

Pruritus occurs in patients with chronic kidney disease: Features and associated factors

El prurito se presenta en pacientes con enfermedad renal crónica: características y factores asociados

 Dr. Intisar Ahmed Hasan¹,  Dr. Rana Khalid Obeed²

¹lecturer, Faculty of Medicine, University of Diyala/Iraq, Intesarahmed14@yahoo.com.

²Al-anbar health director/ministry of Health/Iraq, RaniDermatology@gmail.com.

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Abstract

Introducción: La enfermedad renal crónica (ERC) trata sobre la lesión de los riñones o la tasa de filtración glomerular inferior a 60 ml / min / 1,73 m² durante más de tres meses. La enfermedad renal en etapa final es la etapa mortal de varias ERC y su aparición ha aumentado en los últimos 30 años. El objetivo del estudio es mostrar las características del prurito asociado a la ERC y su asociación con variables sociodemográficas. Método: Estudio transversal de 53 pacientes con enfermedad renal crónica recogidos en el centro de diálisis de Baqubah desde el 1 de abril de 2020 al 1 de septiembre de 2020, los criterios de inclusión son todos los pacientes con enfermedad renal crónica que padecen erupciones cutáneas y prurito, mientras que los criterios de exclusión son todos los pacientes que padecen. Erupciones y prurito no asociados a la ERC y causados por otra enfermedad. Todos los pacientes toman datos sociodemográficos como edad, sexo, patrón de sueño, gravedad de la enfermedad si no hacen que los pacientes se duerman fácilmente y la ubicación del prurito. Resultados: Pacientes con ERC con prurito de 52 ± 6 años de edad el 87% de todos los pacientes de 45 años o más y el 13% de ellos por debajo de los 45 años. El 23% de los pacientes son mujeres y el 77% son hombres, el 40% de los pacientes el prurito interfiere con su sueño mientras que el 60% no. Aproximadamente el 40% de los pacientes con prurito son graves, mientras que el 60% de ellos no lo son. El 62% de los pacientes con prurito ocurren en el tronco, mientras que el 38% ocurre en todo el cuerpo. Existe una asociación significativa entre la gravedad del prurito y el sexo. Además, existe una asociación significativa entre la gravedad del prurito y el área afectada. Además del sexo y el área afectada, existe una asociación significativa entre la gravedad del prurito y el sueño. Conclusión: El síntoma más común de la piel en la ESRD es el prurito, ampliamente identificado como "prurito urémico". Debido a que no existe una asociación correcta con la uremia, asociación importante y ocurren más en varones, mayores de 45 años, interfieren con el sueño y más en la región del tronco.

Palabras clave: prurito, enfermedad renal crónica, características, factores de asociación.

Resumen

Introduction: Chronic kidney disease (CKD) discusses the kidneys being injured or the glomerular filtration rate less than 60mL/min / 1.73 m² for more than three months. The final stage of renal illness is the deadly stage of several CKDs, and its occurrence has increased obviously in the previous 30 years. The study aims to show the features of pruritus associated with CKD and its association with sociodemographic variables. Method: Cross-sectional study of 53 patients with chronic kidney disease collected from Baqubah dialysis center from period 1st of April 2020 to 1st of September 2020, inclusion criteria are all patients with chronic kidney disease suffer from rashes and pruritus while exclusion criteria are all patients suffer from rashes and pruritus not associate to CKD and cause by another disease. All patients take sociodemographic data like age, gender, sleep pattern, the severity of disease if not make patients quickly to sleep and location of pruritus. Results: CKD patients with pruritic with age 52 ± 6 years old 87% of all patients with age 45 years old and above and 13% below 45 years old. 23% of patients are females, and 77% are males, 40% of patients the pruritus interfere with their sleep while 60% do not. About 40% of patients with pruritic are severe, while 60% of them are not. 62% of pruritic patients occur in the trunk, while 38% occur in the entire body. There is a significant association between the severity of pruritus and gender. In addition, there is a significant association between the severity of pruritus and the affected area. As well as the gender and affected area, there is a significant association between severity of pruritus and sleep. Conclusion: Utmost communal symptom of skin in ESRD is pruritus, broadly identified as "uremic pruritus." Due to there being no correct association with uremia, the critical association occurs more in males, age more than 45 years, interfere with sleep, and more in the trunk region.

Keywords: Pruritus, chronic kidney disease, features, association factors.

Introduction

Chronic kidney disease (CKD) discusses the kidneys are injured or the glomerular filtration rate less than 60mL/min / 1.73 m2 for more than three months¹. The final stage of renal illness is the deadly stage of several CKDs and its occurrence has increased obviously in the previous 30 years². More than 80% of patients in advanced republics received management for ESRD³ and wide no. of them were selected to be cured with dialysis to rise their lifetime. Pruritus is broadly identified as "uremic pruritus."^{4,5}.

Pruritus related to CKD could be problematic to differentiate from pruritus produced by non-renal problems characteristically related with CKD, for example, thyroid illness and blood malignancy⁶. Prior studies have stated mutable occurrence rates (8 - 70%) in patients with changeable severity^{7,8}. Peritoneal or hemodialysis dialysis patients suffer from changed pruritus related to CKD at changed degrees, which needs more studies^{9,10}. In addition, pruritus related to CKD have poor sleep patterns or severe depression than patients without pruritus related to CKD^{11,12}. No study instrument for the measurement of Pruritus related to CKD. Numerous danger issues have been related to pruritus related to CKD in patients with dialysis patients^{13,14}. Henceforth, examine the occurrence of pruritus related to CKD in dialysis patients to find a reply suitably for decreasing the illness problem. The study aims to show the features of pruritus associated with CKD and its association with sociodemographic variables.

