

Novel Posture-Based Neuromuscular Treatment for Chronic Pain and Dysfunction of the Lateral Knee - Basketball

Dawn Andrews, Russell T. Baker, James M. May, University of Idaho, Moscow, ID. (Sponsor: Chantal A. Vella, FACSM)

Email: dpandrews2010@gmail.com

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HISTORY:

A 16-year old female high school basketball player presented with chronic lateral right knee pain of nine months duration and without a reported mechanism of injury. She rated her pain 4 out of 10 on the Numeric Rating Scale (NRS) and rated her function 7 out of 10 on the Patient Specific Functional Scale (PSFS). The patient had previously been diagnosed with Iliotibial Band (ITB) Syndrome and was treated with traditional therapy (e.g., strengthening exercises, myofascial release, corticosteroid injections). She denied any new injury had occurred since her previous diagnosis and reported being otherwise healthy.

PHYSICAL EXAMINATION:

Signs of acute injury were not noted, but palpation revealed tender points over lateral right knee and adductors. Orthopedic tests were negative for ligamentous or cartilage injury at the knee. The slump test was positive, but other neurological testing was unremarkable. A novel posture-based neuromuscular treatment classification system was utilized to evaluate the patient. The exam identified seven (out of 14) dysfunctional postures correlated to an S1 nerve root dysfunction in the system.

DIFFERENTIAL DIAGNOSIS:

1. ITB syndrome
2. Thoracic extensibility disorder
3. Sciatic Nerve Impingement

TEST AND RESULTS:

Not Applicable

FINAL WORKING DIAGNOSIS:

S1 Nerve Root Compression

TREATMENT AND OUTCOMES:

- 1 Patient was treated using a neuromuscular intervention combining passive and active movements with tactile stimulation of the muscles innervated by the S1 nerve root.
2. The initial treatment resulted in a two point decrease in pain.
3. The treatment was repeated the following day and the patient reported a resolution of her pain (0/10 on NRS) and full function (10/10 on PSFS).
4. The patient reported a continued resolution of her complaints at the next two treatment sessions. After the fourth visit, the patient was discharged and remained asymptomatic at one-week follow-up.
5. The postural evaluation revealed a resolution of three of the seven dysfunctional postures between initial evaluation and discharge.



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