

## ABSTRACT

Chronic kidney failure is a disease with a progressive decrease in kidney function in a few months or years. Chronic kidney failure is defined as kidney damage and / or decreased Glomerular Filtration Rate (GFR)  $<60 \text{ mL/min} / 1.73\text{m}^2$  for a minimum of 3 months. Examination of renal function with a good marker of kidney filtration is serum creatinine level because serum creatinine is in a relatively constant state and is not influenced by protein from the diet. If renal dysfunction occurs, creatinine filtration ability will decrease and serum creatinine will increase. If kidney function is greatly decreased, there is a buildup of anions from weak acids in body fluids that are not excreted by the kidneys. In addition, a decrease in glomerular filtration rate reduces phosphate and  $\text{NH}_4^+$  excretion, thereby reducing the amount of  $\text{HCO}_3^-$  which is added back to body fluids. Thus, chronic kidney failure can cause severe metabolic acidosis. Metabolic acidosis makes the blood pH acidic and affects urine pH levels. Decreasing urine pH indicates that the body experiences a state of metabolic acidosis.

The purpose of this study was to determine the relationship between serum creatinine levels and urine pH in patients with chronic renal failure. This type of research is a descriptive study in 30 patients with chronic kidney failure who performed hemodialysis. Examination of serum creatinine and urine pH was examined. The Kolmogorov-Smirnov test was used to test the normality of the data and the Spearman rank test ( $\alpha = 0.05$ ) was used to test the relationship between two variables. The results of this study are using the Spearman rank test obtained  $p = 0.028 < \alpha = 0.05$ , which means there is a relationship between serum creatinine levels and urine pH in patients with chronic kidney failure.

*Keywords: chronic kidney failure, serum creatinine, urine pH*