

SCIATICA DUE TO INTRINSIC SWELLING FROM HAMSTRING AND QUADRICEPS MUSCLE STRAINS IN A COLLEGIATE ATHLETE

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Introduction/Personal Data/Medical History

An 18 year-old, college freshman female soccer player suffered sciatica due to intrinsic swelling from 2nd degree right hamstring muscle strain on the second day of the preseason. Prior to an afternoon session of practice, she complained of a sciatic type of pain and was evaluated by a certified athletic trainer. The athlete could not pinpoint any mechanism of injury and reported that she favored her right side when pushing off the ground and kicking a ball.

Physical Signs and Symptoms

Burning pain and tingling sensation over the right hamstring was the primary complaint. There was no discoloration, swelling, and/or deformity. The athlete had point tenderness over the right ischial tuberosity, middle muscle belly of the right hamstring and right quadriceps, and sciatic nerve. Both active and passive ROMs of hip extension and flexion, knee extension and flexion were limited due to pain. Resistive ROMs of hip flexion and extension, knee flexion and extension, and plantarflexion was weaker than the uninvolved side. Reflexes of L4 (Patellar reflex) and S1 (Achilles tendon reflex) were diminished. Unilateral Straight Leg Raise (Lasègue) and Bowstring (Cram) tests were positive.

Differential Diagnosis

The first impression was 2nd degree hamstring strain with sciatica. Athlete was referred to see the team orthopedist on the next day.

Results of Diagnostic Imaging

Lumber X-ray and MRI were normal.

Clinical Course

The orthopedist diagnosed sciatica type pain due to intrinsic swelling from hamstring strain. Initial treatments for inflammation and pain controls included icing, electric stimulation, stretching in pain-free range of motion, and anti-inflammatory medications. Effleurage and pétrissage massages were applied after the inflammatory phase. The athlete received passive stretching before, during, and after the practice. A thigh compression wrap was applied while she was practicing with the team. The athlete started therapeutic exercises on the 4th day of post injury. For cardiovascular exercise, a stationary bike, which also provided upper extremity movements, was utilized. Squats and lunges were performed in a pain-free range of motion. Neuromuscular control exercises such as balance training were also included in the rehabilitation program. Approximately two weeks post-injury, she completed the entire practice session. Finally, she fully returned to full competition at week 6.

Deviation from the Expected

This case was unique because this athlete's sciatic signs and symptoms did not come from disc herniation, piriformis syndrome, or any injuries of the lumbopelvic area. Her sciatica occurred secondary to the hamstring and quadriceps muscle strains. Usually, athletes who suffer muscle strains do not have sciatic pain.