Follow-up of these patients and recruitment of further subjects is continuing. We have set up a prospective randomised trial comparing PHILOS plates with the T2 proximal humeral nail.

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Does the presence of a full thickness rotator cuff tear influence outcome following proximal humeral fractures?

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In spite of proximal humeral fractures being common in the elderly, the influence of a coexistent rotator cuff tear on outcome has, to our knowledge, not been previously investigated. This study evaluates if the presence of a rotator cuff tear in association with a proximal humeral fracture influences prognosis.

Methods: Eighty-five patients treated conservatively for proximal humeral fractures were evaluated prospectively with Ultrasoundography to determine the status of the rotator cuff. All patients were managed in a sling for two weeks followed by a course of physiotherapy based on the Neer regime. Functional outcome was measured using the Constant shoulder score and the Oxford shoulder score, at 3-months and 12-months post injury.

Results: Sixty-six of the 85 patients were female. The fractures were equally distributed for hand dominance. There were 27 patients with an undisplaced fracture, 34 patients with Neer’s Type II fracture and 24 patients with Neer’s Type III and IV fracture. There were 43 patients with full thickness cuff tears and 42 patients with no cuff tear or a partial thickness tear. Full thickness cuff tears were much more frequent in the over 60 year age group, which is consistent with the known increased incidence of cuff tears with increasing age.

The outcome scores at 3 and 12 months showed no statistically significant difference for either the Constant score or the Oxford score with regards to cuff integrity. Analysis of these scores showed no correlation between presence or absence of a full thickness cuff tear and shoulder function.

Conclusion: The results of this study indicate that rotator cuff integrity is not a predictor of shoulder function at 12 months following proximal humeral fracture, as measured by outcome scores. This suggests that there is therefore no clinical indication for routine imaging of the rotator cuff in patients for whom conservative management is the preferred treatment option.

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Intramedullary nailing of the humerus—Revisited

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Humeral shaft fractures occur with a high incidence but the best part is amenable to non-operative treatment. However, due to a not insignificant non-union rate as well as impaired shoulder function the tendency for surgical intervention has increased. Newer implant designs and surgical techniques have led to wider application of the intramedullary nailing technique. However, the indication for the treatment of delayed unions, non-unions and more complex injuries remains controversial.

Between March 2002 and March 2005, we reviewed retrospectively the case notes and radiographs of 70 consecutive patients, treated with intramedullary nailing of their humeri. All procedures were performed by the senior author’s team at our institution, a level three trauma centre. Indications for surgery included primary fixation for unstable, comminuted or segmental fractures, delayed treatment for established non-unions as well as revision surgery for primary fixation failure.

Different intramedullary devices (Acumed, Stryker, DePuy, Synthes, Smith and Nephew, Tarcon) as well as different insertion and fixation techniques (reamed, unreamed, static and dynamic locking as well as compression) were used.

All patients were followed until bony union occurred. Complications, blood loss, time to union and need for further surgery was recorded and compared. The majority of patients were called back for a functional assessment of their upper limb (DASH, Constant, ASESS).

We are presenting a large series of 70 consecutive patients, treated with intramedullary fixation of their humeri. Results, including time to union, functional outcome and complications are discussed with view of modern implant design and surgical technique. The results of our study are compared with the literature and current treatment concepts and indications for surgery provided.

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