

Minimally invasive treatment of Garland type ii and iii supracondylar fractures in children

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The aim of this paper is to present our results from the minimally invasive approach in the treatment of Gartland types II and III supracondylar fractures of the humerus in the pediatric population.

Method: This study included isolated supracondylar fractures types II and III according to the Gartland classification. In the period from January 2011 to December 2012, 112 children were admitted for surgical treatment. Children were aged 4 to 12 years (mean 6.9 years.). All children were treated for 24 hours after sustaining the injury. Our protocol for the treatment of elbow fracture consists of fracture classification based on the anteroposterior and lateral elbow radiographs; closed reduction in the prone position using a specially designed table, with the elbow flexed at 90 degrees, using gravity to help reposition; biplanar x-ray verification of the reduction; fracture stabilization using two sommer pins placed percutaneously through the medial and lateral humeral condyles respectively. After the intervention all elbows were immobilized in a splint cast for 3 weeks.

Results: Patients were followed up for six months. Control radiographs were performed postoperatively, three weeks and two months after the injury. There were no malunions and nonunions. No iatrogenic nerve injuries were registered in our series. We estimated the elbow function using the Mayo elbow performance index. The functional results were excellent and very good according to the Mayo score.

Conclusion: We recommend this one-day surgical approach for the treatment of Gartland type II and III supracondylar fractures.

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