

Eur J Trauma Emerg Surg. 2008 Aug;34(4):378-84. doi: 10.1007/s00068-007-7902-y. Epub 2007 Oct 25.

Displaced Operable Radial Head Fractures : Functional Outcome Correlations.

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Abstract

**BACKGROUND:**

Radial head fractures are common injuries occurring in conjunction with other injuries. We hypothesize that the associated injuries are under-diagnosed, under-treated and are underestimated in terms of their relevance to the patients final functional outcome. We hypothesize a high correlation between the associated injuries and poor functional scores.

**MATERIALS:**

Thirty-nine displaced radial head fractures were clinically, radiologically and functionally assessed at an average of 47 months postoperatively. Demographic data, case notes, and follow up data were statistically analyzed. Pearson's correlation coefficient was performed for the associated injuries and final functional scores.

**RESULTS:**

There were 21 type II and 18 type III radial head fractures. About 52% of Mason type II (11/21) and 94% of the Mason type III (17/18) had associated injuries. The average Mayo Elbow Performance Score for the Mason II fractures was 70 and for the Mason III was 55. There was a strong correlation between the number of associated injuries and functional scores. For Mason II injuries the Pearson correlation coefficient was  $r = -0.994$ , and for the Mason III group,  $r = -0.972$ .

**CONCLUSIONS:**

"Isolated radial head fractures" are rare. All displaced radial head fractures need thorough clinical and radiographic evaluation. The associated injuries are often unappreciated on initial diagnosis and are often under-treated. Associated injuries are strongly correlated with poor functional scores and therefore need to be addressed during surgery.

**KEYWORDS:**