

## **CHARACTERISTICS OF CHRONIC RENAL FAILURE PATIENTS IN THE HEMODIALYSIS UNIT OF TANGERANG CITY HOSPITAL**

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### **ABSTRAK**

Gagal ginjal kronis yang merupakan penyakit tidak menular termasuk dalam 10 penyakit terbanyak di Indonesia. Penelitian ini bertujuan untuk mempelajari karakteristik pasien gagal ginjal kronis di Unit Hemodialisa di RSUD Kota Tangerang Banten. Penelitian ini menggunakan pendekatan kuantitatif desain *crosssectional*. Populasi adalah pasien hemodialis sebanyak 213 orang, data dikumpulkan dengan menggunakan data rekam medis. Analisis dilakukan secara deskriptif. Hasil penelitian ini menunjukkan bahwa lebih dari setengah berjenis kelamin laki-laki sebanyak 114 orang (53,52%) dan sisanya sebanyak 99 orang (46,48%) adalah perempuan. Usia cukup bervariasi mulai dari usia muda 15-24 tahun sebanyak 0,94 %, sampai dengan lanjut usia sebanyak 0,94 %. Usia terbanyak pada kelompok usia 45 – 54 tahun sebanyak 31,94 %. Pendidikan terbanyak dari kategori Pendidikan menengah sebanyak 112 orang (52,58%) dan sisanya 101 orang, hanya 9,39% yang berpendidikan tinggi. Dan dari segi pekerjaan hampir setengah responden adalah ibu rumah tangga sebanyak 85 orang (39,91%). Dari penelitian ini dapat disimpulkan bahwa karakteristik pasien gagal ginjal mengalami perubahan khususnya dalam hal usia, ditemukan 0,94% berusia muda 15-24 tahun. Perlu upaya promotive dan preventif terkait kejadian gagal ginjal pada usia muda dengan memperhatikan tingkat pendidikan.

**Kata Kunci:** Gagal Ginjal, Gagal Ginjal Kronis, Hemodialisa

### **ABSTRACT**

*Chronic kidney failure, a non-communicable disease, is included in the top 10 diseases in Indonesia. This study aims to study the characteristics of chronic renal failure patients in the Hemodialysis Unit at Tangerang City Hospital, Banten. This study uses a quantitative approach to crosssectional design. The population was 213 hemodialysis patients, and data were collected using medical record data. The analysis is carried out descriptively. The results of This study showed that more than half of the male sex was 114 people (53.52%), and the remaining 99 people (46.48%) were women. The age varies quite a bit from 15-24 years, as much as 0.94%, to the elderly. The most age in age group of 45-54 years was 31.94%. The most educated from the secondary education category was 112 people (52.58%); in the remaining 101 orgs, only 9.39% were highly educated. And in terms of work, almost half of the respondents were housewives as many as 85 people (39.91%). From this study, it can be concluded that the characteristics of renal failure patients have changed, especially in of age; it was found that 0.94% were young, 15-24 years old. Promotive and preventive efforts are needed to be related to the incidence of kidney failure at a young age by increasing the level of education.*

**Keywords:** Kidney Failure, Chronic Kidney Failure, Hemodialysis

### **INTRODUCTION**

One of the essential organs in the human body is the kidneys. The kidneys function as a place to filter waste and excess fluid from the blood before being disposed of through urine fluids so that it can prevent the accumulation of waste or waste products from metabolism and control the balance of fluids in the body and produce hormones and enzymes that help in controlling blood pressure, making

red blood cells and keeping bones strong. If the kidneys do not work properly, toxic waste and extra fluids accumulate in the body and can leading to high blood pressure, heart disease, stroke, and premature death (Centers for Disease Control and Prevention, 2021).

Diagnosis of Chronic Renal Failure (GGK) is established if the glomerulus filtration rate or Glomerular Filtration Rate (GFR) is less than 60ml/min/1.73m<sup>2</sup> for 3 months or more. (Vaidya SR & Aeddula NR, 2021). The risk factors more commonly cause chronic kidney failure disease in adults are Diabetes and high blood pressure. Other risk factors include heart disease, obesity, a family history of chronic kidney failure, inherited kidney abnormalities, past damage to the kidneys, and older age (Centers for Disease Control and Prevention, 2021).

According to the Centers for Disease Control and Prevention (CDC) of Chronic Kidney Disease in the United States, 2021. Kidney failure is more common in women (14%) than men (12%). Chronic renal failure is most common in people aged 65 years and older (38%), followed by people aged 45 to 64 years (12%) and people aged 18 to 44 years (6%). (Kidney Disease Statistics for the United States NIDDK [Internet]. [cited 2020 Jan 22].) The proportion of age distribution of chronic renal failure patients with hemodialysis therapy in 2018 was the highest at the age of 45-to 64 years, while patients aged less than 25 years contributed 2.57% in active patients (PERNEFRI, 2018).

