



A Short Term Effect of Alternative Medicine on Serum Creatinine Level among Chronic Kidney Disease Patients



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Abstract

Aim: The aim of this study was to investigate the effect of herbal medicine and naturopathy intervention on serum creatinine level among chronic kidney disease patients.

Methodology: The study was carried out in universal good life ashram, Thirunelveli, Tamilnadu, India. A convenient sample of 20 patients who were between the ages of 35-65 of both sexes with chronic renal failure who attended our inpatient department of renal care unit was selected for the study. Depending upon the number of days the patients underwent the treatment we divided them in to three groups (5 days group, 7 days group, 10 days group). We had given an herbal medicine and naturopathy treatments like cool water enema, cold hip bath and kidney pack for the chronic kidney disease patients. Serum creatinine level was evaluated before and after the corresponding days of treatment. Data were collected for statistical analysis.

Results: All the participants have shown significant reduction in serum creatinine level. There was a reduction of 28.6% of serum creatinine value after the 5 days of alternative medicine interventions (pre-creatinine value 3.640, SD±1.6334; post-creatinine value 2.600, SD±1.6000), whereas there was a reduction of 27% of serum creatinine value after the 7 days of interventions (pre-creatinine value 3.714, SD±2.1435; post-creatinine value 2.714, SD±1.7014) and 31.81% reduction of creatinine after 10 days of treatment (pre-creatinine value 5.500, SD±1.3137; post-creatinine value 3.750, SD±.9681).

Conclusion: This study shows the significance of short term reduction in serum creatinine level among chronic kidney disease patients by herbal medicine and naturopathy interventions. This study needs further clinical trials with large samples to show the effect of herbal and naturopathy medicine on serum creatinine level for long term management.

Keywords: Chronic kidney diseases; Alternative medicine; Naturopathy; Herbal medicine; Serum creatinine

Introduction

Chronic kidney disease (CKD) refers to decreased kidney function, as shown by a glomerular filtration rate (GFR) of less than 60mL/min per 1.73m², or markers of kidney damage, or both, of at least 3 months duration [1]. Progression of chronic renal disease is associated with a number of serious complications including increased incidence of cardio vascular disease hyperlipidaemia, anaemia and metabolic bone disease [2]. In India the prevalence of CKD was observed to be 17.2% with ~6% have CKD stage 3 or worse [3]. According to KDOQI guidelines there are five stages of chronic kidney disease [4]. This study discusses the alternative strategies and treatment option for reducing the serum creatinine level by improving the functions of kidney. In this study we had

given naturopathy treatment and herbal medicine for the selected chronic kidney disease patients. Naturopathy is a system of health care. Naturopathy is also defined as a system of medicine for cure of diseases by encouraging natural curative reactions inherent in every diseased cell through methods and treatments based upon the fundamental laws which govern health [5]. The holistic approach to health care makes herbal medicine very attractive to many people, but it also makes scientific evaluation very challenging because so many factors must be taken into account. Herbal medicines are in widespread use and although many believe herbal medicines are safe, they are often used in combination and are drawn from plant sources with their own variability in species, growing conditions, and biologically active constituents [6]. Water is a main component

of Naturopathy. It is an ancient method of treatment used mainly for preserving health, relieving the inner congestion and curing different types of diseases [5]. In this study the patients with chronic kidney disease were underwent naturopathy treatment such as diet therapy, hydrotherapy and herbal medicine with different window

periods (5days, 7days and 10days). There is a lack of systematic approach to assess the safety and effectiveness of herbal medicine. Each patient the serum creatinine level was measured before and after the course of treatment.

Methodology of Study

Table1: 10 days Interventional group.

