

CHRONIC KIDNEY DISEASE–A MULTI-CENTER STUDY IN KARACHI, PAKISTAN

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ABSTRACT

Objective: Chronic kidney disease is growing at an alarming rate in developing countries like Pakistan. The aim of the study was to find out the major factors leading to this disease and to carry out the comparative analysis of the effectiveness of allopathic and homoeopathic medicines in the treatment of chronic kidney disease.

Methods: A multi-centre study was carried out in five different centers from 2009-2014. The study was carried out by interviewing the patients, noting down their vitals and reviewing their records. Evaluation of the data was done considering age, sex and co-morbidities associated with renal failure.

Results: Significant results were observed. Patients of age groups 46 to 60 (48%) and 30 to 45 (21%) were found to suffer more from chronic kidney disease. Hypertension was found as the most frequently occurring co-morbidity along with chronic renal failure followed by diabetes.

Conclusion: The current study will be beneficial in bringing awareness in general public and thereby reducing the increasing burden of end-stage kidney disease.

Keywords: Urea, Creatinine, Glomerular filtration rate, Allopathic medicines, Homoeopathic medicines

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INTRODUCTION

Chronic kidney failure is a progressive loss in the functioning of kidneys. Raised levels of creatinine, urea and a glomerular filtration rate of 30 mg/g are the diagnostic markers of chronic kidney disease [1]. In Pakistan, there is a progressive rise in patients with kidney failure requiring dialysis and transplantation. According to the study carried out by Sakhuja and Sud 2003, in developing countries like Pakistan and India, end-stage renal failure patients are much younger (mean age of 42 y). Apart from that most of the chronic kidney disease patients are not able to avail renal replacement therapy due to financial constraints [2]. The leading factors of kidney failure are: undiagnosed or uncontrolled blood pressure, diabetes mellitus, irrational use of pain-killers, improper diet and environmental stress.

Homoeopathic medicines successfully treat chronic kidney failure by stimulating the body's immune system to repair kidneys. These medicines are also valuable in alleviating the symptoms associated with dialysis and transplantation [3-4]. After perceiving all symptoms and checking all medical reports, proper homeopathic medicines are given to the patient. These medications work either by controlling the condition so that no more damage is done to the kidneys or initiates elimination of the root causes of renal failure. Contrary to allopathic medicines, homoeopathic medicines have no side effects associated with them. If correct remedy is selected and the patient takes medicines regularly according to physician's directions, most of the patients are completely cured and their kidney starts functioning normally [5].

The research work was carried out on patients suffering from chronic renal failure, especially those on dialysis. The objectives of the study included: determination of the factors leading to chronic renal failure. To check the co-morbidities associated with it. Interpretation of impact of dialysis on the physical, emotional and mental health of patients. Observation of the complications associated with dialysis. Comparison of merits and de-merits of allopathic and homoeopathic systems of medicine. Evaluation of

homoeopathic medicines role in reducing the number of dialysis session in chronic kidney failure patients. Determination of homoeopathic treatment effectiveness in halting the progression of chronic kidney disease to end-stage renal failure.

MATERIALS AND METHODS

Methods

The following basic methods of data collection were utilized for carrying out clinical studies: Direct observation and measurement, interview, records.

The collection of data was done from Faran dialysis Center, Al-Mustafa Medical Center–dialysis unit, Dow University Hospital-dialysis unit, Al-Murtaza Homoeopathic Clinic, and Shahid Homoeopathic clinic.

Protocol of the clinical studies included an examination of data according to:

- Age group and gender of patients
- Co-morbidities associated with chronic renal failure

This research is carried out to explore the clinical aspects of homoeopathic and allopathic medicines used in patients suffering from renal failure. The data was collected from different hospitals/clinics during the years 2009-2014 and was analyzed as per WHO recommendations.

Number of Homeopathic patients: 100

Number of male patients: 53

Number of female patients: 43

Number of children (male+female): 03+01

Number of Allopathic patients: 100

Number of male patients: 57

Number of female patients: 43

Number of children (male and female): 00

These patients are classified according to age group as follows:

Group 1: 1-15 y

Group 2: 16-30 y

Group 3: 31-45 y

Group 4: 46-60 y

Group 5: 61-above

These patients were classified according to the type of renal disease and co-morbidities such as diabetes, hypertension, tuberculosis, liver disorders (Hepatitis A, B and C, liver sepsis, enlargement and cirrhosis etc.), carcinoma and cardiac diseases etc [5].

Inclusion criteria

Patients of all age groups, both genders and socio-economic class; patients having co-morbidities along with renal failure were included in the study.