Based on Basic Health Research (Riskesdas) (2018), the prevalence of chronic renal failure in Indonesia reaches 0.38% of the total population of Indonesia. Banten provinces suffering from chronic kidney failure amounted to 0.25%, and those undergoing hemodialysis amounted to 28.47%. In the Tangerang Region, hemodialysis patients are 20%-30% and usually reach 47%. This prevalence rate is quite high for chronic renal failure patients undergoing hemodialysis (Septimar & Nurmalahayati, 2019).

According to the report obtained from the medical records of the Hemodialization Room of Tangerang City Hospital, prevalence cases were brought in 1 year from January 2021 to December 2021, the number of patients suffering from chronic kidney failure was 213 people, and the highest prevalence was in March. If not treated immediately chronic renal failure causes many complications: anemia, peripheral neuropathy, cardiopulmonary complications, gastrointestinal complications, sexual dysfunction, skeletal defects, paraesthesia, motor nerve dysfunction (foot drop and flacid paralysis), pathological fracture pathologist. (Kowalak, Welsh, & Mayer, 2017). These complications can affect the patient's quality of life or even death.

One of the methods of treatment for late-stage renal failure that is considered to save the patient's life is hemodialysis, which is the basic disease in chronic renal failure that carries out kidney replacement therapy or hemodialysis therapy is hypertensive kidney disease followed by diabetic nephropathy. (PERNEFRI, 2018). Hemodialysis (HD) therapy is the most widely carried out therapy for End Stage Renal Disease (ESRD) patients with a total of 66,443 new HD patients in 2018, more

than 21,000 new patients every year since 2015 in Indonesia, and more than 130,000 patients in Indonesia actively undergoing HD treatment in 2018. (PERNEFRI, 2018).

Chronic renal failure, a non-communicable disease, is included in the top 10 diseases in Indonesia. Therefore, this study aims to study the characteristics of chronic renal failure patients in the Hemodialysis Unit at Tangerang City Hospital, Banten.

## METHOD

This study uses a quantitative approach to cross-sectional design. The population is 213 hemodialysis patients, and the report was collected using the medical record report of the patient's Hemodialysis unit of the Tangerang City Hospital, Banten, from January to December 2021. The analysis is carried out descriptively.

## RESULTS AND DISCUSSION

The following table presents the results of a study on the characteristic picture of chronic renal failure patients in the Hemodialysis Unit of Tangerang City Hospital, Banten.

**Table 1. Description of Characteristics of GGK Patients in The Hemodialysis Unit of Tangerang City Hospital**

Variable	Category	Number	Percentage
Gender	Male	114	53,52
	Women	99	46,48
Age	late teens (17-25 years)	2	0,94
	Early adulthood (26-35 years)	13	6,10
	Late adulthood (36-45 years)	37	17,37
	Early elderly (46-55 years)	67	31,46
	Early elderly (46-55 years)	62	29,11
	> 65 years	32	15,02
	Education Level	Elementary	81
	Secondary	112	52,58
Work	Highly	20	9,39
	Private Employee	47	22,07
	Entrepreneurial	27	12,68
	Housewife	85	39,91
	Driver	4	1,88
	Retirement	16	7,51
	Civil employee	5	2,35
	Unwork	14	6,57
	Lawyer	1	0,47
	Freelance	6	2,82
	Employees of SOEs	1	0,47
	Teacher	5	2,35
Fisherman	1	0,47	
College students	1	0,47	

From table 1 above, the results of this study show that more than half of the male sex was 114 people (53.52%), and the remaining 99 people (46.48%) were women. This is consistent with research that the prognosis of chronic renal failure is sex-related. The prognosis of chronic renal failure in men is due to the ability to control proteinuria, while women cannot the ability to control blood sugar. (Chang et al., 2016). So both sexes each have a risk of developing this disease.

In terms of age, it varies from the young age of 15-24 years, as much as 0.94%, to the elderly > 65 years, as much as 14.02%. The most age in age group of 45-54 years was 31.94%.

The most education from the secondary education category was 112 people (52.58%) and the remaining 101 people, only 9.39%, were highly educated.

And in terms of work, almost half of the respondents were housewives, as many as 85 people (39.91%).

## CONCLUSIONS AND SUGGESTIONS

From this study, it can be concluded that the characteristics of renal failure patients have changed, especially in age; it was found that 0.94% were young aged 15-24 years.

Promotive and preventive efforts are needed to be related to the incidence of kidney failure at a young age by paying attention to the level of education.

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