

# Pruritus Overview of Chronic Kidney Failure Patients Using Visual Analogue Scale Application In Hemodialysis Unit General Hospital dr. Soekardjo, Tasikmalaya City, West Java

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**Abstract.** Chronic Kidney Failure is a chronic disease that can cause changes in the quality of life of patients. One factor that can cause these changes is the presence of pruritus complaints. This study aims to describe the pruritus of patients with chronic kidney failure using The Visual Analogue Scale application in the hemodialysis unit of the General Hospital Dr. Soekardjo, City of Tasikmalaya. This research is a descriptive quantitative research. The population in this study was 40 people. The sampling method in this study uses purposive sampling, based on the inclusion and exclusion criteria that have been determined, a sample of 38 people was obtained. The results showed that the majority of patients pruritus were on moderate and severe pruritus as many as 13 people (34%) and a small portion were on mild pruritus as many as 1 person (3%) . Based on the anatomy of the body, the most frequently complained of experiencing pruritus were the backs of 33 people (87%), forearms as many as 26 people (68%), buttocks and thighs as much as 19 people each (38%). The conclusion of this study is that most pruritus is on the "8" scale and that most pruritus is complained of the back, forearms, buttocks and thighs. From the results of this study it is recommended for nurses to be more attentive to the basic needs of comfort in patients with Chronic Kidney Failure.

## 1. Introduction

Pruritus is a problem that is often experienced by patients with end-stage renal failure. About 40% of patients with kidney failure experience pruritus [10]. In accordance with the results of the study that 40-90% of patients with chronic kidney failure can experience pruritus complaints [3]. This pruritus is not clearly known about the cause [2,10]. Some states that pruritus is caused by a lack of iron, so that the levels of hepsidin inflammatory agents increase, this is indicated by an increase in reactive C protein [7]. And pruritus complaints increase with age [7].

This pruritus should not be left alone because it can have a negative impact on the sufferer. Pruritus can cause poor quality of life, sleep disturbance, depression and increase mortality [10].

There are several ways to overcome pruritus, including: aggressive skin hydration, health education about not too strong or frequent scratching, optimizing the care of patients with chronic kidney failure, including dialysis, serum parathyroid hormone, calcium and phosphorus management [10]. In addition, pruritus can also be overcome by administering gabapentin, pregabalin, mast cell stabilizers,



phototherapy, modified hemodialysis, and other topical drugs [11]. But among the several ways to treat pruritus, the most widely used and considered the most effective way to deal with pruritus is gabapentin [11].

Although this pruritus is a subjective and individual complaint, this complaint can be measured. There are several ways to measure this pruritus complaint, including the Visual Analogue Scale (VAS) Application. This VAS can be useful for measuring pruritus because the results are numeric so that it is easier to understand [5]. Even this VAS has high validity and reliability for measuring pruritus complaints [8]. This is consistent with research that VAS is a very useful method for assessing pruritus [9]. The following pruritus categories are based on VAS as follows [9]:

**Table 1.** Pruritus Category Based on Visual Analogue Scale

No	Point	Category
1.	0	No Pruritus
2.	$> 0 - < 4$	Mild Pruritus
3.	$\geq 4 - < 7$	Moderate Pruritus
4.	$\geq 7 - < 9$	Severe Pruritus
5.	$\geq 9$ points	Very Severe Pruritus

## 2. Method

This research is a descriptive quantitative research. The population in this study was 40 people. The sampling method in this study used purposive sampling. Based on the specified inclusion and exclusion criteria, a sample of 38 people was obtained. The inclusion and exclusion criteria are as follows:

- Inclusion criteria: Patients diagnosed with kidney failure at least 3 months ago, Patients who routinely perform hemodialysis at RSU Dr. Soekadjo City of Tasikmalaya. Patients who experience pruritus complaints
- Exclusion criteria: patients who are not willing to be research respondents, patients who experience worsening conditions, patients with anti-pruritus therapy

This study uses a VAS instrument to measure pruritus in patients with chronic kidney failure.