Exclusion criteria

Pregnancy and lactation, physical deformity diseases, patients having mental retardation, patients using drugs of abuse like pan,

chalia, ghuttka, sheesha, alcohol and anabolic steroids used for bodybuilding.

Limitation of study

Limitation of study includes biasness in patients' response during interview and filling questionnaire.

Statistical analysis

Collected data from individual case report forms were entered into Microsoft excel and was verified by the authors other than interviewers. The data were analyzed by Microsoft excel for finding out relevant statistics (Mean, standard deviation, frequencies and percentage). Qualitative variables were analyzed statistically, presented as frequencies and percentages to observe their relationship with chronic kidney disease.

RESULTS

Our study results include Prevalence of co-morbidities along with chronic renal failure (fig. 1). Influence of age group of patients in using allopathic medicines along with dialysis (fig. 2). A number of male and female patients included in the study that was undergoing dialysis (fig. 3). Renal failure patients included in the study having other co-morbidities that visited homoeopathic clinics for treatment (fig. 4). Age group and gender-wise trend of homoeopathic medicines use in chronic kidney disease patients that were part of the study (fig. 5 and 6). Preference of patient's choice of treatment in the population under study is shown in fig. 7.

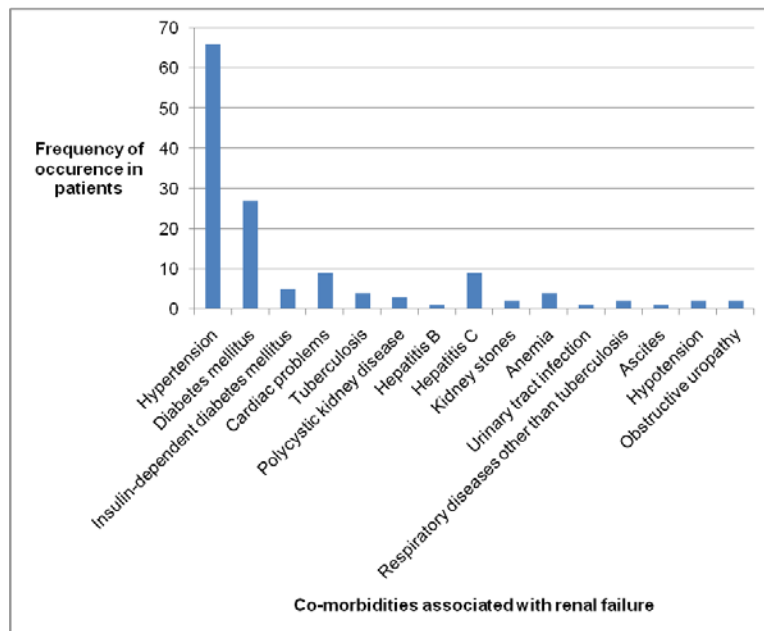


Fig. 1: Shows the prevalence of different co-morbidities along with chronic renal failure in the patients visited dialysis centers

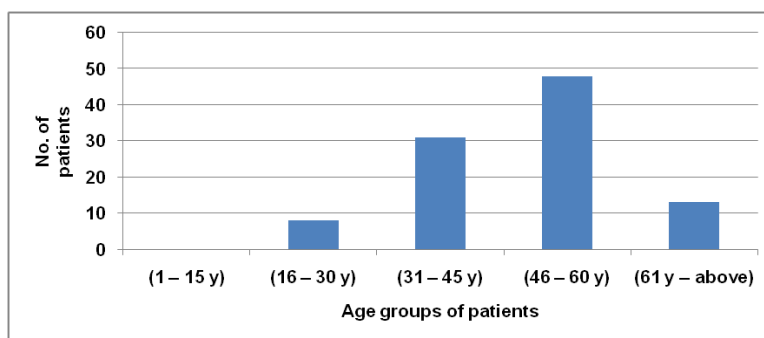


Fig. 2: Shows the age wise distribution of patients using allopathic medicines along with dialysis

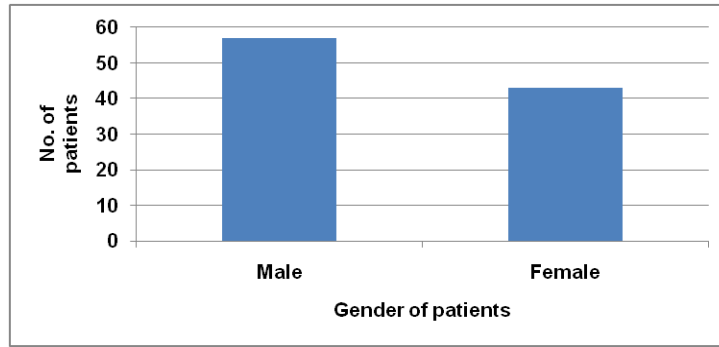


Fig. 3: Shows the gender wise distribution of patients using allopathic medicines along with dialysis

