Cartilage “Blister” of the Lateral Femoral Condyle with a Proximal Tibiofibular Sprain in a College Basketball Athlete

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Abstract

Background: Athlete was an 18 year old male college basketball athlete. Athlete’s past medical history included a bone contusion of the lateral femoral epicondyle of the left knee. In December 2016 the athlete was coming down from a dunk and landed on his left leg a little weird. He had MRI’s and X-rays taken. He then was diagnosed with a bone contusion on the lateral epicondyle of the left knee. In July 2016, athlete reported to the doctor, who performed a complete examination and ordered diagnostic imaging. The show was a bone bruise and was in a casted controlled motion walking boot and used for 6 weeks. He was completely pain free to return to play which was monitored with the participation in basketball practices. Initial evaluation revealed no obvious instability or signs of Iliotibial band issues. Athlete had pain with jumping, squattting, jumping cutting, pivoting and completing some motor skills. Athlete was point tender over and around the fibular head. Full Active ROM and strength with knee flexor and extensor. Athlete’s proximal fibular glide demonstrated instability. Differential Diagnosis: Proximal Tibiofibular joint sprain of the left knee. After rehab to his repairs, the athlete was then scheduled for surgery. While he was under anesthesia, the orthopedic surgeon noticed a small defect on the lateral femoral condyle of the left knee. Treatment: After an initial two months of rehabilitation, the athlete continued to have pain and was referred to an orthopedic surgeon for a second opinion. The physician found that the injection helped decrease his pain of the same day and for that night. However, when he woke up the next morning his pain had returned to normal. The doctor was hoped that addressing the cartilage damage with surgery would remove the athlete’s pain. Athlete was then scheduled for surgery to assess cartilage damage. During the surgery, it was found that the cartilage on the athlete’s femur had “blistered” or “bubbled” away from the bone. There were no lesions in the cartilage, but it was no longer in contact with the underlying bone. The surgery performed will hopefully allow the athlete to participate in sports and rehabilitate faster. The incision was closed and has begun rehabilitation plan. Uniqueness: While osteochondral lesions in the knee are not uncommon, the athlete’s case was. When the physician assessed the cartilage damage, he discovered that the athlete’s cartilage had no lesions. However, the athlete’s cartilage was blistered away from the bone with fluid. Between the cartilage and the femur. Another unique aspect of this case is that the surgery that the doctor performed. The cut a chunk out of the blistered cartilage, drained the fluid and injected platelet rich plasma to help improve healing. He then performed a microfracture technique to stimulate the repair and heal the damaged cartilage. The athlete stated that the injection only helped overnight and that his pain had returned the following morning. After having another MRI, the team physician made an attempt to connect the cartilage of the lateral femoral condyle with a proximal Tibiofibular sprain of the left knee. This case highlighted the diagnosis and treatment of an athlete suffering from a bilateral cartilage of the lateral femoral condyle with a proximal Tibiofibular sprain of the left knee. This case further highlighted an attempt on MRI and unique cases. As the athlete’s treatment, care, and rehabilitation continue we will discover if the initial surgery was enough or if he will need under another surgery.

Case Report

Patient: An 18 year old male college basketball player who sprained his proximal Tibiofibular joint. In addition to this injury, the athlete’s cartilage on his left lateral femoral condyle was blistered off of the underlying bone. The space between the cartilage and the cartilage was filled with fluid and the team doctor believed this is what was causing his pain.

Mechanism of injury: In December 2016 the athlete was coming down a dunk in a game and landed awkwardly on his left leg. He was diagnosed with a bone contusion and put in a non weight bearing boot for 6 weeks but continued to have pain. 18 months later he began to develop lateral knee pain during basic military training. He was then diagnosed with a stress fracture and was restricted in his training for a few days. This did not help and he continued to have pain. The athlete stated that his pain worsened upon participation in basketball practice one day during a sprint. Clinical Examination: Upon re-evaluation swelling was noted and it was found that the athlete had pain with squatting, jumping and cutting. Athlete had full active and passive range of motion with pain at end range flexion-extension. Manual muscle testing was a 5/5 for knee extension and a 4/5 due to pain for knee flexion. He was tender to palpation over and around the fibular head. Valgus stress test, McMurry’s, and Ober’s tests were all negative. A proximal fibular glide demonstrated significant instability.

Radiographic Findings: The athlete had an MRI done which was read by the team physician. He confirmed the proximal tibiofibular sprain and recommended a surgeon to address the athlete’s injury. The athlete stated that the injection only helped overnight and that his pain had returned the following morning. After having another MRI, the team physician made an attempt to connect the cartilage of the lateral femoral condyle with a proximal Tibiofibular sprain of the left knee. This case highlighted the diagnosis and treatment of an athlete suffering from a bilateral cartilage of the lateral femoral condyle with a proximal Tibiofibular sprain of the left knee. This case further highlighted an attempt on MRI and unique cases. As the athlete’s treatment, care, and rehabilitation continue we will discover if the initial surgery was enough or if he will need under another surgery.

Discussion and Summary

Osteochondral lesions are uncommon in sport. A cartilage blister in a healthy 18 year old is. This was a very unique injury. The treatment used by the team physician was also unique in the fact that he did not know what exactly he was treating before he began the surgery or what treatment would be needed. Because this injury was so unique, the physician had to make a judgement call during surgery on how to treat the pathologies. He chose to address the microfracture surgery and inject platelet rich plasma to promote healing. If the athlete continued to have pain after rehabilitation for this injury, they would discuss options to address the tibiofibular sprain.

Conclusion

This case highlighted the process of diagnosing a cartilage “blister” of the lateral femoral condyle. In addition to the diagnosis, it examined the treatment chosen to address the diagnosis. This entire case was very unique and it is unfair that we are not able to follow up with the athlete about his post-surgical progress.

References

[References provided for the article are not included in this text but can be found in the original source.]