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Clinical profile of patients with chronic kidney disease

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Abstract

Renal impairment is associated with significant co-morbidity that increases with progressive renal decline. Once an individual reaches end-stage renal disease (ESRD), cardiovascular disease (CVD) is responsible for approximately half of deaths. A pre-structured proforma was prepared to be used to collect demographic data which included age, gender, occupation history of present illness, Past history, family history and personal history including history of smoking, alcohol. General examination and cardiovascular examination was done according to the proforma. All relevant investigations were done for all the participants. All the samples were sent to the respective laboratory departments. In the present study majority of the cases presented with Dyspnoea ie.75% (75/100), followed by chest pain in 65% cases (65/100), pedal edema was seen in 40% cases (40/100) and palpitation in 35% cases (35/100). In the present study, 48% (48/100) present with history of Smoking and alcohol, 17% (17/100) cases with only smoking, 5% (05/100) cases with only alcohol, 12% (12/100) cases with Tobacco chewing and 8% (08/100) had NSAIDS use, and 10% (10/100) presented with no history of any addiction.

Keywords: Chronic kidney disease, renal impairment, clinical profile

Introduction

Chronic kidney disease (CKD) is defined as either: kidney damage for >3 months, as defined by structural or functional abnormalities of the kidney, with or without a decrease in GFR manifest by pathological abnormalities or markers of kidney damage,, including abnormalities in the composition of the blood or urine, or abnormalities in imaging tests or, GFR <60ml/min/1.73 m² for > 3months, with or without kidney damage [1].

The US National Kidney Foundation kidney outcomes quality initiative (NKF-KDOQI) introduced a 5 stage classification of CKD [2].

The data examining whether or not renal impairment is an independent risk factor are conflicting. Even when adjustments are made for the severity of the coronary anatomy, the risk of future adverse events remain elevated in patients with renal insufficiency, suggesting that it may be an independent risk factor. Renal impairment is associated with significant co-morbidity that increases with progressive renal decline. Once an individual reaches end-stage renal disease. (ESRD), cardiovascular disease (CVD) is responsible for approximately half of deaths.

These individuals are 20 times more likely to have a cardiovascular-related death than for their kidneys to progressively fail to require dialysis or transplantation [3].

The diagnosis of left ventricle abnormalities by Doppler echocardiography and ECG is important step for characterization of individuals with higher cardiovascular risk. Non-dialysis-dependent CKD was associated with an increased risk for all-cause and cardiovascular death in the /majority of studies. Individuals with CKD are at high risk for cardiovascular disease and other adverse outcomes and supports calls for more intensive intervention in patients with CKD to prevent adverse outcomes [9].

Methodology

- It was hospital based cross sectional study.
- Cases selected randomly
- A pre-structured Proforma was prepared to be used to collect demographic data which included age, gender, occupation history of present illness, Past history, family history and personal history including history of smoking, alcohol.

- General examination and cardiovascular examination was done according to the proforma.
- All relevant investigations were done for the all the participants. all the samples were sent to the respective laboratory departments.
- GFR was calculated using Cockcroft-Gault equation corrected to the body surface area

Inclusion criteria

- Patients willing to participate in the study.
- Age above 18 years.
- Both gender.
- Diagnosed case of chronic kidney disease or,
- Patients with one or more of the following symptoms
- Structural abnormalities detected on ultrasound
- Decreased glomerular filtration Rate <60ml/min/1.73m²

Exclusion criteria

- Patients not willing to participate in the study.
- Age below 18 years.
- Past history of coronary artery disease.
- Patients with congenital heart diseases.
- Patients with acquired valvular lesions (rheumatic heart disease)

Results

Table 1: Age –Sex Distribution

Age distribution	Males	Females	Total
18 – 30 years	02	-	02
31 - 40 years	03	02	05
41 – 50 years	30	20	50
51-60 years	15	10	25
61-70 years	12	06	18
TOTAL	62	38	100

Table 2: Duration of symptoms

Duration of symptoms	No. of cases	Percentage
6 months to 2 years	07	7%
2-5 years	40	40%
>5years	53	53%
Total	100	100%

In the present study according to duration of symptoms 53% (53/100) of cases had history of Symptom’s more than 5 years, 1-5 years among 40% (40/100) cases, only 7% (7/100) were having 6 months duration.