DAY	6.00 AM	8.00 AM	8.30 AM	9.00 AM	9.30 AM	11.00 AM	12.00 PM	1.30 PM	2.00 PM	4.00 PM	4.30 PM	5.30 PM	7.00 PM
1 st day	Chuk-kum- alli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine (neermulli, dried leaves of mullukee- rai, vattasara- nai, sirukanpee- lai)	Barely water	Rice flakes, Salad (cucum- ber, chow chow, ashgourd)	Ginger honey juice	kid- ney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece- coconut, 2dates,ap- ple2piece, pomegranate 112,grapes(10), papaya(4piece), watermel- on(3piece), sprouted thinai)
2 nd day	Chuk-kum- alli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Rice flakes, Salad (cucum- ber, chow chow, ashgourd)	Ginger honey juice	kid- ney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece- coconut, 2dates,ap- ple2piece, pomegranate 112,grapes(10), papaya(4piece), watermel- on(3piece), sprouted thinai)
3 rd day	Chuk-kum- alli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Rice flakes, Salad (cucum- ber, chow chow, ashgourd)	Ginger honey juice	kid- ney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece- coconut, 2dates,ap- ple2piece, pomegranate 112,grapes(10), papaya(4piece), watermel- on(3piece), sprouted thinai)
4 th day (fast- ing)	Chuk-kum- alli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Rice flakes, Salad (cucum- ber, chow chow, ashgourd)	Ginger honey juice	kid- ney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece- coconut, 2dates,ap- ple2piece, pomegranate 112,grapes(10), papaya(4piece), watermel- on(3piece), sprouted thinai)
5 th day	Chuk-kum- alli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Rice flakes, Salad (cucum- ber, chow chow, ashgourd)	Ginger honey juice	kid- ney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece- coconut, 2dates,ap- ple2piece, pomegranate 112,grapes(10), papa- ya(4piece),wa- termel- on(3piece), sprouted thinai)

6 th day	Chukku malli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Rice flakes, Salad (cucumber, chow chow, ashgourd)	Ginger honey juice	kidney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece-coconut, 2dates,apple2piece, pomegranate 112,grapes(10), papaya(4piece), watermelon(3piece), sprouted thinai)
7 th day	Chukku malli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Pomegranate juice	Ginger honey juice	kidney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Orange juice
8 th day	Chukku malli-coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Pomegranate juice	Ginger honey juice	kidney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Orange juice
9 th day	Chukku malli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Pomegranate juice	Ginger honey juice	kidney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece-coconut, 2dates,apple2piece, pomegranate 112,grapes(10), papaya(4piece), watermelon(3piece), sprouted thinai)
10 th day	Chukkimalli coffee	Curry leaves juice	Cold Hip bath	Herbal medicine	Barely water	Rice flakes, Salad (cucumber, chow chow, ashgourd)	Ginger honey juice	kidney pack	Ragi malt	Barely water	Herbal medicine	Amla juice	Fruits(2 piece-coconut, 2dates,apple2piece, pomegranate 112,grapes(10), papaya(4piece), watermelon(3piece), sprouted thinai)

The study was carried out in universal good life ashram, Thirunelveli, Tamilnadu, India. A convenient sample of 20 patients who were between the ages of 35-65 of both sexes with chronic renal failure who attended our inpatient department of renal care unit was selected for the study after obtaining written consent. No samples had a previous history of dialysis. During the study period no samples were under the conventional medicine for hypertension. As long as their period of stay as inpatient in hospital we divided them into 3 groups with 5 days , 7 days ,and 10 days group. We got total of 20 patients among that five patients stayed for five days seven patients stayed for 7 days and 8 patients stayed for 10 days. All the samples we had given herbal medicine daily for 2 times, morning and evening and also we had given other naturopathy treatments like cool water enema, cold Hip bath, Kidney pack and specialized diet. For all the groups same treatment protocol was followed with only difference in the number of days treatment given and juice fasting , for five days group one day was juice fasting, for seven day group 2 days was juice fasting and for 10 days group 3 days was juice fasting. Before and after the corresponding window period of their treatment we observed the changes in serum creatinine

level. The details of the given interventions for 10 days group are tabulated in Table 1. Additionally we had given cool water enema everyday for all the patients at empty stomach in early morning.

