AN ISOLATED NON-TRAUMATIC FIRST RIB FRACTURE IN A COLLEGIATE BASEBALL PLAYER
Hummel, CH: Ithaca College, Ithaca, NY

The objective of this case presentation is to present the unique case of an isolated non-traumatic first rib fracture in a non-pitching baseball player. A 19-year-old male Division III 2nd baseman initially presented with point tenderness at the right pectoralis major insertion at the mid-sternum level following a clean during a team lifting session. On further examination, the athlete was found to have full strength and range of motion. The initial treatment consisted of ice for pain. Prior to each subsequent practice, treatment consisted of heat and pre-modulated electrical stimulation followed by a stretch to the chest and shoulder musculature. The athlete had no limitation or significant complaints until day 24, when he complained of right axilla soreness. Approximately twenty minutes into practice that day, he felt a sharp pain in the axillary region following a single throw (approximately the 30th throw of the day) during the team’s warm-up throwing drills. On physical examination, the athlete complained of extreme pain in the right axillary region, which increased with all head and neck movements and while taking deep breaths. He denied any weakness, numbness or tingling in either extremity. Compression of the scapula and clavicle significantly increased his pain. He was immediately referred to the team physician for evaluation. Differential diagnosis included glenohumeral dislocation, rotator cuff tear, clavicular fracture, pectoralis major tear, humeral fracture, and scapular fracture. An x-ray revealed a fracture to the right first rib. It was determined by the medical staff to progress in a similar fashion to stress fracture rehabilitation. The athlete rested for three weeks and was pain free at day 10. He began throwing and swinging at day 22 and was back to full participation at day 36. Isolated rib fractures are rare, but even more unusual are 1st rib fractures in non-pitchers. Rib fractures have been seen in other sports more frequently, such as wrestling, crew, and football. Questions remain as to the etiology of these first rib fractures and how best to treat them. Until the mechanism of injury has been identified, the most likely candidate is muscle/tendon induced stress at the bony insertion. It seems that this type of isolated fracture progresses much like that of stress fractures found more commonly in the lower leg. The problem then becomes how to best functionally progress the athlete with this uncommon type of fracture. Key Words: First rib injury, Fracture, Non-trauma