Therapy Solutions News

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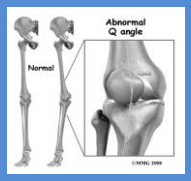

Thank you for your continued support!

Our clinic is minus one of our original therapists Melinda Ramirez who along with her husband Frankie and daughter Michaela are about to add another child to their family. Congratulations to Melinda and Frankie and we look forward to meeting their new daughter and to her return to treating patients in a couple months.

Bruce and Kent pictured above, racing the time trial stage of the Adoption Exchange Classic in Albuquerque. They both did well, had a lot of fun and are still sore.

For female patients with Patellofemoral Pain Syndrome (PFPS) initial hip strengthening leads to an earlier pain decrease as compared to initial quadriceps strengthening (1)

(Level 2b evidence)

Prior studies emphasized the importance of quadriceps strengthening in the treatment of patients with PFPS (2). More recent studies have focused on the importance of hip musculature weakness as a contributing factor for PFPS (3). A randomized clinical demonstrated successful outcome (VAS, WOMAC) after performing 8 weeks of hip strengthening that was maintained at the 6 months follow up (3). Weak hip abductors and external rotators may lead to dysfunctional lower extremity joint alignment which can affect the lateral forces acting on the patella (Dynamic Quadriceps Angle) (1,3). Dolak et al 2011 (1) performed a randomized clinical trial were 33 female patients with PFPS were randomly assigned to an initial hip strengthening group or an initial quadriceps strengthening group for 4 weeks after which both groups received the same program of functional weight-bearing exercises (co-contractions of the muscles around the knee). Primary outcome measures were the Visual Analogue Scale and the Lower Extremity Functional Scale. Results: After 4 weeks of rehabilitation the patients in the hip strengthening group reported a 43% drop in VAS scores as compared to only 3% in the quadriceps strengthening only group. This difference was statistically significant (p= 0.035). At the completion of the next 4 weeks (same program of functional weight-bearing exercises) the differences in VAS scores between the 2 groups was not statically significant any more (the quadriceps strengthening only group caught up with the hip strengthening only group). At 4 and 8 weeks the scores on the Lower Extremity Functional Scale demonstrated a statistically significant improvement from baseline (p=0.006), however the between group differences were not statically significant. **Conclusion**: While both groups demonstrated clinically important changes after 8 weeks of rehabilitation, the initial hip strengthening only group reported significantly less pain during the first 4 weeks as compared to the initial quadriceps strengthening only group. Utilizing this information at Therapy Solutions, we experienced increased patient motivation and fewer patient drop-outs with our PFPS patients.

Erik De Proost

References

(1). Kimberly L. Dolak, "Hip Strengthening Prior to Functional Exercises Reduces Pain Sooner Than Quadriceps Strengthening in Females With Patellofemoral Pain Syndrome: A Randomized Clinical Trial," *Journal of Orthopaedic and Sports Physical Therapy* (2011),

(2). Lori A Bolgla and Michelle C Boling, "An Update for the Conservative Management of Patellofemoral Pain Syndrome: a Systematic Review of the Literature from 2000 to 2010," *International Journal of Sports Physical Therapy* 6, no. 2 (June 2011): 112–125.

(3) Khalil Khayambashi, "The Effects of Isolated Hip Abductor and External Rotator Muscle Strengthening on Pain, Health Status, and Hip Strength in Females With Patellofemoral Pain," *Journal of Orthopaedic and Sports Physical Therapy* (2011),