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Case Report

Management of severe traumatic flexion-distraction injuries in a multisystem trauma patient: A case report

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ABSTRACT

Study design: Case report and relevant literature review.
Objective: To discuss the management of severe flexion-distraction injury of the subaxial cervical spine in a multisystem trauma patient.
Summary of background data: Traumatic cervical spine injury from flexion-distraction injury can cause significant instability requiring extensive instrumentation complicated by vascular and soft tissue injuries.
Methods: The medical record of a patient who suffered traumatic flexion-distraction injury was reviewed for relevant clinical and radiology data. A literature review on the management of traumatic cervical injuries was performed using the *PubMed* database.
Results: We report a case of 21-year-old woman who suffered a C5-C6 flexion-distraction injury. After she underwent anterior cervical discectomy and fusion (ACDF), her care was transferred to the senior author (S.K.) due to the severity of the distraction. The patient returned to the OR the next day and underwent removal of implants at C5 and corpectomy with anterior and posterior instrumentation.
Conclusion: There are many ways to manage a flexion-distraction injury of the cervical spine. In a polytrauma patient, the surgical strategy can become complex. We present a surgical option with an acceptable outcome.

Introduction

Flexion-distraction injuries account for 61% of all subaxial cervical injuries [1]. There are many ways to treat flexion-distraction injuries, including an anterior, posterior, or combination decompression and

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Fig. 1. CT and MRI of cervical spine at presentation. There is a 3 mm retrolisthesis of C5 on C6 with widening of the disk interspace and interspinous distance indicating ligamentous injury. There is facet distraction bilaterally at C5/C6 level indicating instability of cervical spine at this level. Sagittal view of an STIR-weighted image demonstrates extensive ligamentous injury and soft-tissue edema/hematoma with widening of the C5–C6 disk and interspinous space. Small anterior epidural hematoma is also noted at this level.

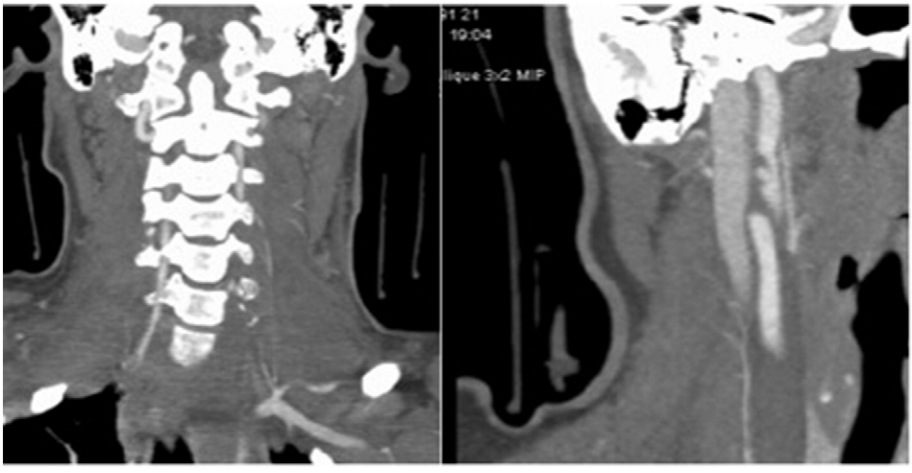

Fig. 2. CTA of the neck demonstrates a fracture of the C6 left transverse process with an associated loss of opacification of the left vertebral artery at the levels of C4–C7 (left). There is an intimal flap with a small 4 mm pseudoaneurysm in the distal right cervical internal carotid artery (right).