Prevalence and associated factors of diabetic neuropathy among young diabetic patients in Sri Lanka

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Introduction

Diabetic neuropathy (DN) deprives quality of life and is associated with considerable morbidity and disability. Although DN is found to be common among the older age group of the diabetic population, prevalence and characteristics of DN among young diabetic patients is much less studied. Studies in this area would be useful for prevention and early detection.

Objectives

To describe the prevalence and associated factors of DN among young adult diabetic patients in Sri Lanka

Methods

1007 young diabetic patients of age 20-45 years were assessed for neurological symptoms and signs and the diabetic neuropathy symptom score (DNS) was determined. Statistical tests including Chi square test were performed to describe known and potential associated factors of DN.

Results

42.3% of the population was males. Mean age, mean age of onset of diabetes mellitus (DM), mean duration of DM were 36.6 ($\pm$11.17) years, 31.8($\pm$5.6) years and 4.8($\pm$4.2) years respectively. 30.7% patients had DN according to DNS, of whom 45.5% complained of burning, aching pain or tenderness and 40% complained of numbness. Monofilament feel, big toe vibration sense and ankle jerk were impaired or absent in 7.5%, 7.2% and 4.2% of patients with DN respectively. Male and female prevalence of DN was 10.66% and 20.03% respectively ($p<0.001$). Demographic factors such as educational level and income were significantly associated with DN ($p<0.05$). The known associated factors for DN including poor glycaemic control, age, sex, duration of diabetes, co morbid hypertension, duration of insulin therapy and being tall were significantly associated with DN in young diabetic patients($p<0.001$). In addition to conventional predictors of DN, presence of metabolic syndrome ($p<0.05$) and the waist hip ratio ($P<0.001$) were also DN predictors. Co existence of other micro vascular complications indicated by the degree of retinopathy and degree of microalbuminuria ($P<0.001$ & $P<0.05$) and co-existence of ischaemic heart disease and peripheral vascular disease ($p<0.001$) also predicted presence of DN among young diabetic patients.

Conclusions

The study defines the prevalence of DN, as predicted by DNS, among young diabetic patients in Sri Lanka. Associating factors of diabetic neuropathy among young diabetic patients appear to be comparable with the known associating factors in overall adult diabetic population though a few less known associations were observed during the study.