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A Study on the Impact of Patient Counselling on Knowledge, Attitude and Practice in Ckd Patients at Tertiary Care Hospitals

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ABSTRACT

Background of the study: Chronic kidney disease (CKD) is a global public health concern that is associated with poor outcomes, high costs, and an increasing incidence and prevalence. CKD is an irreversible condition and the management mainly focusing on reducing the progression and treating further complication. Counseling can be an effective means of achieving both pharmacological and non-pharmacological benefits, such as improved knowledge of CKD and medication, and lifestyle modification, including exercise, diet, and weight loss. **Aim:** To study the impact of patient counseling on knowledge, attitude and practice in CKD patients. **Methodology:** A prospective observational study was conducted at Karuna Medical College and Rajiv Gandhi Co-operative Multispecialty Hospital from October 2023 to May 2024. The study included 60 CKD patients based on inclusion and exclusion criteria. Validated KAP questionnaire was used to assess the patient's baseline KAP score and then patient counseling was provided. The test was done again after the next follow-up. The data will be analysed and compared for assessing the improvement in knowledge, attitude and practice before and after counselling. **Result:** Following counselling, significant improvements were observed in patients knowledge, attitude, and practice scores. **Conclusion:** Our study suggests that pharmacist mediated counseling plays a vital role in improving patients' knowledge, attitude, and practice towards the disease management.

Keywords: *CKD (Chronic Kidney Disease), ESRF (End-Stage Renal Failure), KAP (Knowledge, Attitude, Practice), HTN (Hypertension), DM (Diabetes mellitus)*

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INTRODUCTION

Chronic kidney disease (CKD) is a global health epidemic with rising costs and incidence (McCullough *et al.*,2010).Individuals who suffer from long-term conditions like diabetes, hypertension, and cardiovascular disorders are considered to be at an increased risk of developing chronic kidney disease(kazancioglu *et al.*,2013).Since chronic kidney disease (CKD) is an irreversible condition, management involves treating its complications and slowing down its progression(Lewis R *et al.*,2013) (Yusoff.D.M *et al.*,2016).Anemia and problems with the metabolism of bone minerals can also be major complications of earlier-stage chronic kidney disease (CKD)(Wolide A.D *et al.*,2020)^[8]. The great majority of people are still ignorant of CKD despite its known negative effects. Basic laboratory techniques can be used to diagnose kidney disease (Synder.S *et al.*,2005)(Plantinga L.C *et al.*,2008).Due to CKD's progressive nature toward end-stage renal failure (ESRF), the growing number of patients with the condition has become a global concern(Levey,A.S *et al.*,2007).

Multiple strategies are needed to manage chronic kidney disease (CKD), including complex medication regimens involving more than five medications, fluid restrictions, and special dietary recommendations for renal patients. It is advised that patients with chronic kidney disease (CKD) maintain appropriate blood pressure and blood sugar control(Chow,W.L *et al.*, 2012).Counseling can be an effective means of achieving both pharmacological and non-pharmacological benefits, such as improved knowledge of CKD and medication, and lifestyle modification, including exercise, diet, and weight loss. By comprehending the levels of knowledge, attitude, and practice (KAP) of participants regarding CKD, we can enhance the effectiveness of raising awareness in the community and reduce the disease burden(Ghimirey, A *et al.*,2013).Clinical pharmacists with the necessary training may be of great assistance in educating patients with chronic kidney disease (CKD), which will clearly improve treatment outcomes(Sathvik,B.S *et al.*,2009).In addition to medical interventions, comprehensive patient education and counseling are necessary for the effective management of chronic kidney disease (CKD). With this approach, patients will be equipped with the knowledge and abilities needed to take control of their health, follow their treatment regimens, and make wise lifestyle decisions (Khokhar,A *et al.*,2020).

