

Long-Term Patient Satisfaction and Residual Symptoms After Plate Fixation and Nonoperative Treatment for Displaced Midshaft Clavicular Fractures

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Purpose: Recent studies have shown that plate fixation reduces the risk of nonunion compared with nonoperative treatment for displaced midshaft clavicular fractures, but that shoulder function is similar and secondary operations are common after both treatments. In addition, it is of value to evaluate long-term results from the patient's point of view. The aim of this study was to evaluate long-term patient-reported satisfaction and residual symptoms after plate fixation (PF) and nonoperative treatment (NOT) for displaced midshaft clavicular fractures.

Methods: 160 adult patients with a fully displaced, midshaft clavicular fracture that had been included in a multicenter randomized controlled trial comparing PF and NOT were interviewed for a long-term follow-up survey. Outcomes were satisfaction with the received treatment, with the cosmetic result, and with the shoulder function (measured on a scale of 1 to 10), and presence of residual symptoms. Also, patients were asked if they would opt for the same treatment if they were to fracture their other clavicle.

Results: 79 patients (40 after PF, 39 after NOT) could be contacted and agreed to participate. The median follow-up was 53 months (range, 34 -79). Overall satisfaction was similar for PF and NOT (mean score \pm SD: 7.7 ± 2.1 vs 6.9 ± 2.4 , $P = 0.12$), as was satisfaction with the shoulder function (9.1 ± 2.3 vs 8.6 ± 2.6 , $P = 0.43$). Patients were more satisfied with the cosmetic result after PF (8.2 ± 1.6 vs 6.8 ± 2.0 , $P = 0.002$). Less than half of the patients felt that their shoulder had fully recovered (48% for PF vs 46% for NOT, $P = 1$) and residual symptoms were frequently present in both groups (55% for PF vs 41% for NOT, $P = 0.26$). After PF, 88% of patients would prefer the same treatment again, compared with 41% after NOT ($P < 0.001$).

Conclusion: Despite the fact that residual symptoms were common after both plate fixation and nonoperative treatment, and satisfaction with the functional result was excellent in both groups, most patients would opt for surgical treatment in case of a future clavicular fracture. In order to manage patients' expectations, objective information regarding both treatment options should be provided before a shared treatment decision is made.