Abdominal Injury In A Male Division I Ice Hockey Player

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Background: A 21 y/o male ice hockey player was participating in a regular season game and while returning to the bench for a shift change, was blind-sided on the left side by an opposing player. The athlete left the ice under his own power but immediately reported severe pain in his left upper quadrant. The athlete reported no LOC and had no complaints of dizziness, disorientation, or memory loss; he complained of mild facial and neck pain which improved quickly. Upon evaluation, the athlete appeared pale and had superficial abrasions on the left side of his face. Initial blood pressure in supine was 104/60 which increased to between 110-118/76-82 over the next 15 minutes, while pulse was 68 bpm which remained between 60-70 bpm during the serial checks. Upon abdominal evaluation there was no obvious deformity or rigidity. Bowel sounds were quiet but present and abdominal tenderness was limited to the left upper quadrant. Upon percussion the spleen seemed to be enlarged projecting to the costal margin.

Differential Diagnosis: Internal organ contusion; internal organ laceration; rib fracture; rib contusion. Treatment: The athlete was transported via ambulance to the local hospital. A precautionary IV was started during transport and vitals remained WNL. A CT scan of the abdominal region was ordered and revealed splenic enlargement and bleeding causing free fluid in the abdominal cavity as well as enlarged lymph nodes. Enlarged lymph nodes and spleen were suggestive of an infectious response, which was determined through blood work to be a mononucleosis infection. The final diagnosis was a grade III splenic laceration resulting in a 25% devascularization of the splenic parenchyma, secondary to infectious mononucleosis. An immediate splenic artery angiogram and splenic artery embolization were ordered. The surgeon carried out the embolization through the right common femoral artery with the puncture site in the right groin. The athlete remained in post surgical ICU for 48 hours before being moved to a general care floor for another two days. Discharge orders were given on the fourth day post operative to release the athlete to the university health services where he remained for one day. He was released with orders to follow up at the trauma clinic in two weeks and was instructed to avoid contact sports. At 2 weeks s/p the athlete was instructed to refrain from physical activity until 4 weeks had passed from onset of symptoms and blood work indicated that the mononucleosis infection had subsided. Uniqueness: Splenic injuries in ice hockey are uncommon and are primarily seen in automobile accidents, equestrian, or aerial sports. Following the injury, the athlete did not present with weak pulse, nausea, dizziness, abdominal rigidity, Kehr’s sign or other signs of abdominal trauma. Also, although the athlete was suffering from a case of mononucleosis severe enough to cause splenic and lymph node enlargement, he presented with no signs or symptoms prior to the injury. Mononucleosis is generally self limiting and individuals are typically unable to withstand intense physical exertion due to extreme fatigue, fever, weakness, and other symptoms. This athlete, however, had no complaints or impaired performance prior to the injury. Conclusion: The undiagnosed mononucleosis infection was determined to be the cause of the enlarged spleen predisposing the athlete to rupture. Following the injury, appropriate evaluation and diagnosis led to a quick and successful treatment. The athlete slowly returned to activity and was able to return to non contact skating and biking 4 weeks s/p. Approximately 7 months s/p the athlete has been medically cleared to return to hockey and has no complaints of lingering symptoms. Word Count: 590