Operative versus Nonoperative Treatment of Olecranon Fractures in Elderly Patients: A Retrospective Review

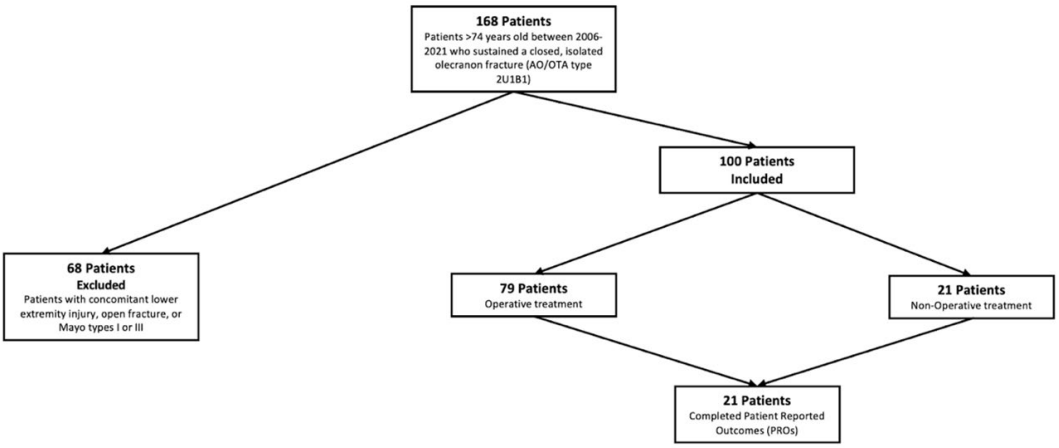
***Lily Wood, MD**; Linzie Wildenauer, BS; Thomas Z. Paull, MD; Gaonhia Y. Moua, BS; Mai P. Nguyen, MD; Khalid Azzam, MD*

Purpose: The incidence of geriatric olecranon fractures is increasing. We performed a retrospective review of outcomes with focus on complications, comparing operative versus nonoperative treatment of olecranon fractures in elderly patients.

Methods: Our hospital database was queried for all patients, >74 years old, who sustained an isolated, closed olecranon fracture (AO/OTA type 2U1B1) between the years 2006 and 2022. Other fracture patterns, including Mayo Type I and III fractures, were excluded. Operative and nonoperative treatment was at the discretion of the provider. All patients had a minimum of 3 months of follow-up. Any unexpected return to the operating room (eg, NOT for elective removal of metalwork) was included as a "complication." Fisher's exact tests were used to compare categorical variables and t-tests were used to compare continuous variables. A P value <0.05 was considered significant. Patient reported outcomes (PROs) were acquired by phone. The questionnaire included the QuickDASH (an abbreviated version of the Disabilities of the Arm, Shoulder and Hand [DASH]), a visual analog scale (VAS) for current pain, and a single assessment numeric evaluation (SANE) score.

Results: 56 patients were included—43 treated operatively and 13 treated nonoperatively. Age at injury was significantly greater in the nonoperative group (81.5 years vs 84.9 years, P = 0.0414). American Society of Anesthesiologists (ASA) scores and total modified Charlson Comorbidity Index scores were greater in the nonoperative group (P = 0.044 and P = 0.034). In the operative group, most fractures were treated with plate fixation (79.0%). There were 11 complications (91.7%) in the operative group and 1 complication (8.3%) in the nonoperative group. Four patients (7.1%) underwent elective removal of metalwork. The most common complication in the operative group was loss of reduction requiring revision (63.6%) followed by deep infection (36.3%). One wound complication (ulceration requiring surgical management) occurred in the nonoperative group. 18 patients, 14 (32.5%) in the operative group and 4 (30.7%) in the nonoperative group, agreed to participate in our phone survey. We found no significant difference in QuickDASH scores (P = 0.1170) or pain scores (P = 0.288). SANE scores were higher in the operative group (P = 0.0004).

Conclusion: We found a higher rate of complications (including loss of reduction and deep infection) in geriatric olecranon fractures treated operatively versus nonoperatively. Of note, of the 7 patients who underwent revision fixation, 3 (42.9%) subsequently developed a deep infection that required further removal of metalwork and intravenous antibiotics. Of the patients who responded to patient-reported outcome questionnaires, the results were somewhat mixed. Overall, all elbows were functioning well at last follow-up with patients reporting low pain and high function. Based on our results, nonoperative treatment for elderly olecranon fractures should be strongly considered given the high complication rate with operative fixation.



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