Table 3: Clinical symptoms

Symptoms	No. of cases	Percentage
Pedal edema	10	40%
Dyspnoea	25	75%
Chest pain	35	65%
Palpitation	25	35%
Vomitings	10	15%

In the present study majority of the cases presented with Dyspnoea ie.75% (75/100), followed by chest pain in 65% cases (65/100), pedal edema was seen in 40% cases (40/100) and palpitation in 35% cases (35/100).

Table 4: Past history

Past history	No. of cases	Percentage
DM	43	43%
HTN	32	32%
DM+ HTN	18	18%
No history of past illness	07	7%
Total	100	100

In the present study 43% (43/100) had history of DM, 32%(32/100) had history of HTN., 18% (18/100) of the cases had past history of both DM + HTN, 7% (07/100) had no past history.

Table 5: Personal history

Personal history	No. of cases	Percentage
Only Smoking	17	17%
Only Alcohol	05	5%
Smoking+ alcohol	48	48%
Tobacco chewing	12	12%
NSAIDS	08	8%
No History	10	10%
TOTAL	100	100%

In the present study, 48% (48/100) present with history of Smoking and alcohol, 17% (17/100) cases with only smoking, 5% (05/100) cases with only alcohol,12% (12/100) cases with Tobacco chewing and 8%(08/100) had NSAIDS use, and 10% (10/100) presented with no history of any addiction.

Table 6: CKD stage at presentation

Stages of CKD	No. of cases	Percentage
Stage I	NIL	Nil
Stage II	06	6%
Stage III	54	54%
Stage IV	30	30%
Stage V	10	10%
Total	100	100%

- In the present study Stage II CKD were seen in 6% cases
- Stage III CKD constituted 54%, 30% cases in stage IV CKD, and 10% cases were in stage V CKD.

Discussion

In the present study Majority of the cases were among 41-50 years ie, 50% (50/100), followed by 51-60 years age group ie, 25% (25/100). with a mean age was 52.66 years.in males -52.48 years, females – 52.94 years. The findings were compared with other studies.

Jas Pal Dhamija *et al.* [5] observed Maximum patients were in age group between 41-50yrs (34%). Mean age of the patients was 45.5+23.5. In a study done by Adarsh L *et al.* [6] the mean age of the patients included in the study was 59 years varied from 47 to 73 years. and in Preety Motiyani *et al.* study [7] Majority of the patients belong to age group of 60-70 years.

In the present study, males occupied 62% and females about 38%. Jas Pal Dhamija *et al.* study [5] Out of 35 patients, 27 (77%) were male and 8 (23%) female. Adarsh L *et al.* study [6] 168(67.2%) males and 82(32.8%) females. In Preety

Motiyani *et al.* study [7] Majority of the patients were male [90 (60.7%). Hence it was correlating other studies [8].

Table 7: Comparative studies related to Etiology

Etiology	Jas Pal Dhamija <i>et al.</i> study [5]	Present study
Diabetic nephropathy	15(42%)	45(45%)
Chronic glomerulonephritis	05(14%)	15(15%)
HTN associated CKD	10(28%)	31(31%)
chronic tubule-interstitial nephritis (CTN)	03(8.5%)	-
IgA nephropathy	-	02(2%)
Obstructive Nephropathy	-	05(5%)
Adult polycystic kidney disease	-	05(5%)

In the present study the most common cause of chronic kidney disease was Diabetic nephropathy ie, 45% (45/100). followed by HTN associated CKD ie, 31%(31/100).In a study conducted by Jas Pal Dhamija *et al.* study [5] Most common cause of ESRD was diabetes 15 (42%), followed by hypertension 10 (28%) respectively.

Conclusion

- Majority of the cases were among 41-50 years ie, 50% followed by 51-60 years age group ie, 25%. Mean age was 52.66 years. in males -52.48 years in females – 52.94 years.
- Males were predominant ie, 62% when compared to females ie, 38% Male: Female –1.6:1.
- Most of the cases presented with Dyspnoea ie.75% followed by chest pain in 65% cases with majority were having history of symptoms more than 5 years.53%.

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