Pitfalls in Spinal Radiology:
Association between the Hangman’s fracture and an extension teardrop fracture of the body of C2

Comment
The association between an extension teardrop fracture of the body of C2 and a Hangman’s fracture is well described. Both injuries commonly result from a hyperextension force such as may occur when the forehead of an unrestrained occupant of a motor vehicle is thrown forward against the windscreen as a result of a sudden deceleration impact. (In the case of a judicial hanging, a severe distracting force is probably the more important mechanism).

The fact that the Hangman’s fracture is not visible on the initial films is unusual. However because of the known association between an extension teardrop fracture of the body of C2 and the Hangman’s fracture, the presence of one should generate a high index of suspicion for the possible presence of the other. The extension teardrop fracture is unstable in extension, but stable in flexion. The Hangman’s fracture is completely unstable because of the bilateral pedicle fractures. (The extension teardrop fracture of C2 can be thought of as the “little brother” of the Hangman’s fracture).

Reference