Patellar Subluxation with Patellar Chondral Defect  
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**Background:** The Patient is a 21 year old male who participates in collegiate track and field’s hammer and javelin throwing events. While throwing the hammer, his foot stuck in the ground as his upper body continued to twist during the spinning technique used in his event. He reported feeling a pop and having severe pain in his anterior knee at the time of injury. A physical exam revealed swelling and discoloration around the knee. The patient was point tender over the patella, medial and lateral femoral condyles and epicondyles, as well as the tibial plateaus. He was also point tender over the MCL, LCL, medial patellofemoral ligament, and the patellar tendon. Range of motion was limited in both flexion and extension, while strength testing was not done due to the patient's severe pain level. The Brush, Sweep and patellar apprehension tests were all positive for swelling, and pain with patellar movement. Varus and Valgus tests were both positive for pain with no laxity. An MRI showed an osteochondral defect that was approximately 50% of the posterior patella’s articulating surface. The patient was diagnosed with a posterior patellar osteochondral defect, and medial patellofemoral ligament tear. The patient received surgery to reattach the osteochondral defect and repair the medial patellofemoral ligament. The defect was so large that it required five pins to secure the articular cartilage to the patella. **Differential Diagnosis:** Patellar fracture due to dynamic overload. Subluxating patella. Femoral chondral defect. Meniscal tear. **Treatment:** The patient was braced in full knee extension and instructed to be non-weight bearing for 2.5 months. The day after surgery the use of a continuous passive motion machine began to help restore full range of motion to the knee. The goal of the first six weeks was to return the knee to full passive extension, and 120° of flexion, as well as reduce pain and swelling. The rehabilitation program up to week 12 focused on increasing mobility to full knee range of motion, improving the quadriceps strength and endurance to 30% of the contralateral side, improving the hamstrings strength to 20% of the contralateral side, and starting functional activities. From weeks 12-26 the patient's goals were to reach full non-painful range of motion, and have the strength of his injured leg be at least 80% of the strength of the contralateral leg. From week 26 on the goals of the patient's rehabilitation have been to get him to completely return to his normal activities. Modalities such as electric stimulation, and cryotherapy were used to reduce pain, along with compression to reduce swelling throughout his rehabilitative process. **Uniqueness:** This patient sustained a rare grade IV chondral lesion to his posterior patella during the hammer throw. The patient’s lesion was 2-3 cm from top to bottom and almost traversed the entire width of the patella. **Conclusion:** This patient suffered from the rarest type of osteochondral defect from a mechanism often seen with ACL and meniscal injuries. A quick surgical intervention and inclusive rehabilitative process has allowed him to quickly progress through his rehabilitative process. The study of this case demonstrates the need for understanding the possible complications that can occur with a patella dislocation. An injury of this magnitude also illustrates the need to modify comprehensive rehabilitation procedures based on these complications. **Relevant Evidence:** The patient followed a protocol set forth in the Journal of Physical Therapy for his rehabilitation, which was modified based on his meeting of goal criteria. **Word Count:** 591