

Midshaft Clavicle Fracture Fixation: Comparison of Pin Versus Plate

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Purpose: The purpose of this study was to compare the functional outcomes scores of displaced midshaft clavicle fractures (OTA 15B) treated with plate fixation versus those treated with intramedullary fixation.

Methods: After obtaining IRB approval, 61 patients with displaced midshaft clavicle fractures (OTA 15B) were prospectively randomized to osteosynthesis with either an intramedullary pin or with plate fixation. Patients younger than 18 years old, patients who were pregnant, and patients with concomitant injuries were excluded from this study.

Results: Of the 61 patients initially enrolled in our study, 29 patients had adequate follow-up. The pin group included 14 patients and the plate group included 15 patients. The mean age of the patients was 35.3 years (range, 18-61 years). Twenty patients were male, nine were female. ADL (activities of daily living), ASES (American Shoulder and Elbow Surgeons), PCS (physical component summary), MCS (mental component summary), and EQ5 (Euro-Qol 5D) scores were recorded for all patients at the time intervals shown in the table below.

POSTER ABSTRACTS

ADL	Initial	6 weeks	3 months	6 months	1 year
Pin	1.8	11.1	15.9	25.8	27.6
Plate	3.9	17.3	25.9	26	29.1
ASES	Initial	6 weeks	3 months	6 months	1 year
Pin	24.9	54.9	73.8	81.9	90.7
Plate	25.4	66.2	88.5	94.3	96.9
PCS	Initial	6 weeks	3 months	6 months	1 year
Pin	37.1	38.4	45.4	50.3	52.6
Plate	33.5	46	53.5	55.1	55.4
MCS	Initial	6 weeks	3 months	6 months	1 year
Pin	53.9	50.1	51.8	57.5	54
Plate	51.8	49.9	51.4	52.4	53.2
EQ5	Initial	6 weeks	3 months	6 months	1 year
Pin	65.2	78.1	80.9	91.8	87.1
Plate	71.5	82.7	85.7	86	90.1

Conclusion: Based on our results, both groups treated allowed significant improvement in functional outcome scores and fracture union. There was no significant difference in functional outcome scores when comparing plate fixation versus intramedullary fixation.