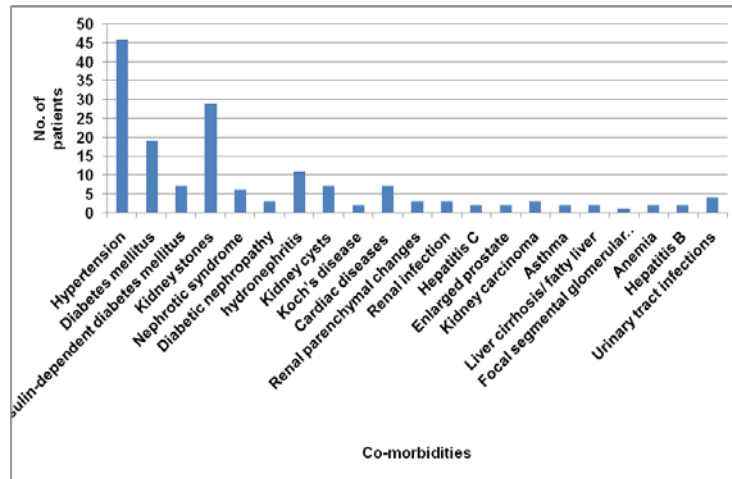


Fig. 4: Shows the prevalence of different co-morbidities along with chronic renal failure in the patients visited the homoeopathic clinic

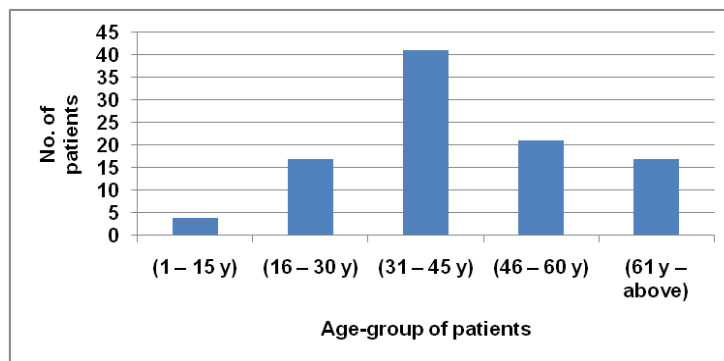


Fig. 5: Shows the use of homeopathic medicines for the treatment of kidney diseases in different age groups

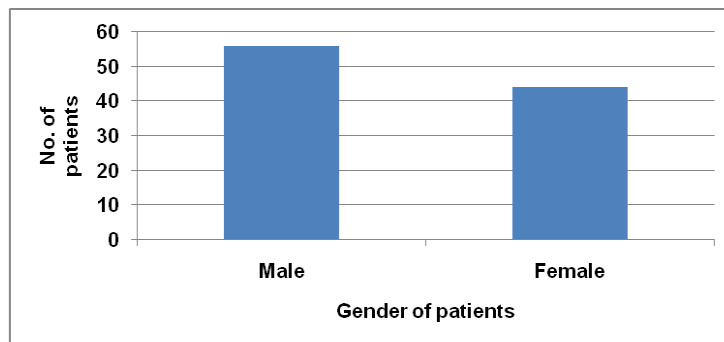


Fig. 6: Shows the gender-wise distribution of patients using homoeopathic medicines

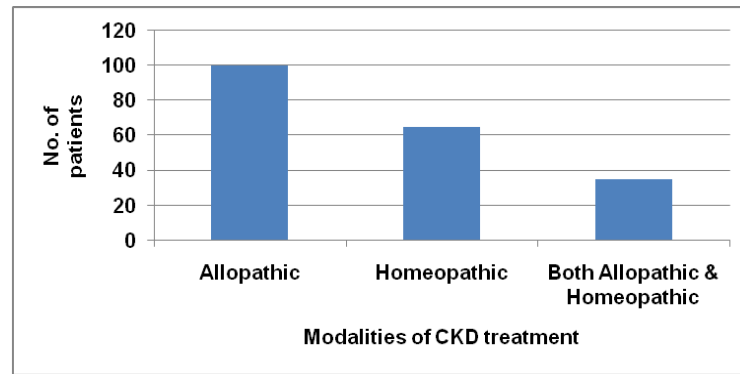


Fig. 7: Shows the treatment options selected by 200 patients for treatment of CKD/ESRD

DISCUSSION

Clinical data of 100 patients visiting dialysis centres were collected. Our results were in confirmation to the work carried out by Junger *et al.* (1996) of the higher incidence of chronic renal failure in males in comparison to female patients [6]. 48% patients of 46-60 y age group were observed to be affected most by the end-stage renal disease, followed by 31% of 31-45 y; 13% of 61 y or above and 8% of 16-30 y age groups respectively. Out of 100 patients, 57 were male while 43 were female.

