Visceral Trauma in a High School Football Player
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Background: A 16 year old male high school football running back was participating in an early season varsity game. While completing a play, he was hit anteriorly and posteriorly by two opponents simultaneously. He continued to play for the remainder of the series, but then immediately reported to the sidelines complaining of bilateral weakness upper abdominal and mid-thoracic pain, dyspnea, a tingling sensation throughout his body, and light headedness without dizziness, headache, or disorientation. The patient's previous medical history is not significant for injuries to the involved area. Initial sideline examination revealed palpable tenderness over the left mid thoracic area, left ribs 8-10, the sternum, and upper left quadrant and umbilical region of the abdomen with slight rebound tenderness, and bilateral weak grip strength during manual muscle testing. Within 5-10 minutes the patient’s skin tone became palor, his eyes glossed over, and he reported feeling cold with increased nausea. The patient remained orientated despite the deterioration of his condition. After consulting with his father who is also a physician, the patient was transported to the nearest emergency department via ambulance for immediate treatment. Differential Diagnosis: internal organ derangement, bowel rupture, urinary contusion, pulmonary contusion, solar plexus contusion, rib fracture, abdominal wall contusion, pneumothorax, and sternal contusion. Treatment: Following arrival to the emergency department, the attending physician ordered plain film radiographs of the chest, an abdominal CT scan, and a series of blood tests. Results of diagnostic testing concluded unremarkable radiographs, a negative intra-abdominal CT scan, and hemodynamically stable blood tests. A final diagnosis of a mild spleen contusion was made and the patient was released. Initial treatment involved refraining from physical activity and cryotherapy. After one week and the cessation of pain, the patient was cleared by his pediatrician to begin cardiovascular exercise as tolerated. The patient gradually increased his activity level over the course of the next week and was subsequently cleared to begin sport specific activities with the requirement of a flack jacket / rib pad to protect the injured area. Once the patient was able to participate in light practice with no pain or increase of symptoms, the athlete was cleared for unrestricted return to impact sports while continuing to wear protective padding for the remainder of the season as long as there was no reoccurrence of any symptoms. Uniqueness: This case is unique because an injury to a lymphatic organ is an uncommon athletic injury, the injury was not associated with a splenomegaly, the trauma sustained by the patient would suggest a more severe injury, and the signs and symptoms at presentation and the initial physical examination indicated a potentially life threatening injury. Finally, with a splenic injury, it would be expected that an individual would miss four weeks of physical activity, but this athlete was able to return to full contact in only two weeks. Conclusion: The signs and symptoms of mild trauma to a visceral organ (e.g. mild contusion) can be similar to that of a rupture. When suspecting an internal injury, it is critical to know how identify the nature of the injury, as well as when to refer the patient for advanced care.

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