

Evaluation of Postural Stability in Patients with Flat Feet: A Controlled Trial

Authors : Ghada Mohamed Rashad, Doaa Ayoub Elimy, Mohamed Hussein Elgendy, Ahmed Mohamed Fathi Elshawi, Mahmoud Ghazy

Abstract : Background: Flat feet cause changes in foot mobility, foot posture, and load distribution under the foot which influences dynamic balance, that is essential in activities of daily living and for optimal performance in sports activity. Purpose: To investigate the effect of flat feet on dynamic balance including overall stability index (OAI), anteroposterior stability index (APSI) and mediolateral stability index (MLSI). Study Design: The design of the study was an experimental design. Subjects: Forty subjects from both sexes were selected from the Faculty of Physical Therapy, Cairo University, their mean age (23.55 ± 1.74) years, divided into two groups, group A (8 males and 12 females) with flat feet, and group B (9 males and 11 females) with normal feet. Methods: The Navicular Drop Test was used to determine if the feet were pronated and Biodex Balance System was used to assess dynamic balance at level 8 and level 4 for both groups. Results: There was no significant difference in dynamic balance including (OSI, APSI and MLSI) of the Biodex at stability level (8) (most stable) ($p = 0.56$). While there was a significant difference between both groups in all dependent variables at stability level (4) (less stable level) ($p = 0.0001$). Conclusion: It may be concluded that flat feet have an effect on dynamic balance and there is balance affection in subjects with flat feet.

Keywords : flat feet, dynamic balance, postural stability, types of flat feet, eversion strength

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