Osteoid Osteoma in a Female D1 Soccer Player
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Background: A nineteen year old, female division 1 soccer player complained of shoulder pain on September 13, 2014 that started the night before. Athlete had no known mechanism or history of shoulder injury. Athlete had pain actively raising her arm above 90 degrees. Passive range of motion was full and pain free. Athlete was tender on the proximal lateral humerus. Athlete had pain at night and would notice it when she laid on the involved side. Differential Diagnosis: Possible diagnoses included contusion, rotator cuff strain, impingement and biceps tendonitis. Treatment: Shoulder pain did not inhibit athlete from playing due to uninvolvement of limb in patient’s sport. Athlete took part in a shoulder rehab program focusing on scapular strength and posture along with rotator cuff strengthening. When no improvements of symptoms were seen, the athlete saw the team physician five days later. The physician ordered for radiograph imaging to be taken. Four days after the appointment, radiographs were taken in the AP and transthoracic views. Radiographs revealed a lucent lesion in the mid shaft of the right humerus that was extracortical. It was believed to be a possible osteoid osteoma and a CT scan was suggested. Athlete began taking a non-steroidal anti-inflammatory drug. Two weeks after the initial appointment, the athlete had a follow up appointment with the physician. Treatment plan included continuing NSAIDs and not getting additional imaging due to patient goals and effectiveness of ibuprofen. Athlete continued NSAIDs until pain went away. Athlete is now completely pain free with no other symptoms or side effects from treatment. Uniqueness: This case is very unique due to the location of the tumor and the gender of the athlete. Osteoid osteoma makes up 2.6% of all bone tumors and 11% of all benign bone tumors (Katz et al., 1997). There is a 3:1 to 4:1 male to female ratio of cases. Over 50% of cases occur in the femur and tibia with another 30% occurring in the spine, foot and hand. The humerus is considered to be an atypical location for osteoid osteoma (Chai et al., 2010). One study that looked at 803 cases of osteoid osteoma found that only 13 cases presented in the proximal humerus (Rouhani et al., 2012). Conclusion: In mid September of 2014, the athlete had insidious onset of right shoulder pain on the lateral mid shaft of the humerus with no known mechanism or history of shoulder pain. After conservative rehab and treatment were unsuccessful, radiographs revealed an osteoid osteoma in the mid shaft of the humerus. Athlete saw a reduction of symptoms soon after starting NSAIDS 3x a day and needed no further interventions. This patient had a rapid reduction of symptoms after onset due to the referral and imaging after failed conservative rehab. This case is important because it exemplifies how constant re-evaluation as well as expanding your differential diagnoses should be done if the patient is not responding to initial treatment. Relevant Evidence: Most cases of osteoid osteoma need minimally invasive surgical interventions to remove the lesion (Cohen et al., 1983). The average period of 2 to 3 years abolishes the symptoms in most patients with an osteoid osteoma (Ilyas et al., 2002). There is no published case of an osteoid osteoma in the humeral shaft of a female, let alone a female Division 1 athlete. Word Count: 569