E-Poster

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Relationship Between Static Balance and Hamstring -Quadriceps Ratio in Overweight/Obese Patients With Knee Osteoarthritis

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

Impaired balance is one of the assorted risk factors that have been associated with increased risk of lower extremity injuries. Thigh muscles, including the quadriceps and hamstring muscles, adapt also to lower extremity injuries by losing strength. However, the correlation between them has not been fully elucidated.

The objective of this study was to seek a possible relationship between isokinetic unilateral ratio and static balance performance.

METHODS

Overweight/obese patients with knee osteoarthritis, outside of congestive flare-ups, volunteered for this study. Participants completed the monopodal static stance test on the dominant leg. Maximum isokinetic extensor Peak torque (EPT) and isokinetic flexor Peak torque (FET) in concentric modality were evaluated.

RESULTS

Our study included 36 patients, with a mean age of 49.58 ± 6.54 years. The mean BMI was 34.64 ± 3.41. All patients had right dominant leg. Spearman's rank coefficient (R) for unilateral ratio *vs.* balance performance was 0.9 showing highly significant positive correlation ($p < 0.001$).

CONCLUSION

The static balance was significantly influenced by thigh muscle strength. Thereby thigh muscles strength asymmetry should be taken into account among patients with deficit during balance test.

Statement of Disclosures

None

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