

Effects of Sacroiliac Joint Mobilization on Hamstring Muscle Flexibility and Quadriceps Muscle Strength

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Objectives: The aim of this study was to determine the effect of sacroiliac joint mobilization (SJM) in cases with sacroiliac joint dysfunction (SJD) on hamstring muscle flexibility and quadriceps muscle strength.

Methods: Seven subjects age average (min- max) was 21.85 (21-23) years with SJD were included. Hamstring muscle flexibility was measured with passive knee extension (PKE) method by using goniometer; quadriceps muscle strength was measured by using a hand dynamometer. After osteopathic evaluation (sacroiliac joint stress and mobility tests) appropriate mobilization methods (ilium anterior, ilium posterior and sacrum R / R dysfunction mobilization) were performed in patients with sacroiliac joint dysfunction. All measurements were repeated before, immediately and 4 days after application. For statistical analysis, Friedman and Wilcoxon-Signed test was used.

Results: Immediately after SIJ mobilization for 7 patients, hamstring muscle flexibility was evaluated and compared with pretreatment status; bilateral hamstring muscle flexibility improvement was observed ($p < 0.05$). When the results at 4 days were compared with the pretreatment measurements, generated effect continued in the dominant side ($p < 0.05$) and there were no changes observed in the non-dominant side ($p > 0.05$). When immediate and 4th-day measurements were compared, bilateral improvement was maintained ($p > 0.05$). When pretreatment and immediate posttreatment results were analysed, bilateral quadriceps muscle strength was found to be increased ($p < 0.05$). When 4th- day and pretreatment measures were compared the effects were bilaterally maintained ($p < 0.05$). Comparison of immediate postapplication and 4th-day measurements revealed that bilateral improvement continued ($p > 0.05$).

Conclusion: In SJD patients known with hamstring muscle flexibility loss and quadriceps muscle weakness, private sacroiliac joint mobilization is effective in enhancing hamstring muscle flexibility and quadriceps muscle strength, so SJD could be considered for increasing quadriceps muscle strength and hamstring muscle flexibility.

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