Knee Pain in a Collegiate Football Player
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Background: A 20 year-old intercollegiate offensive lineman presented after practice with mild left knee pain secondary to falling on a flexed knee. The patient's medical history is not significant for injuries to the involved knee or surrounding area. Evaluation revealed mild swelling over the patellar region without ecchymosis or deformity. Tenderness to palpation was revealed over the patella. Active and passive ROM testing was full and painful with terminal knee flexion. Ligamentous testing revealed firm end feels with valgus, varus, anterior drawer, and posterior drawer. Meniscal testing did not elicit crepitus or locking sensations. The patient was wrapped with a compression bandage, instructed to follow RICE protocol for the first 48 hours, and report for a follow up visit.

Differential Diagnosis: pre-patellar bursitis, PCL sprain, ACL sprain, MCL sprain, chondral fracture, and meniscal injury. Treatment: The patient returned for the follow up evaluation presenting with increased pain, swelling, and ecchymosis from the proximal tibia to the hip making the anatomical contours around the area undetectable. The patient was discontinued from activity. He received initial conservative treatment encompassing sensory level electrotherapy combined with ice and compression, and was referred to the team physician. The physician’s evaluation revealed continued increase of pain, swelling, and ecchymosis of the proximal extremity, but showed no signs or symptoms associated with infection. The patient was diagnosed with a grade II pre-patellar bursitis and 50 cc of fluid was aspirated from the knee. He was fit for a rehabilitative brace to permit controlled progressive motion and instructed on the use of crutches to perform partial weight barring gait. An MRI was ordered; results indicated an increase of fluid around the knee joint with no structural stability involvement. Management of the condition consisted of controlling pain and inflammation by continued suspension of athletic participation, application of cryotherapy, and sensory level electrotherapy. The patient’s knee brace was also locked in extension to allow the bursa to adequately heal. Over a five week period, the patient was monitored for signs and symptoms of infection. The team physician aspirated the patient’s knee an additional four times (100 cc, 80 cc, 50 cc, and 25 cc) during consecutive follow up visits. During this time, therapeutic exercises were incorporated to improve range of motion and neuromuscular control of the knee. The patient progressed to performing therapeutic exercises to strengthen and improve proprioception of the knee. The patient was cleared by the team physician and returned to athletic activities approximately 5 weeks post injury. The patient’s return to activity did not elicit any pain or apprehension. Uniqueness: Prepatellar bursitis is a common condition associated with athletic participation; however, in this instance, after presenting with a mild case, within two days, the severity of the injury increased drastically as large amounts of fluid was produced. The accumulation and thickening of the fluid within the prepatellar space resulted in increased pressure causing pain,
motion restriction, and discontinuation from activity for five weeks. Additionally, with the severity of ecchymosis, the patient had to be monitored because of the high risk of infection. **Conclusion:** Early diagnosis and treatment of bursitis to limit the progression of the condition was critical in this case. Clinicians should be aware that cases of traumatic bursitis can significantly progress over a short period of time which may restrict a participant’s ability to compete athletically. Cases of traumatic bursitis should be treated appropriately. Specifically, elastic bandages should be applied starting from the most distal aspect of the extremity wrapping to the most proximal aspect to provide support to injured areas and assist in managing the increase of fluid production. **Word Count:** 598