Hypertension was found to be the leading causative factor of the end-stage renal disease. Amongst the 100 patients, 66 patients suffered from hypertension, 32 had diabetes, 9 patients had cardiac problems and hepatitis C respectively.

Clinical data of 100 patients visiting homeopathic clinic revealed that 35 patients had adopted both homeopathic and allopathic modes of treatment. 31-45 y age group patients were found to suffer most from the renal impairment that is 41%. Followed by 21% patients of 46-60 y age group, 17% of 16-30 y as well as 61 y-above age groups respectively and 4% of 1-15 y age group. Data of 100 patients suffering from a renal impairment that visited homeopathic clinic were 56 male patients and 44 female patients. Hypertension (46%) was observed as the most prevalent co-morbidity associated with renal impairment; followed by kidney stones (29%), diabetes (26%) and hydro-nephritis (11%). Our findings were contrary to kidney disease statistics carried out by American Kidney Fund in 2012, in which the leading cause of kidney failure was diabetes 38.4% followed by hypertension 25%.

When comparison was done between the clinical data's of patients visited dialysis centres and homeopathic clinic it was evaluated that patient of age groups 31-45 y had chosen homeopathic treatment. Whereas, the patients of age group 46-60 y had preferred dialysis therapy. It was observed that male gender suffered more from chronic kidney disease as compared to female gender in both the systems of treatment that is allopathic and homeopathic.

Hypertension was found as the most frequently occurring co-morbidity along with chronic renal failure followed by diabetes. Our finding was in conformity of Aghakhani *et al.* 2001 [7]. The patients' survival on dialysis therapy was found to be maximum 4-5 y. It was also observed that health of patients gradually declined on dialysis therapy. Murali *et al.* 2015 in his study revealed that physical health is the most affected domain in end-stage renal failure patients [8].

CKD/ESRD is an enormous burden from the medical, social and economic point of view [9]. In Pakistan, 46-60 y age groups are affected most by the end-stage renal disease, followed by the 31-45 y age group. The younger Pakistani population is affected by the end-stage renal disease as compared to the western counterparts, where it is more common among adults 70 above according to the National chronic kidney disease fact sheet, 2014 [10]. The reasons for the affliction of end-stage renal disease in younger age groups in South Asian states like Pakistan are poor awareness and unavailability of health care that delays diagnosis and loss of

opportunities to take effective preventive measures, such as control of hypertension and dietary modifications resulting in faster progression from CKD stage 1 to End-stage renal disease [11-14].

Pre-clinical and clinical studies serve as an asset in advancement and understanding of health and disease. Researchers are being carried out to find new earlier diagnostic techniques and alternative potent treatment protocols to prevent patients with renal disease from reaching the end stage and require dialysis therapy.

Some of the latest researches and the new development include the creation of a new kidney or nephrons through embryonic stem cells, formulation of new therapeutic agents targeted on specific kidney genes to prevent the progression of renal disease and emergence of new biomarkers for improvement of risk assessment in chronic kidney disease [15].

Recent studies have shown that the harms caused by hemodialysis outweigh its benefits in 75 y and older age group patients [16].

According to recently carried out clinical studies, earlier diagnosis and treatment of hypertensive patients with incipient renal failure could result in more effective control of blood pressure and therefore earlier detection and treatment of atheromatous progression towards end-stage renal disease [17-21].

CONCLUSION

Our clinical studies on patients' that visited dialysis centres and homeopathic clinics revealed that males are more susceptible to end-stage renal disease in comparison to females. Patients of age groups 31 to 45 and 46 to 60 are more affected by it.

Hypertension followed by diabetes was found as the two major leading causes of chronic renal failure. Early diagnosis, timely referral to a nephrologist and proper treatment may be effective measurements in halting the progression of chronic kidney disease to end-stage renal failure.

AUTHORS CONTRIBUTION

All authors contributed equally to the preparation and final approval of the manuscript.

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CONFLICT OF INTERESTS

Declared none

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