METHODOLOGY

A prospective observational study was carried out in 60 patients who came for consultation at the nephrology department at karuna medical college, vilayodi, chittur in palakkad and Rajiv Gandhi cooperative multispecialty hospital, Palakkad from October 2023 to May 2024. The study protocol was approved by Institutional ethical committee **KMC /IHEC/05/2024** at Karuna Medical College dated on 12/1/2024. The patients above 18 years those who are diagnosed with CKD and not on dialysis are included in the study. Patients unable to complete the questionnaires owing to severe comorbidities such as dementia

and psychosis were excluded from the study. The study procedure was informed to the patients and signed informed consent was obtained from all participants prior to the study. A pre-designed patient data collection form is used to collect the required information like patients demographic details, detailed family history, dietary pattern, past medical and medication history, signs and symptoms, socio economic status, educational status, residency, laboratory investigations and treatment chart.

The knowledge, attitude and practice of the patient were assessed by using KAP questionnaire (Mondal, R *et al.*,2021).For the knowledge domain, a composite score (ranged: 0-10) is calculated. Each item is treated and scored as correct (1) with the response 'Yes' or incorrect (0) with the responses 'No' or 'Don't know'. For the attitude domain, a composite score (ranged: 0-8) is calculated. Each item is treated and scored as positive with the response 'Yes'(1) or negative with 'No'(0). The practices scale has 12 items that would record patient's healthy practices towards prevention from having CKD. It is measured using 4-point Likert-type scale. Scores ranged from 12 to 48. After the pre-test with patients, counseling was provided to the patients by using patient information leaflet. The test is done again after the next follow-up, which is carried out within 15 days duration.

STATISTICAL ANALYSIS

The collected cases were entered in MS Excel 2007 for calculating the percentage of various parameters. The data were analyzed by using the Statistical Package for Social Sciences (SPSS) 19.0 Version. The effectiveness of counseling in terms of KAP outcomes were determined by comparing the mean KAP scores before and after intervention by applying paired sample t-tests.

RESULTS

A total of 60 cases were included in this study. Mostly CKD were occurring in male (61.5%) than female (38.3%). CKD was more prevalent among the age group between 61-70 (38.3%). About 11 (18.3%) patients were found to have normal BMI and 26 (43.5%) were overweight patients and about 18 (30%) patients were found to be obese. While considering the social habits, 31.5% patients were past smokers and 34.0% patients had not habit of smoking. In the evaluation of Risk factors in patients, about 45% of patients had both HTN with DM. About 16.6% had DM alone and 25% had HTN only.

Before counseling, 56.5% of patients were having low level of knowledge and 44.9% patients were performing average in practices in response to their disease condition and 40.5% patients were having an average level of attitude towards the CKD. After counseling the patient's knowledge, attitude and practice were improved.

Table 1: Gender distribution in CKD (Chronic Kidney Disease) patients

Sl no	Gender	No. of patients	Percentage (%)
1.	Male	37	61.5
2.	Female	23	38.3

Table 2: Frequency distribution of age

Sl no	Age group	No. of patients	Percentage (%)
1	40-50	6	10
2	50-60	13	21.5
3	60-70	23	38.3
4	Above 70	18	30

Table 3: Distribution Based On Social Habits

SI no	Social habits	No. of patients	Percentage (%)
1	Current smoker	9	15.0
2	Past smoker	19	31.5
3	Non smoking	24	40.0
4	Ex alcoholic	2	3.0
5	Current smoker and alcoholic	6	10.0
6	Ex-smoker and alcoholic	9	15.0
7	Non alcoholic	22	36.6

Table 4: Distribution Based On Risk Factors

SI no	Risk factors	No. of patients	Percentage (%)
1	Diabetes mellitus	10	16.6
2	Hypertension	15	25.0
3	Diabetes mellitus + Hypertension	27	45.0
4	Diabetes mellitus + Hypertension + CAD	8	13.4
5	NSAIDS	3	5.0

Table 5: Distribution Based On Knowledge In Patients Before And After Counseling

Knowledge score (0-10)	Before Counseling		After Counseling	
	No of patients	Percentage (%)	No of patients	Percentage (%)
Poor (<5)	33	55.0	9	15.0
Average (5-7)	17	28.3	21	35.0
Good (8-10)	10	16.6	30	50.0

Table 6: Distribution Based On Practices In Patients Before And After Counseling

Before Counseling			After Counseling	
Practice score	No of patients	Percentage (%)	No of patients	Percentage (%)
Poor (<50%)	12	20.0	8	13.3
Average (50-75%)	32	53.3	16	26.6
Good (>75%)	16	26.0	36	60.0

