

***Analysis of Risk Factors for Chronic Kidney Disease Stage V (N18.5) Based on  
Inpatient Medical Records at R.T. Notopuro Regional General  
Sidoarjo Hospital***

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***ABSTRACT***

Chronic Kidney Disease (CKD) Stage V is an end-stage kidney disease characterized by kidney function decline to  $<15 \text{ mL/min/1.73 m}^2$ , requiring hemodialysis therapy. The number of CKD Stage V cases at RSUD R.T. Notopuro Sidoarjo increased during 2023–2025. This study aimed to analyze the association of age, sex, hypertension, diabetes mellitus, urinary tract infection, urinary tract stones, obesity, cardiovascular disease, and nephrotoxic drug use with CKD Stage V. This analytical observational study used a case-control design and secondary data from medical records. The sample consisted of 165 cases and 165 controls selected using simple random sampling. Data were analyzed using univariate and bivariate analyses with the chi-square test. Respondents were predominantly aged  $<60$  years (67%), male (52.4%), and had a history of hypertension (61.2%). Most respondents had no history of diabetes mellitus (60.3%), urinary tract infection (81.5%), urinary tract stones (89.7%), obesity (74.2%), cardiovascular disease (77.3%), or nephrotoxic drug use (89.4%). Bivariate analysis showed that hypertension ( $p\text{-value}=0.000$ ), urinary tract infection ( $p\text{-value}=0.000$ ), urinary tract stones ( $p\text{-value}=0.046$ ), obesity ( $p\text{-value}=0.000$ ), and cardiovascular disease ( $p\text{-value}=0.000$ ) were associated with CKD Stage V. Age ( $p\text{-value}=0.815$ ), sex ( $p\text{-value}=0.123$ ), diabetes mellitus ( $p\text{-value}=0.261$ ), and nephrotoxic drug use ( $p\text{-value}=0.721$ ) were not associated. It was concluded that hypertension, urinary tract infection, urinary tract stones, obesity, and cardiovascular disease were associated with CKD Stage V. Hospitals should improve preventive education, future researchers should conduct multivariate analysis and include other risk factors, and communities should undergo regular check-ups.

**Keywords:** *case control, Chronic Kidney Disease Stage V, risk factors, medical record*