Distal Avulsion of the Medial Collateral Ligament
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Background: A 21 year old male division III collegiate football player suffered a medial knee injury resulting from a valgus load caused by contact with another player. The lineman planted his foot on the ground while another player fell and rolled into his leg. An on-field evaluation revealed that the patient recalled hearing a pop, complained of pressure inside of his knee and had immediate swelling over the medial collateral ligament. The patient also presented with a positive valgus stress test at both 30 degrees and 0 degrees. As the patient was being assisted off of the field, he stated that his knee felt unstable and that if he were to apply pressure it would give out. Initially on the field, the patient was assisted to the sideline where he elevated his leg and iced his knee for 20 minutes until the end of practice. After practice, the patient was escorted to the athletic training facility for further evaluation. He presented with point tenderness over the MCL, a positive valgus stress test, and an inconclusive Lachman’s test due to guarding. He was then placed in an ace wrap and a knee immobilizer and was given crutches and referred for an MRI. Differential Diagnosis: ACL rupture, PCL rupture, MCL rupture, medial Meniscus tear. Treatment: The MRI results revealed a distal avulsion of the medial collateral ligament and a partial tear to the posterior cruciate ligament. Two weeks following the injury, the patient underwent surgery in which the surgeon performed an open reduction internal fixation of the MCL. During surgery it was found that the MCL avulsed a portion of the medial meniscus when it was injured. Therefore, the surgeon also performed a posterior medial corner repair of the meniscus. After surgery, the patient was placed in a locked hinge knee brace at 45° of knee flexion for the week following surgery and was non-weight bearing. After the first two weeks, the patient was cleared by the surgeon to begin rehabilitation exercises in the hinge knee brace between 30 degrees and 90 degrees of knee flexion. He began performing straight leg raises, heel digs, calf raises, and leg extensions within the allowed ranges of motion. The patient will continue rehabilitation as per the physician’s plan of care. Uniqueness: A distal avulsion of the MCL is a rare pathology, occurring in 0.24 out of every 1,000 people in the United States per year. It is also fairly uncommon for an MCL injury to require surgical repair because most MCL ruptures occur mid-substance of the ligament allowing the ligament to heal easily. In this case, the patients MCL avulsed off its distal attachment and recoiled proximally upon injury, creating a severe instability to the knee that warranted surgical repair. Conclusion: On the first day of preseason football practice with full pads, the patient was participating in blocking drills when another player fell into his leg applying a valgus load which caused his MCL to avulse from its insertion point on the tibia. The patient successfully underwent surgery in which the damaged structures were repaired and he is currently undergoing post-operative rehabilitation. His estimated time of recovery is between three and four months given that he completes rehabilitation without any complications. Word Count: 556