

Suture Anchor Fixation of Medial Epicondyle Fractures

Andrew Bratsman, Brendan Richard Fitzpatrick, Samuel Rice, Gregory Iovanel, Errol Steven Mortimer

Introduction:

Medial epicondyle fractures are a common upper extremity injury seen in the pediatric population. Open screw fixation is the traditional method of surgical treatment for these injuries. Recent studies describe suture anchor fixation, although there is a paucity of outcomes data on this method of fixation. We reviewed pediatric patients who underwent fixation of medial epicondyle fractures either using screws or suture anchors to compare the outcomes and complications between these two techniques. We hypothesized that suture anchor fixation would have similar outcomes with lower rates of symptomatic hardware and reoperation.

Methods:

This is a retrospective review of pediatric patients who underwent operative fixation of medial epicondyle fractures performed at a tertiary academic center. Data was separated into two groups: patients initially treated with screw fixation, and patients initially treated with suture anchor, with complications, reoperation, and final range of motion (ROM) recorded.

Results:

61 patients were identified with initial data collection, of which 46 met inclusion criteria. Surgeries were performed by 3 fellowship-trained pediatric orthopedic surgeons. 21 patients underwent suture anchor fixation and 25 underwent screw fixation.

All patients who underwent suture anchor fixation did not require reoperation. Conversely, 9 patients who underwent screw fixation required a reoperation, the majority being for symptomatic hardware ($p=0.002$). Of the 25 patients who underwent screw fixation, 11 experienced postoperative complications. In addition, in the group of 25 patients who underwent screw fixation, 7 experienced ulnar nerve paresthesias postoperatively which all resolved without intervention compared to 3/21 patients who were fixed with suture anchor ($p=0.31$). There were no significant differences in functional outcomes between the two groups, as assessed by return to full ROM ($p=0.73$).

Conclusion:

Suture anchor fixation is a safe and reliable technique for fixation of pediatric medial epicondyle fractures. This method of fixation may be advantageous when compared to screw fixation, given the lack of potential for complications necessitating reoperation.