

Comparative Effectiveness of Nonoperative Versus Operative Treatment for Completely Displaced Clavicle Shaft Fractures in Children

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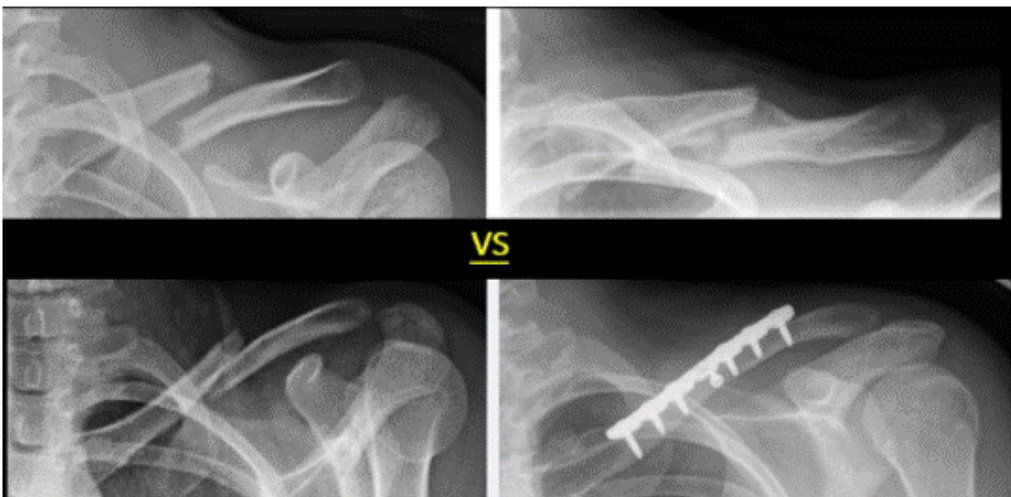
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Purpose: Our aim was to compare the outcomes among children treated nonoperatively versus operatively for completely displaced clavicle fractures.

Methods: A retrospective cohort study of 110 pediatric patients with completely displaced clavicle shaft fractures was undertaken, 55 treated nonoperatively and 55 treated operatively (plate and screws). Outcome measures included time to return to activities, complications, and QuickDASH (an abbreviated version of the Disabilities of the Arm, Shoulder and Hand [DASH] questionnaire) scores. Data were collected via chart review and telemedicine follow-up. Regarding statistical analysis, the Fisher exact test was used for categorical variables and Student two-tailed t test for continuous variables.

Results: The nonoperative group had an average age of 11.6 years (range, 8-14) while the operative group average was 14.3 years (range, 9-17). No significant difference ($P = 0.941$) between the groups was identified regarding average time to return to full unrestricted activities (90.4 days for nonoperative group and 89.7 days for operative group). Significant ($P = 0.031$) differences in refracture rate were detected: 22% (12 of 55) nonoperative patients versus 7% (4 of 55) in the operative group. There was a 27% rate (15 of 55) of plate and screw removal in the operative group. A subset of each group provided QuickDASH data and no significant differences ($P = 0.329$) were noted; 77% (17 of 22) nonoperative patients reported no disability versus 88% (22 of 25) in the operative group.

Conclusion: Prior comparative studies in this age group have documented a faster return to unrestricted activities. Our study did not confirm this. We also found a surprisingly high 22% refracture rate in the nonoperative group and an annoyingly high 27% rate of plate and screw removal in the operative group.



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