

Hypothesis: Using radiologic and clinical results, we studied the outcome of patients who underwent open reduction and plate osteosynthesis for comminuted olecranon fractures.

Materials and methods: We retrospectively studied 18 patients (5 women [27.8%] and 13 men [72.2%]; mean age, 41 years [range, 19-67 years]) with comminuted fractures of the olecranon who underwent locking-plate osteosynthesis after open reduction between March 2005 and August 2009. According to the Mayo classification, 11 cases were classified as type IIB (61.11%) and 7 cases were classified as type IIIB (38.88%). In 7 cases, additional injuries were present in the olecranon area. We evaluated results with respect to clinical and radiologic findings. The mean follow-up duration was 22.6 months (range, 7-42 months).

Results: Complete union was achieved in all cases. Mean union time was 4.4 months (range, 4-6 months). According to the Morrey scale, 4 cases were considered very good; 8, good; 5, fair; and 1, poor. The mean QuickDASH (Disabilities of the Arm, Shoulder, and Hand) score was 17 (range, 0-75). There were no statistically significant differences between the Mayo type IIB and type IIIB cases in terms of elbow range of motion, QuickDASH score, and Morrey score. On long-term follow-up, elbow stiffness developed in 1 patient, who underwent surgical release with simultaneous removal of the hardware. The cases with fair and poor scores were cases with open fractures and additional elbow injuries.

Conclusions: Locking-plate osteosynthesis is an effective and safe treatment option for comminuted olecranon fractures, allowing early joint motion and yielding satisfactory radiologic and clinical results. In cases with concomitant injuries, the risk of limited elbow motion is high.

Level of evidence: Level IV, Case Series, Treatment Study. □ 2011 Journal of Shoulder and Elbow Surgery Board of Trustees.

[**Yayına ulaşmak için tıklayın - Results of open reduction and plate osteosynthesis in comminuted fracture of the olecranon**](#)