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TRAUMATIC ASYMMETRICAL UNILATERAL FACET FRACTURE DISLOCATION OF CERVICOTHORACIC JUNCTION ON TWO CONTIGUOUS VERTEBRAE

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Introduction: Falling from high which mostly occurs at workplace is a common cause of trauma, and represents a high percentage on etiologies of cervical injuries. In order to avoid complications appropriate precautions needs to be taken for diagnosis. Axial loading forces during vertical falls can cause facet dislocation fractures which are often seen in cervical spine rather than the rest of the vertebral column. These fractures may happen bilaterally which are mostly located at same level on two sides. With this case, we present an atypical presentation of bilateral facet dislocation fracture of cervicothoracic junction with asymmetrical involvement of two different levels.

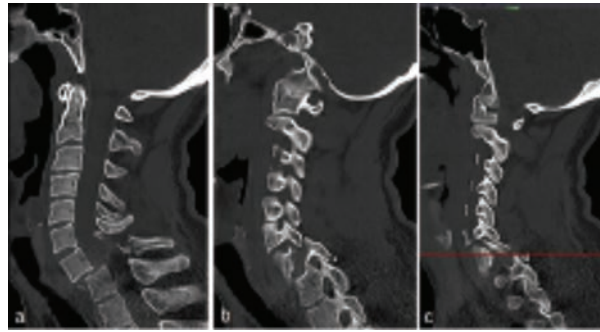
Case presentation: 41-year-old male patient is referred to our emergency clinic after a work accident of a fall from 7-meters high on his right leg. Physical examination showed that he was conscious, totally oriented and had no motor deficit. He had event amnesia and sensitivity on back side of his neck. He also had a minor pain on left arm which had occurred after trauma, but showed no sign of trauma or bruising on inspection. Computerized tomography (CT) scan revealed that he had C7-T1 traumatic dislocation due to right sided C6-7 and left sided C7-T1 unilateral facet fracture dislocations with C7 lamina and right pedicle fractures (Figure 1a-c). The patient was taken to operation room without any delay. During the surgery the tip of right C7 superior facet and left T1 superior facet was removed and cervical realignment was provided. Afterwards right C7 corpus, bilateral C6, T1, T2 transpedicular screws are inserted, C6 and C7 total laminectomy was performed and fusion was achieved with appropriately angled rods for cervical lordosis (Figure 2). The patient was transferred to the ward without neurological deficit.

Conclusion: In this case, the patient had asymmetrical unilateral facet dislocation fractures on two contiguous vertebrae. When the patient fell onto his right leg tumbling over, an asymmetrical impact occurred in the cervical vertebrae and due to the shear force generated by this impact on his C7 vertebrae, this may be the reason for the uneven two-level unilateral facet dislocations.

This case is an example of the importance of careful inspections of CT scans, that could reveal atypical fracture dislocation patterns which may impact the surgical decision-making process.



Figure 1



Preoperative sagittal CT scan a) C7-T1 dislocation on midsagittal plane b) Right C6-7 facet fracture dislocation c) Left C7-T1 facet fracture dislocation

Figure 2



a) Postoperative AP radiogram shows transpedicular instrumentation b) Proper sagittal realignment seen on the postoperative sagittal CT scan.

Keywords: trauma, work accidents, falls, facet dislocation fracture, cervicothoracic junction