) November, 2015). On this day her RFT and hemogram were repeated and surprisingly the child was doing well except for her haemoglobin, which was 5.6 gm%. Next day she was transfused one unit of blood. Niruhabasti was resumed along with all the oral medications. After about one week, niruhabasti was alternated with kshirabasti of (Shatavari kshirapak). Subsequent creatinine values continued to remain satisfactorily and at clinically better levels and later started falling, but haemoglobin level was not improving, hence she was advised erythropoietin in the dose of 2,000 units once a week. Since then her haemoglobin has stopped falling and the subsequent levels are maintaining. The child was discharged on 14\(^{\text{th}}\) December, 2015. Her creatinine (done at her native place on 21-12-15) dropped to 5.4 mg/dL (below the level of immediate post-hemodialysis), Hb 6.6 gm% (improved a little bit), urea 89.2, serum Ca\(^{++}\) 6.5 and platelet 125,000. All her blood values are given at the end of the article in the tabulated form. She continues to take all the oral medicines as mentioned earlier.

**DISCUSSION**

This clinical experience poses some questions.

- Can this result be reproducible?
- Can Ayurvedic treatment improve renal function?
- Can this treatment slow the rate of progression of the disease?
- Can we postpone renal dialysis or reduce the number of dialysis?
- Can we postpone renal transplantation for some time (may be years)?

There are several such questions. The Ayurvedic treatment is relatively much cheaper than dialysis. If renal transplantation can be avoided, then there is one more positive aspect it i.e. of avoiding use of immunosuppressant drug.

**REFERENCES**


3. Rasayana churna


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Table showing all relevant hematological values for RFT along with Hb

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<th>Date</th>
<th>Hb</th>
<th>Creatinine</th>
<th>Urea</th>
<th>Total protein (Ab + G)</th>
<th>Alk. Pho. IU/dL</th>
<th>Na+</th>
<th>K+</th>
<th>Cl-</th>
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DOA=date of admission, BHD = before hemodialysis, AHD = after hemodialysis, BT = blood transfusion;
The patient’s height was 121.8 cm; GFR (ml/min/1.73m$^2$)= k x height (cm) divided by serum creatinine (mg/dL).