

The Epidemiology of Chronic Kidney Disease-Related Pruritus and its Effect with Sleep Quality in Hemodialysis Patients in Pakistan A Cross-Sectional Study

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ABSTRACT

A glomerular filtration rate of less than 60 ml/min/1.73 m² for more than three months is the medical definition of chronic kidney disease (CKD) caused by damaged kidneys. The incidence of chronic kidney disease, which can be fatal if left untreated, has been rising for the past 30 years. An unpleasant condition, Pruritus due to chronic renal disease causes itching and decreases the quality of sleep.

This study aims to examine the factors associated with Pruritus in CKD patients on maintenance hemodialysis and their impact on sleep quality.

Duration and Place: Since 01/01 2019 and ending in 30/06/2019 that year, I will be working as a Post graduate trainee Nephrology in the Nephrology Department at the Institute of Kidney Diseases in Peshawar.

Methodology: The department of Nephrology Institute of kidney diseases provided 120 patients with the chronic renal illness. Patients with chronic kidney disease who experienced Pruritus and sleep disruption were included in the study, but those with rashes and Pruritus unrelated to CKD were not. All patients were questioned about their age, gender, typical sleeping habits, illness severity, poor sleep quality, and the location of any pruritus they experienced.

Results: CKD-associated This is how pruritus was dispersed: Eighty-one Percent of patients were older than 90, while the remaining 24 percent were younger. Only 43% of those diagnosed with Pruritus reported it affecting their ability to sleep, while 57% reported no such disruptions; also, only 31% of those diagnosed were female, and 74% were male. About 56 percent of those suffering from Pruritus have it quite seriously, whereas 44 percent do not. 62% of Pruritus people experience it on their trunks, compared to 38% elsewhere. A high degree of Pruritus was associated with the female gender, affected body parts, and lack of sleep.

Conclusion: Pruritus (sometimes called "uremic pruritus") is the most prevalent skin symptom among persons with ESRD. Despite the absence of evidence linking it to uremia, a significant connection exists in men over 45, causes sleep disruption, and predominates in the trunk.

Keywords: CKD-Related Pruritus, Effect, Sleep Quality, Hemodialysis

INTRODUCTION

CKD is a glomerular filtration rate (GFR) of less than 60 ml/min/1.73 m² for more than three months due to renal injury¹. Renal failure, the terminal stage of chronic kidney disease, has increased in prevalence during the past three decades². Itchy skin, known medically as Pruritus, is a symptom of chronic renal disease that can disrupt sleep³. More than 78% of people with ESRD were treated in developed countries, and a sizable percentage of them opted for dialysis as a treatment to extend their lives⁴. Uremic pruritus is a common term for itching. Sometimes, it may be difficult to tell the difference between Pruritus produced by CKD and Pruritus induced by non-renal disorders typically linked with CKD, such as thyroid disease and blood malignancy⁵. Past study has found a wide range of incidence rates, from 7% to 72%, over a spectrum of severity levels of people. More studies are needed to determine the prevalence and severity of CKD-related Pruritus in peritoneal and hemodialysis patients⁶. Patients with CKD-related Pruritus were also more likely to suffer from sleep disturbances or clinical depression than CKD-related pruritus-free patients⁷. Unfortunately, studies lack a method of assessing Pruritus in CKD patients. Numerous variables have been linked to Pruritus in CKD patients on dialysis. Study the incidence of Pruritus in CKD patients on dialysis to find an effective way to alleviate their illness. This study aims to illustrate the features of Pruritus associated with CKD and how they are related to demographic and socioeconomic variables⁸.

MATERIAL AND METHODS

During the six months for 01/01 2019 and ending in 30/06/2019 that year, study years from the department of Nephrology at the institute of Kidney diseases analyzed data from 120 patients with CKD in a cross-sectional study. Patients with Pruritus or a rash

who did not have CKD were not considered. Patients reported the following demographic information: age, gender, sleep pattern, the severity of illness, sleep quality, and location of Pruritus. SPSS 23 was used to conduct the analysis, yielding mean and standard deviation for continuous data and frequencies and percentages for categorical data. The Chi-square test was performed to analyze the correlation between the variables.

RESULTS

All 120 patients in a cross-sectional investigation of CKD-related Pruritus were aged 45 or above; 70% were aged 40-45 or above, while 30% were aged 46-55 or under. Only 38% of those diagnosed with Pruritus reported it affecting their ability to sleep, while 62% reported no such disruptions; also, only 31% of those diagnosed were female, and 69% were male. (Table 1).

Table 1: Variable distributions

(variables)	(frequency)	(percentage)	
Gender	Female	32	25
	Male	88	72
sleep	Interfere with sleep	50	40
	No association	70	57
age	below 40	30	24
	45 and above	90	70

About 56% of those suffering from Pruritus have it quite seriously, whereas 44% do not. Fifty-six Percent of those with Pruritus experience it on their trunks, compared to 44 percent elsewhere. (1&2) Pictorial.

