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Influence of Strengthening of Hip Abductors and External Rotators in Treatment of Patellofemoral Pain Syndrome

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Abstract : Background: Patellofemoral pain (PFP) is a common musculoskeletal pain condition, especially in females. Decreased hip muscle strength has been implicated as a contributing factor, yet the relationships between pain, hip muscle strength and function are not known. Objective: The purpose of this study is to investigate the effects of strengthening hip abductors and lateral rotators on pain intensity, function and hip abductor and hip lateral rotator eccentric and concentric torques in patients with PFPS. Methods: Thirty patients had participated in this study; they were assigned into two experimental groups. With age ranged for eighty to thirty five years. Group A consisted of 15 patients (11females and 4 males) with mean age 20.8 (±2.73) years, received closed kinetic chain exercises program, stretching exercises for tight lower extremity soft tissues, and hip strengthening exercises .Group B consisted of 15 patients (12 females and 3 males) with mean age 21.2(±3.27) years, received closed kinetic chain exercises program and stretching exercises for tight lower extremity soft tissues. Treatment was given 2-3times/week, for 6 weeks. Patients were evaluated pre and post treatment for their pain severity, function of knee joint, hip abductors and external rotators concentric/eccentric peak torque. Result: the results revealed that there were significant differences in pain and function between both groups, while there was improvement for all values for both group. Conclusion: Six weeks rehabilitation program focusing on knee strengthening exercises either supplemented by hip strengthening exercises or not effective in improving function, reducing pain and improving hip muscles torque in patients with PFPS. However, adding hip abduction and lateral rotation strengthening exercises seem to reduce pain and improve function more efficiently.

Keywords : patellofemoral pain syndrome, hip muscles, rehabilitation, isokinetic
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