Introduction

Back injuries are very common injuries among all athletes and can have many different origins and presentations depending on the athlete and sport. Disc herniations can be a common injury for the regular population as well; often seen during lifting and rotating motions. An 18-year-old male, collegiate football defensive lineman, has gone non-operatively with the help of three epidural steroid injections (ESI’s). These were used on pain that the athlete felt during treatment. The first two injections failed. The athlete was able to remove the weight of his back, which allowed him to get up safely from the squat. Following this, he felt a sharp, radiating pain in his lower back, but, said he took ibuprofen to relieve some pain. He claimed that he was not able to work out the following week due to pain. The pain began to minimize about a week after injury, which left the athlete feeling most of his pain in the mornings and with daily tasks such as: putting on socks and boots, running, push-ups, squats, making his bed, etc. The athlete failed to mention his pain during basic training camp due to the possibility of it affecting his chance into The Academy. During his initial evaluation, the athlete was discovered to have point-tenderness over L5/S1, spinal cord and weakness was present in the left leg. Pain was diffuse and was most intense in the left lower back. The athlete reported continuous pain in the left buttock and left leg. The athlete suffered a disc herniation at L5/S1. This is the most common location for herniations as it is at the most mobile level of the lumbar spine due to limited mobility of the spine with region of the lumbar spine due to limited mobility of the spine with sagittal plane motion. According to a study done by Karademir, he found that the most herniations are often found in active athletes who load their spine during their sport and can also be evaluated and a diagnosis could be determined. The MRI revealed a partial disc herniation at L5/S1. A rehabilitation plan with short, and long-term goals were established for the athlete. Athlete was treated conservatively with therapeutic exercises, modalities, and strict stretching. This treatment was designed by the medical staff to increase stability in his lumbar spine by strengthening the abdominal muscles, create space within the thoracic column, and encourage proper posture to create the best environment for healing.

Discussion and Summary

This particular athlete joined the football team with a pre-existing injury from a fall that occurred approximately 1 ½ months before coming to the Academy. During deceleration into a squat, the athlete reports feeling a sharp pain in his lower back, along with numbness down his left leg. He was able to be evaluated and a diagnosis could be determined. The MRI revealed a partial disc herniation at L5/S1. A rehabilitation plan with short, and long-term goals were established for the athlete. Athlete was treated conservatively with therapeutic exercises, modalities, and strict stretching. This treatment was designed by the medical staff to increase stability in his lumbar spine by strengthening the abdominal muscles, create space within the thoracic column, and encourage proper posture to create the best environment for healing.

Abnormal Disc

Rehabilitation and Results

The following decision of vertebro surgical repair of the lumbar vertebral disc, conservative treatment is usually recommended for athletes and often has successful results if the herniation is still intact. This was instigated to lay specialists who otherwise present symptoms of herniation. As an area of endurance and core strength testing determined that this athlete also does not have the core control that he should for his fitness level. Other special testing for this injury was done to determine the extent of the injury. The athlete tested positive when performing the Kemp Test, SLR, and lumbar instability test. This athlete was also tested for their range of flexion in their thoracic spine. Since he was limited in this motion, the medical staff focused their attention once a week to perform a specific exercise that would better show his progress. The athlete was instructed to lay specialists with his knees relaxed at 90/90, taking all stress of the lumbar spine. The athletic trainer then grabbed the athlete’s arms and caused herniations are often put in place that cause pressure on the spinal cord and nerve roots or pathways. These injuries can be located anywhere throughout the spinal column. According to a study done by Karademir, he found that the most common low for this injury is L5/S1 at 54%, followed by L5/S1 with 34% (Karademir 2017).