Background: A 19 year old female collegiate soccer player, with no prior history of injury, complained of a gradual onset of medial knee pain while participating in soccer practice during the fall season of 2007. No specific mechanism of injury (MOI) could be recalled, but she reported increased knee pain with weight bearing activities and an occasional locking sensation that had become progressively worse while continuing to participate over several weeks. There was point tenderness on the medial joint line and medial aspect of the patella, mild effusion on the medial side, quadriceps atrophy, and a loss of 5 degrees of active extension. Ligamentous testing was unremarkable, but increased pain with McMurray’s testing and deep squats was noted. Differential Diagnosis: Meniscal tear, osteochondritis dissecans, patellofemoral pain syndrome, chondromalacia. Treatment: The athlete was referred to the team physician who was suspicious of a meniscal pathology and ordered x-ray and magnetic resonance imaging (MRI). The x-rays were unremarkable. The MRI did not indicate a meniscal tear but showed focal edema in the medial femoral condyle with adjacent edema within the articular cartilage; leading to the diagnosis of a type II osteochondral defect of the medial femoral condyle. The athlete finished the entire 2007 soccer season with conservative management, but due to knee pain and swelling, was limited from participating in most agility and sprinting drills. In January 2008 she had microfracture surgery that involved debriding the area and perforating the subchondral bone to help form a fibrin clot resulting in a fibrocartilage formation over the defect. Post-surgically the athlete was non-weight bearing for 8 weeks. Initial treatment involved continuous passive motion, ice, electrical stimulation, quadriceps strengthening exercises. Non-weight bearing cardiovascular fitness and low intensity open chain exercises were also permitted. At eight weeks she began gait training as well as other closed chain exercises to improve quadriceps, hamstring, hip, and gastrocnemius strength. She began running at 4 months post-operatively, and was slowly progressed to plyometric, agility, and functional exercises as tolerated. The athlete returned to participation seven months post-operatively in a summer league and participated fully in the fall 2008 collegiate season. Throughout the duration of the soccer season she still complained of some medial knee pain but her participation was not limited. A follow up MRI was done spring 2009 which showed evidence of continued healing occurring over the medial femoral condyle. Uniqueness: Osteochondral defects are usually the result of a traumatic compressive or shear force that leads to a sudden onset of pain and disability. Additionally, osteochondral defects are often associated with other structural damage, and rarely occur in isolation. In this athlete’s situation, an atypical and unique case pattern presented itself in two ways in that the onset of pain and disability was gradual and occurred without a known MOI, and there was no other associated tissue damage in the affected knee, a finding supported by the MRI. Conclusion: It is important for athletic trainers to recognize that a typical case pattern may not always present itself in the clinical setting, and that the evaluation must recognize key features that don’t follow a particular pattern. In this instance, there were three features that suggested an isolated meniscal tear as opposed to an osteochondral lesion: locking and medial joint line pain, mild effusion, and a lack of other structural damage. There were also two key features of a typical osteochondral lesion that were missing: an acute MOI, and the presence of other structural damage. This case displayed an atypical case pattern for osteochondral lesions. Word Count: 584