Gender has a role in the severity of Pruritus, with men accounting for 91% of cases and females for 09%. In addition, the severity of Pruritus increases in proportion to the area of the body

that is afflicted; 44% of Pruritus may be severe everywhere on the body, although it most often affects the trunk (at a rate of 56%). In addition, the severity of Pruritus correlates with the degree to which it disrupts sleep, with severe cases disrupting sleep in every single case. Furthermore, there is a correlation between pruritus frequency and age, with all cases of severe Pruritus occurring in adults aged 40-45 and above (Table 2).

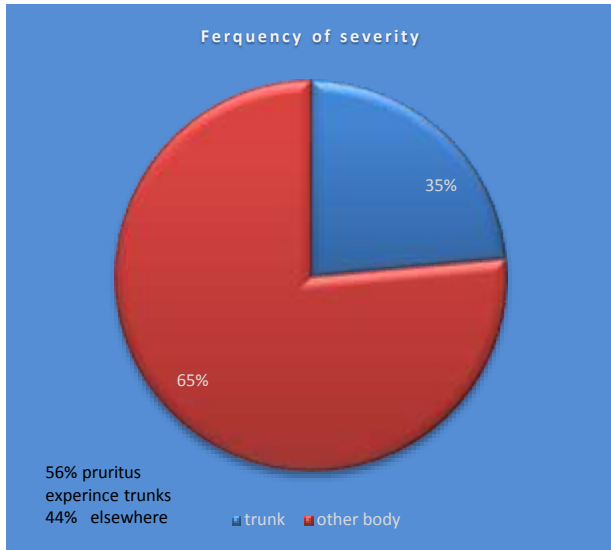


Figure 1: frequency of severity of Patients

Table 2: Placement of Pruritus in Different Parts of Patients' Bodies Relationship between Factors and Placental Position

variables		severity		P-value
		no severe	severe	
gender	female	18	6	0.014
		35%	10%	
	male	36	30	
		65%	90%	
affected area	all body	10	38	0.0002
		21%	78%	
	trunk	29	7	
		80.5%	19.4%	
sleep	Interfere with sleep	0	24	0.0001
		0.0%	100.0%	
	No association	36	0	

DISCUSSION

In patients with end-stage renal illness, Pruritus is an irritating side effect that lowers their health-related quality of life⁹. 81% of our participants were 40-45 or older, whereas just 19 percent were younger than that. Only 25% of patients are women, while 65% are men. For 35% of patients, Pruritus is a sleep disruptor, whereas, for 26%, it is not¹⁰. Other studies have shown that men make up most patients and those with sleep disturbances are often over 40-45 years old. In this study, 56% of participants with Pruritus were classified as having a severe case, whereas 44% did not. 65% of pruritic symptoms are located in the trunk. In contrast, the remaining 35% are located elsewhere. Moreover, Pruritus is frequent in persons with CKD, with 22% (25%) experiencing it¹¹. 20% (24%) of instances included the extremities, 10% (25%) the trunk, and 10% (15%) involved both. Most pruritic cases (65%) are neither severe nor bothersome, whereas 35% are. 12-16. In the present investigation, 91% of cases of severe Pruritus were found in men, whereas only 09% were found in females. This study demonstrated a significant association between gender and CKD pruritus, in contrast to prior studies that indicated no association between the two¹².

A correlation exists between the severity of Pruritus and the area of the body it affects, with 65% of people with severe Pruritus experiencing symptoms all over their bodies and 35% experiencing them in their trunks¹³. 100% of people with severe Pruritus also report that it affects their ability to get a good night's rest. This is independent of gender and afflicted location. Pruritus associated with chronic kidney disease has been linked to poor sleep. 52% of patients had mild sleep problems, whereas 9.6% reported moderate to severe sleep difficulties in this study¹⁴.

Over half of patients in a trial by Pisoni et al. had moderate-to-severe Pruritus. At the same time, over a third of participants in a study by Narita et al. experienced mild-to-moderate itching and disturbed sleep¹⁵. Of those with Pruritus, 56% said it was due to problems sleeping, and 09% said they were worried about going to bed. On the other side, Pruritus was responsible for waking up 12% of participants and affecting the sleep of 35% overall. Tessari et al. found that 65 percent of those with Pruritus also had sleep disturbances. Furthermore, the severity of Pruritus increases with patient age; patients aged 40-45 and higher account for 100% of cases of severe Pruritus¹⁶. This is consistent with other studies that demonstrated an inverse correlation between CKD patients' age and the severity of their Pruritus¹⁷.

CONCLUSION

Pruritus, also known as "uremic pruritus," is the skin symptom that occurs most frequently in people with end-stage renal disease (ESRD). Due to the absence of a clear connection between uremia and the causes mentioned above, it is impossible to explain the significant increase in the number of men over 45 experiencing sleep difficulties and other symptoms localized to the trunk.

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