

## Is Less More? Assessing the Value of Early Clinical and Radiographic Follow-up for Operative Supracondylar Humerus Fractures

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**Purpose:** Postoperative protocols following surgical management of pediatric supracondylar humerus (SCH) fractures are variable and often based on surgeon preference. The purpose of this study was to determine the value of early clinical and radiographic follow-up.

**Methods:** A retrospective review of prospectively collected consecutive patient data treated for SCH fractures with closed reduction and percutaneous pinning (CRPP) between 2009 and 2014 at a single center was conducted. Unanticipated interventions and previously undiagnosed neuropathies documented at the 1-week postoperative visit were identified. Comparisons of unscheduled visits and complications were made between patients with an initial follow-up visit at 1 week postoperatively (early group) and those first seen at an average 3 weeks postoperatively (late group). Statistical analysis was completed using independent samples t test, nonparametric Mann-Whitney U, chi-square, and Fisher's exact tests.

**Results:** Of 873 patients, 823 (94.3%) were seen early, and 50 (5.7%) were seen late. In the early group, 8 of 823 (1%) had a change in management secondary to clinical findings, and 12 of 823 (1.5%) were noted to have a previously undocumented neuropathy. 754 of 823 (91.6%) had radiographs at the 1-week visit, which resulted in a change in management in 1 patient (0.1%). There was no difference in unscheduled visits (2.9% vs 4%,  $P = 0.66$ ) or in complications identified after 1 week (1.6% vs 0%,  $P > 0.99$ ) between the early and late group. Radiographic parameters were comparable at final follow-up (Bauman's angle  $74.5^\circ$  vs  $73.7^\circ$ ,  $P = 0.40$ ; lateral humeral condylar angle  $40.2^\circ$  vs  $41.2^\circ$ ,  $P = 0.53$ ). Further, altering immobilization at the 1-week visit was not protective against unscheduled visits ( $P = 0.37$ ) or complications ( $P = 0.48$ ). At final follow-up all patients, independent of postoperative protocol or early alteration in management, went on to radiographic union without functional limitation.

**Conclusion:** The 1-week postoperative visit following SCH fracture CRPP rarely leads to alterations in care and does not reduce unscheduled visits or late complications. The findings of this study allow treating physicians to safely avoid radiographic examination and alterations to external immobilization at 1 week postoperatively, effectively reducing cost and time spent in the management of SCH fractures.