Insufficiency sacral fracture-dislocation mimicking suicidal jumper's fracture

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DESCRIPTION

Suicidal jumper's fracture is a rare transverse fracture of the upper sacrum results from fall from height and usually associated with suicidal attempts by jumping.¹ A combination of flexion/extension and shearing force is responsible for this fracture, and the forces propagated through the weakest point of sacrum, the foramina. Neurological deficit involving sacral roots are common. Roy-Camille *et al*¹ first described this fracture in 1985 and classified it into three types (type 1 and 2; flexion fractures, type 3; extension fracture where the upper fragment is vertical and displaced anteroinferiorly in front of the lower

fragment). These injuries are often treated surgically with reduction and spinopelvic fixation.²

Sacral insufficiency or stress fractures are rare cause of low back pain, but their occurrence is probably underestimated due to the lack of specific symptoms.³ We present a very interesting and an unusual series of MRI of a non-traumatic case of insufficiency sacral fracture dislocation mimicking this rare suicidal jumper's fracture, which we believe to be the first case in the literature.

We present a 69-year-old woman who presented with 4-week history of progressive lower back pain and difficulty mobilising independently. Her

Figure 1 Sagittal images with low-signal area in T1-weighted with corresponding high-signal areas in T2-weighted images of the lumbar spine demonstrating sacral fracture dislocation with surrounding bony oedema suggestive of acute presentation. The upper fragment is displaced anteroinferiorly in front of the lower fragment in keeping with Roy-Camille type-3 fracture.

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Figure 2 Axial images with T1-weighted/T2-weighted images demonstrating sacral fracture dislocation.

medical history includes osteoporosis and chronic obstructive pulmonary disease. Prior to this presentation, she mobilised independently unaided. There was no history of any trauma or falls. She had no urinary or bowel symptoms. Her musculoskeletal examination revealed lower lumbar spine tenderness. Her neurological examination revealed objective sensory deficit

L5-S4, motor deficit L5-S1 and diminished S1 reflex. She underwent an MRI scan (figures 1 and 2) which revealed sacral fracture dislocation in keeping with Roy-Camille type 3 injury, this was managed conservatively due to her severe osteoporosis.

Learning points

- ▶ Suicidal jumper's fracture is a transverse upper sacral fracture results from fall from height often treated surgically with spinopelvic fixation.
- ▶ Sacral insufficiency fractures are uncommon cause of lower back pain and their occurrence is probably underestimated due to the lack of specific symptoms.
- ▶ Clinicians may consider sacral insufficiency fracture in the differential diagnosis of low back and pelvic pain, particularly in elderly patients without a history of trauma.

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Competing interests None declared.

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