

## ABSTRACT

***Correlation between Duration of Diabetes Mellitus with Foot Neuropathy in RSUD  
Dr. Soetomo Surabaya in 2019  
(Analytic Observational Research)***

*Diabetes mellitus is a metabolic disorder that has characteristics of chronic high blood glucose levels. Diabetes mellitus can be caused by a disruption in insulin production, as well as a disruption of insulin metabolism. DM patients are very susceptible to complications. Chronic complications caused by DM are divided into microvascular and macrovascular complications, one of which is Neuropathy. The purpose of this study was to determine the relationship between long-suffering DM with foot Neuropathy.*

*This research is an observational analytic study with cross-sectional method. Samples were taken using consecutive sampling technique with the formula estimate a correlation coefficient. The variables studied were duration of DM, Neuropathy results through Monofilament test values, gender, age, BMI, and blood sugar control. The data collection method is done by direct measurement of Monofilament test values, medical records data, and interviews.*

*Results: From 46 research subjects, 34.78% were male and 65.22% were female. In age-based group, 6.52% aged less than 40 years, 28.26% aged 40-49 years, 54.35% aged 50-59 years, 10.87% aged 60 years and over. Normal BMI was 58.7%, and overweight BMI was 41.3%. As many as 36.96% of patients had controlled blood sugar control and 63.04% of patients had uncontrolled blood sugar control. As many as 58.7% had a duration of suffering from DM in less than 3 years, while 41.3% had a duration of suffering from DM in 3 years or above. The characteristics of neuropathy in 43.48% were normal and 56.52% had neuropathic disorders. In samples with duration of DM in less than 3 years, 62.96% were found to be normal and 37.04% had neuropathy disorders. In samples with duration of DM 3 years or above, 15.79% were found to be normal and 84.21% had neuropathy disorders. The P-value and C-value between the length of DM suffering and foot neuropathy are 0.001 and 0.469.*

*In conclusion, this study found a significant and quite strong relationship between the duration of patients suffering from DM and neuropathy disorders in patients' feet in the Internal Medicine Outpatients of Dr. Soetomo Surabaya in 2019.*

***Keywords: Diabetes Mellitus, Neuropathy, Monofilament Test***