Table 7: Distribution Based On Attitude In Patients Before And After Counseling

Before Counseling			After Counseling	
Attitude score	No of patients	Percentage (%)	No of patients	Percentage (%)
Poor (0-4)	20	33.3	14	23.2
Average (5-6)	25	41.7	20	33.4
Good (7-8)	15	25.0	26	43.4

DISCUSSION

In the present study, out of 60 patients, 61.5% were male and 38.3% were females. This shows male predominant over females. This was similar to study conducted by Rashid I et al., where reported that male dominance over female by 67.7% and 32.3% respectively (Rashid, L *et al.*,2022).In this study, majority of patients were in the age group of 61-70years (40%).These results are consistent with a study by Monika et al., where 54% of participants were older than 60 years of age. It was found that most of the patients were current smokers and past smokers, it was found to be the major risk factor for chronic kidney disease. Whereas, the study conducted by Ibrahim Abdelmajeed Ginaw et al., which also shows that smoking is a major risk factor for the occurrence of CKD. The most prevalent comorbidity in this study was hypertension, which was followed by diabetes, cardiovascular diseases and hyperlipidemia. Hypertension is highly prevalent in CKD patients and is both a cause and a consequence of kidney disease progression. Studies consistently show that hypertension accelerates the decline in renal function and increases the risk of cardiovascular events in CKD patients(Go,A.S *et al.*,2004).According to a study by Simon D. S. Fraser et al., the most common comorbidity was found to be hypertension (55%) and was followed by diabetes, anemia, and coronary artery disease. However, in the study conducted by Wen-Chin Lee et al., revealed that 66.8% of patients with CKD had hypertension, and 35.5% of patients had diabetes(Lee, W.C *et al.*,2018).The study by Keith et al., also revealed that the two main causes of CKD are diabetes and hypertension, which are responsible for up to two-thirds of the CKD cases(Titze,S *et al.*,2015).

Chronic Kidney Disease (CKD) management requires a multifaceted approach that includes not only medical treatment but also patient education and counseling to empower individuals in managing their condition effectively. After counseling the patients, knowledge score was increased which was similar to the study conducted by Anurodh Ghimirey et al., which suggest that pharmacist provided counseling is effective in improving patients knowledge (Ghimirey, A *et al.*,2013).According to the study conducted by Goruntla et al., this implies that pharmacist counseling and educational intervention can help to improve the knowledge scores(Goruntla, N *et al.*,2019).

Before counseling 53.3% of patients were having average practice towards the CKD while after counseling 60% of patients were having good practice. Participants demonstrated better adherence to prescribed medications, dietary modifications, and lifestyle changes crucial for managing CKD progression. This aligns with findings from the study conducted by Anurodh Ghimirey et al., which suggest that Individualized counseling sessions based on the needs of each patient not only reinforce prescribed treatments but also provide patients the tools they need to take charge of their own health through self-care strategies (Ghimirey, A *et al.*,2013). The disease burden can vary significantly depending on improved practices. The primary aspect of this practice shift is a change in lifestyle, which can be facilitated by the educational programs offered by healthcare providers (Thomas, J.A *et al.*,2017).

Following counseling, participants showed improvements in their attitudes as well. Patients reported feeling more confident about controlling their symptoms and following prescription, dietary guidelines and regular monitoring. Similar findings have been reported in studies focusing on patient education in other chronic diseases, where improved attitudes were linked to better health outcomes and reduced healthcare utilization (Biradar, S.S et al.,2012).

CONCLUSION

A serious public health issue in developing nations is the rising burden of non-communicable diseases like chronic kidney disease. As a result, appropriate education and awareness program should be given to the individuals. This will raise general public knowledge and undoubtedly create a positive attitudes and behaviors.

In this present study, patient counseling emerges as a crucial component in improving the Knowledge, Attitude, and Practice of CKD patients. Patient counseling enable patients to take an active role in their care and achieve the best possible health outcomes by providing them with the necessary information, encouraging good attitudes toward disease management, and encouraging adherence to suggested behaviors. Future research should focus on further evaluating the long-term impact of counseling interventions on disease progression and healthcare utilization in CKD populations.

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