

Original Paper

Effect of hip abductor muscles fatigue on plantar pressure characteristics during stance phase of walking

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Abstract

Background and Objective: Muscles fatigue around the joint can alter the movement pattern and increase the risk of muscle damage. This study was done to determine the effect of hip abductor muscles fatigue on plantar pressure characteristics during stance phase of gait.

Methods: This quasi-experimental study was done on 22 males with age ranges of 15-21 years old. Hip abduction protocol with 50% of one-repetition maximum was used to induce hip abductor muscles fatigue. Average pressure, plantar peak pressure, step duration and the plantar contact area in both feet distribution were collected using before and after the fatigue protocol during gait.

Results: Despite the relative reduction in average pressure, contact area and step duration and plantar increase in peak pressure after abductors fatigue, but these differences were not significant.

Conclusion: This study showed that the hip abductor muscles fatigue can not alter plantar pressure characteristics during stance phase of gait.

Keywords: Hip abductor muscles, Fatigue, Gait, Plantar pressure

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