Gait changes in persons with diabetes: Early risk marker for diabetic foot ulcer.
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Abstract
Background Increasing prevalence of diabetic foot ulcer (DFU) and subsequent foot amputation in persons with type 2 diabetic neuropathy is a well known fact. The present study was aimed to identify the initial risk marker for DFU. Methods Dynamic plantar pressure analysis was done for persons with type 2 diabetes mellitus (T2DM) without neuropathy (D), patients with diabetic neuropathy (DN) with normal foot profile and healthy persons with normal foot profile (C). Results The data showed a significant difference in dynamic peak plantar pressure between C and DN (P = 0.035) and no significant difference between D and DN (P = 0.997). The dynamic segmental peak plantar pressure results showed significant difference only in the medial heel region (P = 0.009) among the three groups. Conclusions Gait variations and restrictions in subtalar and first metatarsophalangeal joint are found in persons with diabetic neuropathy even before the onset of foot deformity.

KEYWORDS: Diabetic foot ulcer; Diabetic neuropathy; Foot deformity; Gait; Plantar pressure analysis
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