## 3. Result

The results of this study can be seen in the following table:

**Table 2.** Characteristic of Respondent

No.	Total	Percentage
Sex		
Male	23	61%
Female	15	39%
Total	38	100%
Age		
Late Teenagers (17-25)	3	8%
Early Adult (26-35)	3	8%
Late Adult (36-45)	9	24%
Early Elderly (46-55)	10	26%
Late elderly (56-65)	13	34%
Total	38	100%
Hemodialysis Experience		
<5 years	28	74%
5-10 years	8	21%
>10 years	2	5%

Total	38	100%
Pruritus Experience		
<5 years	33	87%
5-10 years	3	8%
>10 years	2	5%
Total	38	100%

Based on table 2 above, it appears that some respondents were male as many as 23 people (61%). Based on age, most of them are in the late elderly age category of 13 people (34%). Based on the duration of hemodialysis, mostly of the categories less than 5 years were 28 people (74%). Based on the length of experiencing pruritus complaints, most were in the category of less than 5 years as many as 33 people (87%).

**Table 3.** Category of Pruritus

No.	Category	Count	Percentage (%)
1.	no pruritus	0	0
2.	mild pruritus	1	3
3.	moderate pruritus	13	34
4.	severe pruritus	13	34
5.	very severe pruritus	11	29
	<b>Total</b>	<b>38</b>	<b>100</b>

Based on table 3 above, it appears that the majority of pruritus were in the category of moderate and severe pruritus, each of which was 13 people (34%). And a small proportion are in the category of mild pruritus of 1 person (3%).

**Table 4.** Pruritus Distribution Based on Anatomic Location

No	Body Part	Yes	Percentage	No	Percentage	Total
1	Back	33	87	5	13	38
2	Forearms	26	68	12	32	38
3	Buttocks	19	50	19	50	38
4	Thighs	19	50	19	50	38
5	Abdomen	18	47	20	53	38
6	Lower Leg	16	42	22	58	38
7	Upper Arms	14	37	24	63	38
8	Points of Contac with Clothing (e.g. waistband, undergarment)	14	37	24	63	38
9	Face	13	34	25	66	38
10	Groin	13	34	25	66	38
11	Tops of Hands/Fingers	11	29	27	71	38
12	Head/Scalp	10	26	28	74	38
13	Chest	9	24	29	76	38
14	Tops of feet/toes	9	24	29	76	38
15	Soles	6	16	32	84	38
16	Palms	4	11	34	89	38

Based on table 4 above, it appears that the majority of pruritus complaints on the back was 33 people (87%), then forearms as many as 26 people (68%), buttocks and thighs each as many as 19 people (38%). And a small proportion of these complaints were felt in palms by 4 people (11%).

#### 4. Discusson

Based on the characteristics of respondents in table 2 above it appears that the majority of respondents were male as many as 23 (61%). This is consistent with research that based on observations in several countries shows that the hemodialysis unit is the most male patients [6].

Based on age, the majority of patients in the hemodialysis unit were in the elderly age category of 13 people (34%). This is consistent with the results of the study that the prevalence of chronic kidney failure increases with age [1]. This is due to the decline in kidney function characterized by a decreased glomerular filtration rate. Likewise with pruritus, the incidence increases with age [7].

Based on the results of this research, pruritus complaints are in the category of moderate and severe pruritus, each with 13 people (34%). According to the researchers' assumptions, this can occur because most patients are in the late elderly age category. Meanwhile, according to the results of research that pruritus complaints increase with age [3,7]. So it is not only due to chronic kidney failure, pruritus in the elderly is a complaint that is often conveyed by the majority of the elderly. This happens because the elderly experience a physiological decline in the skin where the skin has poor hydration and changes in nerve function [4].

As for the places that are often complained of experiencing pruritus namely the back of 33 people (87%), then the forearm as much as 26 people (68%), buttocks and thighs as many as 19 people (38%). This is consistent with the results of the study that the part that often experiences pruritus is the back and forearm [2].

#### 5. Conclusion

The results showed that the majority of patients pruritus were in the category of moderate and severe Pruritus, each as many as 13 people (34%) and a small portion in the category of mild pruritus as much as 1 person (3%). Based on the anatomy of the body, the most frequently complained of experiencing pruritus was the back of 33 people (87%), forearms as many as 26 people (68%), buttocks and thighs as much as 19 people each (38%).

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