Creatinine level was measured before and after the period of intervention. Creatinine level in the blood was measured by using modified jaffe's two point kinetic method in the laboratory. The herbal medicine used in this study was named as (in tamil language) neermulli kudineer chooranam (powder) which includes a total of eleven herbs as equal proportion in a dried form. We also added five dried leaves of Amaranthusspinosus, Aervalanata, and Boerhaviadiffusa of each herb which are known to nephro-protective action [7,8]. One teaspoon (5grams) of neermuli chooranam added to one cup of water (100ml) and 5 dried leaves of Amaranthusspinosus, Aervalanata, and Boerhaviadiffusa was added to it and then boiled and reduced to half cup (50ml). Later the decoction was filtered and advised the patients to drink. Two times the same herbal medicine was given with the dose of 50ml each time as mentioned in table.1. Herbal medicine (Neermulli powder) is a combination of eleven herbs in equal proportion which

includes *Hydrophila auriculata* (English name: Swamp weeds), *Terminaliachebula* (Medical wonder), *Phyllanthusemblica* (Indian gooseberry), *Terminaliabellicrica* (Baheda), *Tribulusterrestris* (Puncture vine), *Solanumnigrum* (Black night shade, Wonder berry), *Lagenariasiceraria* (bottle gourd & Calabash gourd), *Cucumissativus* (Cucumber seed), *Cassia fistula* (Golden rain tree), *Smilaxglabra ROXA* (Chinna root), *Trachyspermumammi* (Ajwin). This herbal medicine was given under the guidance of a siddha physician.

Cold hip bath (immersion of the pelvic & lumbar region) is a hydrotherapy modality which was given in a specially constructed tub with a water temperature of $60^{\circ}\text{F}\pm 5^{\circ}$. The tub or basin was filled with enough water that to cover a person's buttocks, hips and lumbar so that the water reaches the level of the umbilicus. Patient sits in the tub for 20 minutes [9]. Kidney pack is also a hydrotherapy modality in which the hot application (hot compress) covers the back from the middle dorsal region to the coccyx and cold application (cold compress) covers the lower third of the sternum. Hot water temperature for hot compress was between $42\text{-}45^{\circ}\text{C}$ and for cold compress the temperature was between $12\text{-}18^{\circ}\text{C}$ and the duration of total pack is 20min. The flannel and dry cloth are spread out on the table or bed. The hot compress is placed on this and the patient is made to lie down in such a way that the hot compress extends from the mid spine to the lower spine. The cold compress is placed on the abdomen, extending up to the lower portion of the chest bone (sternum). The dry cloth is wrapped over this [10].

Table2: Paired sample t- test.

	Mean	Standard Deviation	Standard Error	95% CI of the Differences		t	df	Sig-2 Tailed
				Lower	Upper			
Pre cr 5	1.04	0.3286	0.147	0.6319	1.4481	7.076	4	0.002
Post cr 5								
Pre cr 7	1	0.4619	0.1746	0.5728	1.4272	5.728	6	0.001
Post cr 7								
Pre cr 10	1.75	0.5606	0.1982	1.2813	2.2187	8.829	7	0
Post cr 10								

One way ANOVA shows no statistical differences (F value=1.411, sig=.271) between the groups, it shows that no statistical difference between the length of treatment. But the percentage of creatinine level reduction in 10 days group was high than the 5 days group.

Discussions

According to this study alternative medicine brings a way to reduce serum creatinine level immediately among chronic kidney diseases patients. The management of chronic kidney diseases in modern medicine includes the management of hypertension, diabetes, proteinuria, anemia, mineral metabolism, lifestyle management and renal replacement therapy (either dialysis or transplantation). Lifestyle modification and use of proposed

Cool water enema was employed to all the participants as a part of detoxification which was the prime concern in naturopathy. The water temperature used in this simple enema was $70^{\circ}\text{F}\pm 5^{\circ}\text{F}$. Sufficient quantity (1000ml) water is introduced gradually so that bowels may not be contracted to stimulation. While the water is being introduced through a rectal tube from enema bottle the patient was in Knee-chest position [11].

Results

20 Participants of 12 males and 8 females between the age group of 45 to 65yrs old with chronic renal failure were involved in the study with different window period. Everyone were successfully completed the course of treatment. The serum creatinine level was measured before and after their interventional days. For 5 days group there was a total of 5 patients including 2 males and 3 females. In 7 days group there was a total of 7 patients including 4 males and 3 females and 8 patients (6 males & 2 females) were in 10 days group. There was a reduction of 28.6% of serum creatinine value after the 5 days of alternative medicine interventions (pre-creatinine value 3.640, $\text{SD}\pm 1.6334$; post-creatinine value 2.600, $\text{SD}\pm 1.6000$), whereas there was a reduction of 27% of serum creatinine value after the 7 days of interventions (pre-creatinine value 3.714, $\text{SD}\pm 2.1435$; post-creatinine value 2.714, $\text{SD}\pm 1.7014$) and 31.81% reduction of creatinine after 10 days of treatment (pre-creatinine value 5.500, $\text{SD}\pm 1.3137$; post-creatinine value 3.750, $\text{SD}\pm 0.9681$). Results of the pre and post interventions of serum creatinine level were tabulated in Table 2.