Methods

A cross-sectional study of 53 patients with chronic kidney disease collected from Baqubah dialysis center from period 1st of April 2020 to 1st of September 2020, inclusion criteria are all patients with chronic kidney disease suffer from rashes and pruritus while exclusion criteria are all patients suffer from rashes and pruritus not associate to CKD and cause by another disease. All patients take sociodemographic data like age, gender, sleep pattern, the severity of disease if not make patients quickly to sleep and location of pruritus. Statistical analysis done by SPSS 22, frequency and percentage used for categorical data, mean and SD for continuous data. Chi-square was used for the assessed association between variables. P-value less or equal to 0.05 is considered significant.

Results

A cross-sectional study of 53 CKD patients with pruritic age 52 ± 6 years old 87% of all patients with age 45 years old and above and 13% of them below 45 years old. 23% of patients are females, and 77% are males, 40% of patients the pruritus interfere with their sleep while 60% do not, as shown in table 1.

Table 1. distribution of variables.

variables		frequency	percentage
gender	Female	12	22.6
	Male	41	77.4
sleep	Interfere with sleep	21	39.6
	No association	32	60.4
age	below 45	7	13.2
	45 and above	46	86.8

About 40% of patients with pruritic are severe, while 60% of them are not. 62% of pruritic patients occur in the trunk, while 38% occur in the entire body.

There is a significant association between severity of pruritus and gender, 95% of severe pruritus occur in male while 5% of severe pruritus occur in female. In addition, there is a significant association between the severity of pruritus and the affected area, 76% of severe pruritus occurs in all bodies. In comparison, 24% of severe pruritus occurs in the trunk.

As well as the gender and affected area, there is a significant association between severity of pruritus and sleep, 100% of severe pruritus Interfere with sleep. Moreover, there is a significant association between the severity of pruritus and the age of patients; 100% of severe pruritus occurs at age 45 years old and above, as shown in table 2.

Table 2. Association between variables and placental site.

variables		severity		P-value
		no severe	severe	
gender	female	11	1	0.017
		34.4%	4.8%	
	male	21	20	
		65.6%	95.2%	
affected area	all body	4	16	0.0001
		12.5%	76.2%	
	trunk	28	5	
		87.5%	23.8%	
sleep	Interfere with sleep	0	21	0.0001
		0.0%	100.0%	
	No association	32	0	
		100.0%	0.0%	
age	below 45	7	0	0.034
		21.9%	0.0%	
	45 and above	25	21	
		78.1%	100.0%	

P-value less than 0.05 (significant).

Pruritus related to CKD is a public cutaneous alteration in chronic renal failure patients^{15,16}. As a critical reason for changing the class of lifetime, Pruritus related to CKD predisposed by dialysis¹⁷.

In our study, 87% of all patients aged 45 and above and 13% below 45 years old. 23% of patients are females, and 77% are males, 40% of patients the pruritus interfere with their sleep while 60% do not. This is similar to another study that states the majority of gender is males, and most of the patients are over 45 years old and interfere with sleep^{18–20}.

In the current study, 40% of patients with pruritic are severe, while 60% are not. 62% of pruritic happen in the trunk while 38% happen in the whole body. In addition, this is analogous to other studies showing that pruritus was widespread in 11(28%) patients with CKD. The usually affected local parts were the limbs occur in 10 (26%), trunk in 9 (23%) and a mixture of limbs and trunk in 7(18%), 36% of patients with pruritic are severe while 64% of them are not or mild^{21,22}.

In the current study, there is a significant association between the severity of pruritus and gender, 95% of severe pruritus occur in male while 5% of severe pruritus occur in female. In contrast to other studies showing no significant association between gender and pruritus in CKD^{21,23}.

In addition, there is a significant association between severity of pruritus and affected area; 76% of severe pruritus occurs in all body while 24% of severe pruritus occurs in the trunk^{24,25}.

As well as the gender and affected area, there is a significant association between severity of pruritus and sleep, 100% of severe pruritus Interfere with sleep. Pruritus related to CKD related with reduced sleep quality. In the current study, 53% of patients had moderate trouble in sleep, while 8.4% had severe trouble. Present consequences are allied with consequences from extra studies such as by Pisoni et al., where more than 45% of patients have pruritus moderate-severe with poor sleep²⁶, another study by Narita et al., 70% of patients have severe pruritus, and 34% of patients have mild - modest pruritus associated with sleep trouble²⁷. Sleep problems as the cause of pruritus happened in 57% of patients, with worry in falling in sleep stated by 9% patients. In comparison, 13.0% were awakened by pruritus, and 34.8% stated symptoms collected while dipping asleep and on wakening²⁸. Tessari et al. find that 59% of patients feeling pruritus protested of trouble in asleep^{29–31}. Moreover, there is a significant association between the severity of pruritus and the age of patients; 100% of severe pruritus occurs at age 45 years old and above. This is similar to other studies that also

state an association between the severity of pruritus of patients with CKD and the age of patients^{32,33}.

Conclusions

Overall, the study's main aim was to investigate the characteristics of pruritus related to CKD and its association with sociodemographic variables. To that aim, a cross-sectional study of 53 patients with chronic kidney disease collected was conducted from the Baqubah dialysis center from 1st of April 2020 to 1st of September 2020. Based on the results obtained, it can be concluded that the utmost communal symptom of skin in ESRD is pruritus, broadly identified as "uremic pruritus." Since there is no correct association with uremia, the important association occurs more in males, age more than 45 years, interfere with sleep and more in the trunk region.

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