Analysis of Gait Characteristics Using a Dynamic Foot Scanner in Type 2 Diabetes Mellitus without Peripheral Neuropathy

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Abstract

Objectives: The objective of the present study was to identify the gait changes in T2DM subjects without PN (Peripheral Neuropathy). *Methods:* 36 T2DM subjects without PN and 32 age matched non-diabetic subjects (NDM) were recruited. Gait characteristics were analyzed using Win-track dynamic foot scanner. Data were analyzed using independent 't' test. Level of significance was kept at P<0.05. *Results:* Analysis showed no significant differences in gait characteristics in T2DM subjects without PN as compared to NDM subjects. *Conclusions:* T2DM subjects without PN presents with a gait same as subjects without T2DM. Gait changes in T2DM are dependent on loss of protective sensation of the foot and intrinsic foot muscle atrophy. Therefore, dynamic foot analysis should be incorporated in routine diabetic foot evaluation to understand the gait in T2DM and hence many complications can be prevented.

Introduction

Type 2 diabetes mellitus (T2DM) is a multi-system, metabolic disease