

ONE THIRD of FATALITIES ONE NINTH of SURVIVORS

Spinal fractures in mountain casualties in Snowdonia. All is revealed...

Our ED receives casualties from the mountains of Snowdonia. Spinal injuries are commonly suspected in mountain casualties, and often pose significant handling challenges for mountain rescue personnel, who may be working in precarious locations such as steep scree slopes or small ledges.

However, the incidence and severity of spinal injuries occurring in UK mountain casualties has not been previously studied. We wished to establish the incidence of spinal injuries in mountain casualties presenting to our hospital.

Method

Cases with spinal fractures were identified from our database of mountain casualties brought to our ED Jan 2004–June 2013 following contact with mountain rescue teams and/or RAF Search and Rescue helicopter.

Radiological images/reports and post-mortem reports were examined.

Results

Of 972 casualties during the study period, 780 (80%) were injured rather than ill.

In exactly half, the mechanism of injury was minor, such as a twisted ankle, leaving 390 cases where either the casualty complained of back pain, or the mechanism could potentially cause a spinal injury.

Of this cohort, 57/390 (14.6%) had a confirmed spinal fracture, but 15 of these 57 casualties with spinal fracture(s) died at the scene before help arrived.

Of the 42 live casualties, 9 had potentially unstable fractures, and two of these had neurological injury (one confirmed partial cord injury, one suspected C8 nerve root compression).

49/57 (86%) - including all the fatalities - had fallen from height greater than standing.

Eleven of the fifteen fatalities had spinal cord disruption in addition to bony injury.

Conclusion

- Spinal fractures are quite common in mountain casualties in Snowdonia. However, in casualties found alive, the vast majority are stable: most are transverse process fractures.
- Only 2.3% of casualties with a significant mechanism of injury who were still alive when help arrived had unstable spinal fractures, and only one casualty in the whole 10-year series sustained a definite spinal cord injury.
- The low rate of unstable spinal fractures in survivors of major mishap during mountain pursuits provides some reassurance for rescue personnel should scene logistics or time-critical patient condition preclude full spinal packaging.

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BROKEBACK MOUNTAIN

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