Correlation of Muscular Strength and Balance in Relation to Single Leg Squat Analysis in Male Football Players: An Observational Study

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ABSTRACT

Introduction: Individual participation with inadequate preparation especially during competition have to suffer with increased incidence of injury. Athletes commonly suffer from lower extremity musculoskeletal pain. During growth several biomechanical factors contributes to muscular imbalance result in injury, therefore current study aims to study correlation of lower extremity strength and balance in relation to single leg squat depth and compare kinematic evaluation between dominant and non-dominant side.

Methods: 100 male football players included in study, lower extremity qualitative and quantitative squat analysis performed for both the legs. Isometric strength and balance for lower extremity assessed via dynamometer and Y balance test respectively. Correlation of squat performance with strength and balance was found.

Results: There is moderate relation of visual squat performance on strength of hip extensor on dominant leg and hip abductors in non-dominant leg. Moderate correlation of maximum squat depth with hip abductors, hip extensor and knee flexor on dominant side p value <0.05 and r value was between 0.50-0.70.

Conclusion: Strength and balance influences squat performance. Balance involvement is more than strength.

Keywords: Dominant, Non-dominant, Single leg squat

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