ABSTRACT

**Study design:** Case series

**Background and purpose:** The literature has emphasized the use of exercise as an intervention for individuals with lumbopelvic pain. However, there is limited information to guide clinicians in exercise selection for those with sacroiliac (SI) joint dysfunction. Altered function of the gluteus maximus has been found in those with SI joint dysfunction. The objective of this case series was to assess the effectiveness of an exercise program directed at increasing gluteus maximus strength in those with clinical tests positive for SI joint dysfunction.

**Case descriptions:** The eight subjects in this series presented with lumbopelvic pain and clinical evidence of SI joint dysfunction. Each subject underwent 10 treatments over five weeks consisting of five exercises directed at strengthening the gluteus maximus. Radiological assessment and clinical examination were performed to rule out potential concurrent pathologies. Visual analog pain scale, the Oswestry Disability Index, and strength assessed via hand held dynamometry were measured pre- and post-intervention.

**Outcomes:** A significant (p<0.001) weakness in gluteus maximus was noted when comparing the uninvolved and involved sides pre-intervention. After completing the strengthening exercise program over 10 visits, statistically significant (p<0.002) increases in gluteus maximus strength and function were found, as well as a decrease in pain. All subjects were discharged from physical therapy and able to return to their normal daily activities.

**Discussion:** The results of this case series support the use of gluteus maximus strengthening exercises in those with persistent lumbopelvic pain and clinical tests positive for SI joint dysfunction.

**Key words:** Hip, low back pain, rehabilitation, sacroiliac joint

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