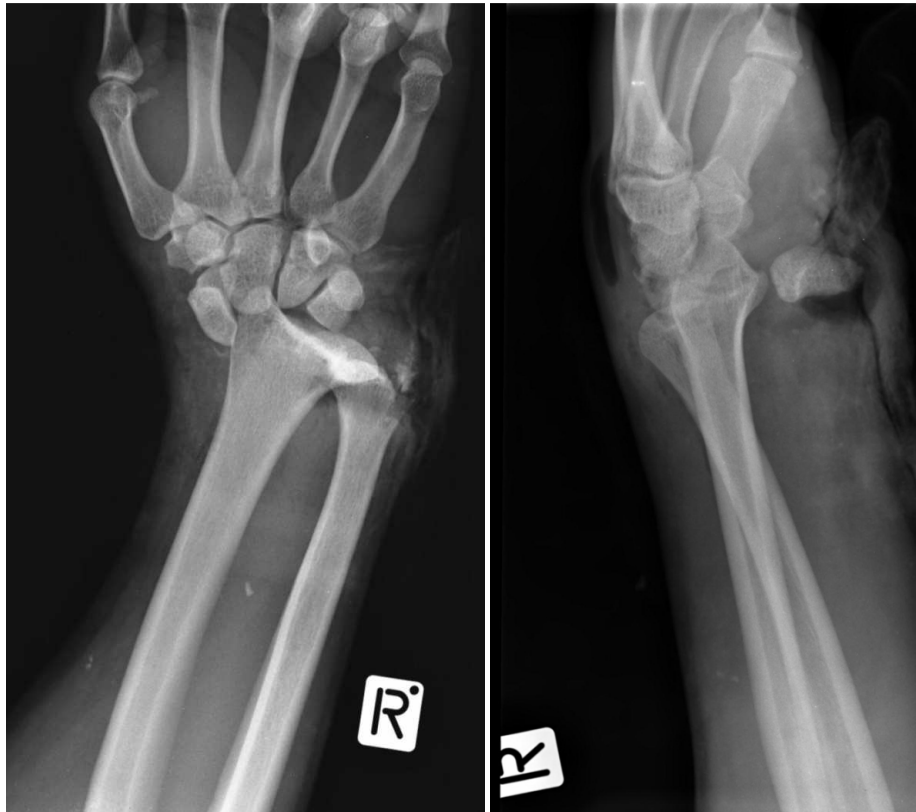


VAQ 2011.2.5 (XR)

A 23 year old man has been brought to your emergency department after a fall onto his outstretched right hand from a height of three metres.



a. Describe and interpret his X-rays (100%)

This radiograph shows a severe limb injury. There is an anterior lunate dislocation as well as associated posteromedial perilunate carpal dislocation. Gas in the soft tissues implies that these injuries are open, with a likely volar/ulnar wound. The distal radioulnar joint is subluxed, and there is a fracture of ulnar styloid. There is considerable risk to multiple structures, mainly the medial and ulnar nerves, the radial and ulnar arteries, and the flexor tendons.

This is an orthopaedic emergency and requires urgent antimicrobials, irrigation, reduction, immobilisation. The 3m fall is concerning for other traumatic injuries which are outside the scope of this question.

XR AP and lateral wrist

Injuries seen

lunate dislocation – anterior, with approx 180 degree rotation seen on lateral view

perilunate dislocation – remaining carpals are displaced dorsally/radially in relation to the articular surface of the radius

Ulnar styloid fracture – comminuted

Distal radioulnar joint is subluxed with the distal ulna displaced dorsally
concerning for associated radial fracture – image up to elbow

Soft tissues

appearance of volar/ulnar wound at least 4cm approximately transverse

gas in soft tissues volar and dorsal to wrist

dressing or skin flap adjacent to wound

in keeping with **open fracture/dislocation**

Additional

small opacities seen over distal forearm may be artefactual
possibly obliterated ulnar styloid or contamination

Severe orthopaedic injury

ideally urgent reduction in theatre, consider temporising reduction in the ED

limb threatening, high chance of short and long term complications

infection

immobility

loss of function

employment and functional implications

Risk to

neurovascular / tendinous structures particularly

median nerve

ulnar nerve

less likely radial nerve

radial artery

ulnar artery

distal perfusion

flexor tendons – FCR/FCU, FDS and FDP to all digits, PL if present

flexor retinaculum