Letter to Editor

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Height and Diabetic Peripheral Neuropathy: Does Being Tall versus Short Determine Long versus Short Nerve Dysfunction?

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Abstract

This letter to editor raises the issue of inter-relationship between the height of the individual, the length of the peripheral nerves and patho-neurophysiological changes in diabetic peripheral neuropathy (DPN) in order to provide implications for practice and research in neuropathic pain care. Height was an independent risk factor for insensate neuropathy albeit not the painful type of DPN and it was associated with other clinical and electrophysiological measures.

Dear Sir,

This letter brings to your kind notice an important yet under-researched area in the field of Neurology and Endocrinology, on a relationship between an anthropometric factor of height (HT) and a common microvascular complication of diabetes mellitus namely the diabetic peripheral neuropathy (DPN). To the authors' knowledge, three studies were found, that studied HT and its relationship to DPN [1].

Gadiaet al [2] examined associations between height and quantitative sensory, nerve-conduction, and clinical indices of diabetic peripheral neuropathy in adult diabetic patients. Height correlated well with VPT, and, peroneal and posterior tibial nerve conduction velocities, but not with TPT. The study's findings indicated that height has a marked influence on quantitative sensory, nerve-conduction, and clinical indices of diabetic peripheral neuropathy, when analyzed together with age and diabetes duration.

Robinson et al [3] examined if height (HT) was an independent risk factor for DPN and determined the influence of height on 28 electrophysiological measures in 170 Japanese American men including: 69 diabetic men, 54 normal men, and 47 men with impaired glucose tolerance (IGT). Median and peroneal sensory amplitudes correlated with HT, with taller subjects having smaller sensory nerve amplitudes which indicated that HT was an independent risk factor for sensory polyneuropathy in diabetic subjects.

Sorensen et al [4] studied the similarities and differences between 2610 people with insensate or painful diabetic peripheral neuropathy, with respect to height and found that height was an independent determinant of insensate neuropathy but not predictive of painful DPN. The influence of height was more than that of glycemic control.

Taller individuals were likely to develop DPN symptoms, although the mechanisms of which are unknown at this stage. There is immediate need for evaluating role of height as a confounding factor in randomized controlled trials in order to minimize between group heterogeneity and to explore neuroanatomy-neurophysiology inter-relationship while studying population with DPN.

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