

**PREVALENSI DAN FAKTOR RISIKO NEUROPATI PERIFER
(LAMA MENDERITA DM, KONTROL GLIKEMIK, DAN IMT)
PADA PASIEN DIABETES MELITUS TIPE 2 DI UPT
PUSKESMAS JATIROTO**

SKRIPSI



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PREVALENCE AND RISK FACTORS OF PERIPHERAL NEUROPATHY (DURATION OF DIABETES, GLYCEMIC CONTROL, AND BODY MASS INDEX) AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS AT JATIROTO PRIMARY HEALTH CENTER

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ABSTRAK

Introduction: Diabetes Melitus (DM) Tipe 2 merupakan penyakit metabolik kronis yang dapat menimbulkan berbagai komplikasi, salah satunya neuropati perifer diabetik. Neuropati perifer menjadi komplikasi mikrovaskular yang paling sering ditemukan dan berpotensi menyebabkan penurunan kualitas hidup, ulkus kaki diabetik, hingga amputasi apabila tidak dideteksi secara dini. Berbagai faktor diduga berperan terhadap terjadinya neuropati perifer, di antaranya lama menderita diabetes, kontrol glikemik yang buruk, dan status gizi yang diukur melalui Indeks Massa Tubuh (IMT).

Tujuan: Penelitian ini bertujuan untuk mengetahui prevalensi neuropati perifer serta menganalisis hubungan lama menderita Diabetes Melitus, kontrol glikemik, dan Indeks Massa Tubuh dengan kejadian neuropati perifer pada pasien Diabetes Melitus Tipe 2 di UPT Puskesmas Jatiroto Lumajang.

Metode: Penelitian ini menggunakan desain kuantitatif dengan jenis penelitian korelasional dan pendekatan *cross sectional*. Sampel penelitian berjumlah 63 responden yang dipilih menggunakan teknik *consecutive sampling*. Data neuropati perifer diperoleh melalui pemeriksaan Monofilamen 10 g, sedangkan data lama menderita DM, kontrol glikemik, dan karakteristik responden diperoleh melalui rekam medis, wawancara, serta pengukuran antropometri. Analisis univariat disajikan dalam bentuk distribusi frekuensi dan persentase, sedangkan analisis bivariat menggunakan uji Chi-square dengan tingkat signifikansi $\alpha = 0,05$.

Hasil: Hasil uji Chi Square diperoleh nilai $p\text{-value} = 0,001$ ($p < 0,05$), sehingga menunjukkan bahwa terdapat hubungan yang signifikan antara lama menderita diabetes melitus dengan kejadian neuropati. nilai $p\text{-value} = 0,043$ ($p < 0,05$), sehingga menunjukkan bahwa terdapat hubungan yang signifikan antara IMT dengan kejadian neuropati. Nilai $p\text{-value} = 0,007$ ($p < 0,05$), sehingga menunjukkan bahwa terdapat hubungan yang signifikan antara kadar glukosa darah dengan kejadian neuropati.

Diskusi: Hasil penelitian menunjukkan bahwa semakin lama seseorang menderita

Diabetes Melitus, semakin buruk kontrol glikemik, serta semakin tinggi Indeks Massa Tubuh, maka semakin besar risiko mengalami neuropati perifer. Temuan ini sejalan dengan teori patofisiologi neuropati diabetik yang menjelaskan bahwa hiperglikemia kronis dan gangguan metabolik menyebabkan kerusakan mikrovaskular, stres oksidatif, serta disfungsi saraf perifer.

Kata Kunci: Diabetes Melitus Tipe 2, Neuropati Perifer, Kontrol Glikemik, Indeks Massa Tubuh, Lama Menderita Diabetes.

ABSTRACT

Introduction: *Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disease that can lead to various complications, one of the most common being diabetic peripheral neuropathy. Peripheral neuropathy is a frequent microvascular complication that may reduce quality of life and increase the risk of diabetic foot ulcers and lower limb amputation if not detected early. Several factors are believed to contribute to the development of peripheral neuropathy, including the duration of diabetes, poor glycemic control, and nutritional status as measured by Body Mass Index (BMI).*

Objective: *This study aimed to determine the prevalence of peripheral neuropathy and to analyze the association between the duration of diabetes, glycemic control, and Body Mass Index with the occurrence of peripheral neuropathy among patients with Type 2 Diabetes Mellitus at Jatiroto Primary Health Center, Lumajang.*

Methods: *This study employed a quantitative correlational design with a cross sectional approach. A total of 63 respondents were selected using a consecutive sampling technique. Peripheral neuropathy was assessed using the 10 g Semmes-Weinstein monofilament test, while data on the duration of diabetes, glycemic control, and respondent characteristics were obtained from medical records, interviews, and anthropometric measurements. Univariate analysis was presented as frequency and percentage distributions, while bivariate analysis was performed using the Chi-square test with a significance level of $\alpha = 0.05$.*

Results: *Chi-Square analysis results obtained a p-value = 0.001 ($p < 0.05$), indicating a significant relationship between the duration of diabetes mellitus and the incidence of neuropathy. A p-value = 0.043 ($p < 0.05$) shows a significant relationship between BMI and the incidence of neuropathy. Finally, a p-value = 0.007 ($p < 0.05$) indicates a significant relationship between blood glucose levels and the incidence of neuropathy.*

Discussion: *The findings indicate that a longer duration of diabetes, poor glycemic control, and higher Body Mass Index are associated with an increased risk of peripheral neuropathy. These results are consistent with the pathophysiological theory of diabetic neuropathy, which explains that chronic hyperglycemia and metabolic disturbances contribute to microvascular damage, oxidative stress, and peripheral nerve dysfunction.*

Keywords: *Type 2 Diabetes Mellitus, Peripheral Neuropathy, Glycemic Control, Body Mass Index, Duration of Diabetes.*