

## **A prospective study of prevalence and association of peripheral neuropathy in Indian patients with newly diagnosed type 2 diabetes mellitus.**

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#### **Abstract**

#### **BACKGROUND:**

Diabetic peripheral neuropathy (DPN) predisposes to foot ulceration and gangrene. It has been reported that DPN is lower in Indians relative to Caucasians. Studies among recent onset patients with type 2 diabetes mellitus (T2DM) are very few. We studied the prevalence and risk factors of DPN in patients with newly diagnosed T2DM.

#### **MATERIALS AND METHODS:**

We prospectively studied 195 consecutive patients over age 30 with a duration of diabetes  $\leq 6$  months. All underwent a clinical and biochemical evaluation and were screened for DPN using Neuropathy Symptom Score (NSS) and Neuropathy Disability Score (NDS) as well as the vibration perception threshold using a biothesiometer. We compared the prevalence of peripheral neuropathy (PN) in 75 age- and sex-matched healthy controls.

#### **RESULTS:**

The cases had a mean age of  $47.6 \pm 10.2$  years (59% males) and duration of symptoms of  $5.9 \pm 8.2$  months prior to presentation. The overall prevalence of DPN was 29.2% [95% CI 22.8-35.7]. PN among matched control was 10.7% (95% CI 3.5-17.8). The prevalence of DPN showed an increasing trend with age (trend chi-square 11.8,  $P = 0.001$ ). Abnormal vibration perception threshold was present in 43.3% (95% CI 36.3-50.3) of cases and had a significant correlation with NDS ( $P = 0.000$ ). Abnormal monofilament testing was present in 6.1% of cases (95% CI 2.7- 9.5). A logistic regression analysis showed that DPN was independently associated with age ( $P = 0.002$ ) and duration of diabetes prior to presentation ( $P = 0.02$ ) but not with body mass index, plasma glucose, or HbA1c.

#### **CONCLUSIONS:**

Our study showed high prevalence of PN in recently diagnosed patients with T2DM, which was independently associated with age and duration of symptoms of diabetes prior to the diagnosis. Screening for DPN at diagnosis of diabetes is warranted, especially among older subjects.