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Prevalence and risk factors for severity of diabetic neuropathy in type 2 diabetes mellitus.

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Abstract

PURPOSE:

To estimate the prevalence of diabetic neuropathy (severity wise) and associated risk factors in a population having type 2 diabetes mellitus.

MATERIALS AND METHODS:

A population-based sample of 1401 persons with diabetes(identified as per the WHO criteria) underwent comprehensive eye examination including stereoscopic digital photography (45° four field) for diabetic retinopathy grading. Vibration perception threshold (VPT) measurements were done to assess neuropathy (cut off ≥ 20 V). Severity of neuropathy was graded into three groups based on VPT score as mild (20-24.99 V), moderate (25-38.99 V), and severe (≥39 V). Univariate and multivariate analyses were done to find out the independent risk factors for severity of diabetic neuropathy.

RESULTS:

In the overall group, the prevalence of diabetic neuropathy was 18.84% (95% CI: 16.79-20.88). The prevalence of mild diabetic neuropathy was 5.9% (95% CI: 4.68-7.15), moderate diabetic neuropathy was 7.9% (95% CI: 6.50-9.33), and severe diabetic neuropathy was 5% (95% CI: 3.86-6.14). Increasing age per year ($P < 0.0001$) was a statistically significant risk factor for all - mild, moderate, and severe - types of diabetic neuropathy. For severe diabetic neuropathy, other significant risk factors were duration ofdiabetes mellitus ($P = 0.027$), macroalbuminuria ($P = 0.001$), and presence of diabetic retinopathy ($P = 0.020$).

CONCLUSIONS:

The results suggested that every fifth individual in a population of type 2diabetes is likely to have diabetic neuropathy. Nearly 13% had neuropathy of moderate and severe category, making this group vulnerable for complications such as foot ulceration or lower limb amputation.

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