Background: A 21-year-old female soccer player reported pain in her low back after warm up for a regular season game. The pain was mild and persisted for 2 days until during practice she had an acute onset of sharp low back pain on her right side during general play of soccer. Pain was found between the PIIS and sacrum. The right ASIS was higher while the contralateral side was lower. The athletic trainer found a positive Faber’s test, negative straight leg raise, and negative valsava. There was pain in the low back with over stretching of the hip flexor on the right side and pain with single leg stance bilaterally, with more pain while standing on the left leg than the right. The athletic trainer also found a positive stork standing test on the right side and a negative result on the left side. There was also a negative sacral compression. A week prior to the injury, the athlete was treated for a left leg hamstring strain, which had completely resolved prior to the onset of low back pain. She has no previous history of back injuries.  

Differential Diagnosis: SI Joint dysfunction, SI joint sprain, biomechanical abnormality.  

Treatment: After she was evaluated by the team physician, X-rays, MRI, bone scan, and CT scan were ordered . The confirmed diagnosis was a sacral stress fracture. Initially the athlete was restricted to a program which avoided stress to the SI joint which included using crutches for non-weight bearing on the right side. Modality treatments included high volt and premod electrical stimulation while simultaneously applying ice atop the area to address pain management. She was prescribed an anti-inflammatory drug and pain medication for sleeping at night. Other components of rehabilitation, once pain was reduced, involved the use of, hip realignment utilizing muscle energy, and pelvic neutral back stabilization exercises as well as incorporating a gentle stretching program. Three weeks post diagnosis the athlete is able to perform aquatic jogging, pelvic tilts, core balance activities on swiss ball, alternating leg lifts in pelvic neutral, and more specific stretching exercises for the hamstrings, piriformis, and hip flexors, bilaterally. In addition to these exercises therapeutic the aforementioned modalities were applied to control pain and muscle soreness following each treatment session. Uniqueness: The symptoms that were presented by the athlete did not match those typically associated with sacral stress fractures, which often mimic sciatica and present as chronic pain rather than acute. Moreover, the condition is often seen more often in runners with a history of amenorrhea or increased training.  

Conclusions: When an athlete reports lower right back pain, particularly if it is non-specific and without incident, an athletic trainer should consider the possibility of a sacral stress fracture. The sacrum is a very porous bone which can be affected by abnormal stressors. Female athletes, particularly those who train at a high level, are at risk for pelvic and sacral stress fractures due to the constant stress that can be placed on these areas. Therefore, if one is suspected referral for an MRI is warranted. When treating an athlete with a sacral stress fracture non-weight bearing should be administered immediately with restoration of ambulation based upon pain free gait. Currently there are few case reports written, or protocols on sacral stress fractures and each person needs to have special considerations that focus on their individual needs. Word Count: 561