Anterior Hip Pathology in a Physically Active Individual
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Background: We present a unique orthopedic hip condition resulting from an Achilles tendon rupture. A 26 year-old male graduate student presented to the Athletic Trainer with left hip dysfunction. The patient has a previous history of a ruptured left Achilles tendon occurring approximately two years ago secondary to performing calf raises with a heavy weight. The patient did not undergo surgical intervention to repair the ruptured Achilles and was instead placed in a 2.5 inch walking boot for 8 months by his orthopedic physician. The patient removed the walking boot approximately 1 year ago, and to improve his physical fitness, the patient began lifting weights vigorously. During lower extremity resistance training exercises, the patient reported tightness and pain in his anterior hip, as well as the feeling of being off center when he lifts. The patient also reported that he would sometimes feel a tingling sensation down his leg. Physical examination did not reveal any swelling or gross abnormal deformities in the lower extremities. Mild atrophy could be seen in the left leg and postural inspection revealed hyperkyphosis and hyperlordosis. AROM goniometric measurements were WNL along with PROM end feels. The patient did report a feeling of increased pressure and a pinching during active and passive motion testing of the hips. AROM and PROM testing were also performed on the ankles. AROM goniometric measurements were WNL for the right ankle; however, the left ankle measured 0° of AROM dorsiflexion and 3° PROM dorsiflexion. RROM elicited mild weakness with left hip external rotation. The long sit test elicited an apparent leg length discrepancy of approximately two inches. The patient appeared otherwise healthy and strong.

Differential Diagnosis: Iliofermoral ligament sprain, lumbar disc degeneration, stress fracture of the femoral head and/or neck, anterior labrum tear, piriformis syndrome, raised femoral head, and muscular tightness of the hip external rotators

Treatment: The patient was not referred for physician evaluation and radiographs because of lack of health insurance. The clinical impression of the Athletic Trainer was a raised femoral head secondary to tight hip external rotators. The patient began rehabilitation program consisting of Maitland’s grade IV anterior to posterior joint mobilizations for the hip, posterior joint mobilizations for the ankle, low-load long-duration static stretching to ease the pressure from the tight hip musculature and Achilles tendon, and left side lower extremity strengthening exercises to reduce muscular atrophy. Following each rehabilitation session, the patient reported immediate alleviation of the pain he was experiencing. The patient is in the final stages of his rehabilitation program and the prognosis for a full recovery is excellent.

Uniqueness: Achilles tendon ruptures are common injuries seen in middle aged “weekend warrior” males. This case is unique because not only did this patient suffer an Achilles tendon rupture in his mid twenties, but was not treated surgically by his physician and was placed in a walking boot for 8 months despite his physical activity level. The patient developed associated compensatory
problems as a result of extended immobilization and the return to aggressive physical activity. **Conclusions:** Patients who are immobilized for an extended period of time and are not provided with appropriate progressive rehabilitation are susceptible to secondary injuries. Clinicians should educate their patients following immobilization about the importance of adhering to rehabilitation programs stressing the phases of healing. The early detection of the hip dysfunction potentially prevented enduring degenerative changes which stemmed from improper foot biomechanics as a direct result of a lack of dorsiflexion which lead to compensatory gait abnormalities. **Word Count:** 582