foodstuffs can be considered as a complementary medicine in addition to conventional treatments to manage renal atrophy patients [12]. Dietary protein intake may be an important determinant of the rate of decline in renal function in patients with chronic renal insufficiency. Dietary protein restriction is effective in slowing the rate of progression of chronic renal failure [13]. There have been no studies about dietary salt restriction and development or progression of chronic kidney disease [14]. According to the manifesto of British Naturopathic Association, "Naturopathy is a system of treatment which recognizes the existence of the vital curative force within the body". This study only analyzed the effect of given intervention on serum creatinine level, further studies are essential to see the change in other parameters and glomerular

filtration rate. The safety and efficacy of the given herbal medicine need to be carried out. Studies of alternative medicine interventions designed to improve the functions of kidney are needed.

Conclusions

This study suggests that there is a short-term reduction of serum creatinine level among chronic kidney disease patients. The herbal medicine, diet therapy and other naturopathic interventions play a major role on serum creatinine level among chronic kidney diseases patients. The alternative medicine intervention by complete modification of their life style to nature, diet therapy and herbal medicine may need further studies with other assessment tools to substantiate the long term effect. This study needs further clinical trials with large samples to show the effect of herbal and naturopathy medicine on serum creatinine level on long term management.

References

1. Pankti AG, Gregory MP, Syed Tabish RZ, Matthew DJ, Ronald LC (2018) Public knowledge of chronic kidney disease evaluated using a validated questionnaire: a cross-sectional study. BMC Public Health BMC series-open, inclusive and trusted 18: 371.
2. Thomas R, Kanso A, Sedor JR (2008) Chronic kidney disease and its complications. Prim Care 35(2): 329-344.
3. Singh AK, Farag YM, Mittal BV, Subramanian KK, Reddy SR, et al. (2013) Epidemiology and risk factors of chronic kidney disease in India-results from the SEEK (Screening and Early Evaluation of Kidney Disease) study. BMC Nephrol 14: 114.
4. http://www2.kidney.org/professionals/kdoqi/guidelines_ckd/Gif_File/kck_t10.gif
5. Rastogi R (2012) Current approaches of research in naturopathy: how far is its evidence base? J Homeopat Ayurv Med 1: 107.
6. Wachtel GS, Iris FFB (2011) Herbal medicine: biomolecular and clinical aspects. (2nd edn), CRC Press/Taylor & Francis, Boca Raton, USA.
7. Kengar S, Thorat D, Jadhav J (2017) Nephroprotective effect of amaranthus spinosus root extract in carbon tetrachloride induced histological toxicity in male albino rat. Int J Drug Dev & Res 9: 5-7.
8. www.planetayurveda.com/mutrakrichantak.htm
9. Prasad M, Kshama G (2013) Efficacy of certain yogic and naturopathic procedures in premature ejaculation: A pilot study. Int J Yoga 6(2): 118-122.
10. Kellog JH (2005) Rational Hydrotherapy 2nd Edition. National Institute of Naturopathy, Pune, India, p. 846.
11. Kellog JH (2005) Rational Hydrotherapy 2nd Edition. National Institute of Naturopathy, Pune, India, pp. 891-892.
12. Marjan M, Arash K, Maryam MGN, Zohre Feyzabadi (2017) Food strategies of renal atrophy based on Avicenna and conventional medicine. J Tradit Complement Med 7(4): 375-379.
13. Ihle BU, Becker GJ, Whitworth JA, Charlwood RA, Kincaid-Smith PS (1989) The effect of protein restriction on the progression of renal insufficiency. N Engl J Med 321(26): 1773-1777.
14. Levin A, Brenda H, Bruce Culleton, Sheldon Tobe, Philip McFarlane (2008) Marcel Ruzicka Guidelines for the management of chronic kidney disease. CMAJ 179(11): 1154-1162.

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