PIGMENTED VILLONODULAR SYNOVITIS IN A 19 YEAR OLD MALE COLLEGIATE FOOTBALL PLAYER

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Background: A 19-year-old male collegiate football player reported to the Athletic Training Room first complaining of tightness inside the left knee with an insidious onset. Patient complained of no pain during rest but felt pain when attempting to completely extend the knee. After attempting to stretch the patient’s quadriceps and hamstrings, we were able to conclude that the patient lacked range of motion with terminal 20 degrees of knee flexion. However, the patient had full range of motion with knee extension. Patient reported severe pain while reaching the terminal part of knee flexion. Manual muscle testing showed full strength in knee flexion and extension along with full strength at the hip. Patient had a pain level of 6/10 when jumping during practice. Patient had a previous history of pigmented villonodular synovitis (PVNS) during his junior year in high school. To test the patient’s ligaments, we performed both Anterior and Posterior Lachman’s along with the Varus and Valgus Tests. Special tests were negative, the patient only had point tenderness in the popliteal fossa and was neurologically intact. Differential Diagnosis: Bone contusion, medial/lateral meniscal tear, PVNS, anterior cruciate ligament sprain, baker’s cyst. Treatment: We referred the patient to his physician, who recommended a magnetic resonance imaging (MRI). MRI results showed villonodular synovitis, a medial femoral condyle contusion and mild patellar tendonitis. Patient was allowed to play as tolerated. Physician instructed the patient that he should receive arthroscopic surgery immediately after the last game of the season. To relieve pain, the patient took non-steroidal anti-inflammatory and iced after every practice. Until surgery, we stretched the patient’s quadriceps and hamstrings to relieve pain before playing. This patient had a very large mass during the first case and had to be opened on the posterior aspect of the knee to remove the mass. During this surgery, the patient received arthroscopic surgery since the mass is smaller than the first one and had no complications. Uniqueness: PVNS is considered a benign proliferative disorder of the synovial tissue even though the pathology has not been classified. PVNS is rare, occurring mostly in the younger population. Loriaut et al reported this injury is estimated to be 1.8 per million in the general population. In most cases of PVNS, the physician will perform either a radiograph or MRI in order to successfully diagnose the patient. PVNS occurs most in young adults and the symptoms are often non-specific. PVNS can further be categorized into two sections; diffuse and localized. Although this is the patient’s second case of PVNS, a study showed that the reoccurrence rate could be reduced from 38% to 1% with repeated surgeries. Conclusion: PVNS can be very difficult to diagnose using only clinical skills. In some cases, the mass can be palpated within the joint, but this is not always true. To successfully diagnose this injury, Athletic Trainers need to recognize the signs and symptoms along with the history of the patient. Patients with this injury should always be referred to a physician for the appropriate care. Secondary to patient history, our diagnosis was apparent, but this is not the case for some patients. Although some athletes are able to push through this injury, surgery is usually required in order to successfully treat this injury. Relevant Evidence: PVNS is rare, but an injury AT’s are capable of seeing. Within this particular case, early diagnosis and referral to a physician allowed for a shorter recovery time after surgery. If the mass is caught early enough, arthroscopic surgery can be very beneficial for the patient. Word Count: 586