Background: The patient is a nineteen year-old female collegiate soccer player with complaints of insidious onset low back pain. She presented after a conditioning session reporting intense left sacroiliac joint (SIJ) and buttock pain with associated tingling into the left lower extremity (LE). She denied past medical history of dysfunction. Initial evaluation by an ATC revealed no deformity. However, sharp pain was noted over the left SIJ with radiating pain into the left buttock upon palpation. Spasm of the left piriformis and gluteal muscles was also noted. The patient demonstrated decreased sensation in the distal left LE and reflexes were hyper-reflexive. Passive straight leg raise testing was positive for pain during the initial 30 degrees of hip flexion. The patient reported a severe increase in LE symptomology following administration of this test. As a result of her initial evaluation, the patient was referred to an orthopedist for further examination. 

Differential Diagnosis: Differential diagnosis in this patient included ruling out piriformis syndrome, lumbar disc herniation, sciatica, SIJ dysfunction, lumbar spine pathology and hip pathology. 

Treatment: The orthopedist ordered plain radiographs and lumbar spine MRI to rule out disc herniation. All diagnostic testing was negative and the patient was instructed to discontinue soccer activity, while continuing an aggressive stretching program. The patient reported significant relief in symptoms over the next several months and was allowed to initiate a summer conditioning program. Intense out-of-season training resulted in a recurrence of symptoms. The patient was referred to a neurologist who again ruled out disc herniation and prescribed anti-inflammatory medications to reduce sciatic nerve irritation. Medication failed to alter the patient’s symptoms and she was referred to a spine specialist two months later. A pelvic MRI was ordered to rule out pelvic and SIJ dysfunction. More than six months after initial onset, the patient continued to complain of debilitating lumbar spine and SIJ pain. At this time, the patient was referred to a pain management specialist. This physician’s examination of the patient resulted in a diagnosis of SIJ arthrosis. Treatment included nerve block injections of the left L5-S2 nerve roots and superior gluteal nerve branches to decrease pain and muscle spasm. Fluoroscopic-guided diagnostic left intra-articular SIJ block with steroid was performed, immediately relieving LE symptoms. The physician recommended continued stretching and manual therapy for the left SIJ. The patient was allowed to resume athletic activity as tolerated. A second SIJ nerve block was performed one month later and resulted in significant relief of the patient's symptoms. The patient returned to the pain management clinic two months after the conclusion of the soccer season for a third SIJ injection and sciatic nerve block. When no relief was reported following this third injection procedure, radio frequency ablation (RFA) of the left L4-L5 and S1-S3 nerve root branches was performed. Approximately one month following the RFA procedure, the patient was completely symptom-free. 

Uniqueness: This case is unique in that, initial presentation implicated lumbar spine disc pathology, sciatica or piriformis syndrome, however all diagnostic tests were negative. Thorough clinical examination and diagnostic work-up determined the pathology was in the SIJ. Pain referral into the LE due to isolated SIJ injury is unusual, therefore, making diagnosis difficult. This case demonstrates the importance of ATC having multiple referral sources available to properly diagnose and treat chronic lumbar spine and pelvic pain resistant to conservative care. Finally, the use of RFA to treat SIJ dysfunction is also unique. 

Conclusions: The patient returned to unlimited functional activity for her senior season of collegiate soccer, approximately sixteen months after initial onset. To date, she reports no recurrence of spine or SIJ dysfunction.