

**Does Approach for Radial Head Repair in Bado II Monteggia Lesions Affect Outcome?**

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**Purpose:** The purpose of this study is to compare patient outcomes and complication rates of patients with Bado II Monteggia fracture-dislocations that required radial head fixation or replacement based upon approach to the radius.

**Methods:** 151 consecutive patients who presented to our center with a proximal ulna fracture and an associated radial head dislocation or fracture (Monteggia lesion) treated by 1 of 4 surgeons were retrospectively reviewed. Injuries were classified by Bado type. Only patients with Bado type II injuries who required a radial head replacement or fixation as part of surgical treatment of their Monteggia lesion and had complete follow-up were included. Data collected included patient demographics, initial injury information, surgical details, and follow-up information including elbow range of motion and complications. Patients were seen at 2 weeks, 6 weeks, 3 months, 6 months, 12 months, and subsequent postoperative encounters were analyzed. All patients underwent plate fixation of the ulna, while 13 patients had their radial head addressed working through the ulna fracture (transosseous posterior, TOP) prior to fixation and 22 radial heads were treated after ulna fixation through a separate lateral (Kocher) interval. Outcomes were analyzed using independent t-tests and compared.

**Results:** 35 patients treated for 35 Monteggia lesions that required radial head replacement (28, 80%) or fracture repair (7, 20%) had a mean final follow-up of 15.3 months. At all postoperative time points patients in both cohorts displayed similar elbow motion ( $P > 0.05$ ). At latest follow-up, the 2 cohorts demonstrated similar rates of pain and ultimate elbow range of motion in flexion, extension, pronation, and supination. Ultimate time to radiographic healing between the TOP and Kocher groups was similar at  $6.5 \pm 3.0$  months and  $5.4 \pm 3.0$  months, respectively. There was no significant difference in rate of bone nonunion ( $P = 0.08$ ), joint contracture ( $P = 0.16$ ), postoperative nerve injury ( $P = 0.33$ ), postoperative infection ( $P = 0.16$ ), heterotopic ossification ( $P = 0.77$ ), incidence of hardware failure ( $P = 0.84$ ), and patient-reported pain ( $P = 0.39$ ) between the 2 cohorts.

**Conclusion:** Surgical approach to the radial head when required during the treatment of Monteggia fracture-dislocations seems to have little to no effect on the ultimate outcome.