CASE REPORT

A Case of Missed Thoracic Fracture Masquerading as Intra-Abdominal Injury

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ABSTRACT

Altered mental status in the setting of polytrauma poses a challenge to the emergency team managing the patient. The tendency to miss positive findings in these circumstances increases several folds due to multiple factors such as depressed mental status/intoxication, presence of distracting injuries and concurrent life-threatening injuries that require more urgent attention. In view of this, NEXUS (National Emergency X-Radiography Utilization Study) criteria of clearing the cervical spine was adopted and used worldwide. Consensus on clearance of the
other parts of spine is still lacking. This case reports highlights the findings in a 18-yrs-old male who presented with altered mental status, facial pain and abrasion, following a motor vehicle accident. Facial bone fracture was diagnosed and he was discharged. Three days later, he came with severe epigastric pain. Tenderness on palpation was noted at the spine and Computed Tomography (CT) scan was done. Multiple thoracic vertebra fractures were seen. As a conclusion, thorough primary and secondary survey should be done in patients who have regained full consciousness prior to discharge in order to avoid overlooking other serious injuries.

Keywords: altered, CT scan, fracture, mental status, thoracic vertebra
was able to self ambulate prior to discharge.

**DISCUSSION**

There are few case reports describing thoracic injury presenting as abdominal pain. Xiong et al. (2001) described a young lady who presented with abdominal pain and found to have a thoracolumbar fracture. We need to bear in mind that abdominal pain is an atypical presentation of thoracic injury. This should be suspected in patients complaining of abdominal pain where intra-abdominal injury has been ruled out. The presentation of thoracic injury was similar to a previous case report in which radiculopathic pain resulted from nerve root compression (Xiong et al. 2001). Nerve root compression can produce poorly localized pain which may present as a non specific abdominal pain. Pain may be intermittent or constant and is usually described as electric, burning, or shooting in nature. As a result from dermatomal distribution, any compressing fracture between T7 and L1 can present as referred abdominal pain.

There are number of factors that contribute to delay in diagnosis. Substance intoxication, multiple injuries, altered level of consciousness and two level spinal cord injuries are among factors reported to cause delay in diagnosis (Reid et al. 1987). A trauma patient with concurrent low GCS and persistent complaint of abdominal pain should be suspected to have a possible thoracolumbar fracture if intra-abdominal injury has been ruled out. A screening criteria or tools similar as the NEXUS criteria in cervical spine clearance should be used in order to determine patients that require a CT of the thoracolumbar spine.

**CONCLUSION**

Thoracolumbar spinal injury may easily be missed in a trauma patient with altered mental status and distracting painful injury. Currently, there is no established guideline in ruling out thoracolumbar spine injury such as NEXUS or Canadian CT rule for cervical spine injury. We would advocate a thoracolumbar CT for any abdominal pain following trauma with normal abdomen CT.

**REFERENCES**


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