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Does it Need Operation in Pediatric Triplane Fracture?
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Introduction/Purpose: The proper treatment of triplane fractures is still controversial. The purpose of this study was to compare the clinical and radiographic outcomes of nonoperative and operative treatments of triplane fractures and to clarify whether operative treatment is always necessary for triplane fractures with displacements of >2 mm.

Methods: Thirty-three patients who were diagnosed as having triplane fractures between January 2007 and January 2014 were reviewed. The first 19 consecutive patients were treated conservatively with closed reduction regardless of age, sex, and fracture severity (nonoperative group), and the latter 14 patients were treated surgically (operative group). Clinical results were assessed using the American Orthopaedic Foot and Ankle Society (AOFAS) scale and modified Weber protocol (MWP) scores. Bone union, plafond varus and valgus, presence of, leg-length discrepancy (LLD), premature closure of the growth plate, and posttraumatic arthritis were radiographically examined.

Results: The mean AOFAS score was 100 for the nonoperative group and 98.1 for the operative group, showing no statistically significant difference between the groups (P = 0.304). The MWP scores were excellent in both groups. One patient in each group showed a LLD of >10 mm at the last follow-up. None of the patients had nonunion, plafond deformity, premature closure of the growth plate, and posttraumatic arthritis.

Conclusion: Nonoperative treatment of triplane fracture is comparable with operative treatment in terms of clinical and radiographic results. Therefore, we suggest that nonoperative treatment may be a better option than operative treatment for triplane fracture, considering the risk of psychiatric trauma from surgery and the necessity of implant removal.

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