

Radiocapitellar arthroplasty: a consecutive case series with 2 to 6 years' follow-up

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BACKGROUND

The aim of this study was to analyze indications, outcomes, and complications in patients treated with radiocapitellar arthroplasty.

METHODS

This prospective analysis of clinical and radiographic results included 16 elbows in 15 patients.

RESULTS

This study included 4 men and 11 women (mean age, 51.9 years; age range, 32-65 years). The mean follow-up period was 3.4 years (range, 2-6 years). The indications were post-traumatic ($n = 10$) and primary radiohumeral osteoarthritis ($n = 6$). A mean of 2 surgical procedures (range, 0-4) had been performed before radiocapitellar arthroplasty. The mean Mayo Elbow Performance Score significantly improved from 46 points to 85 points ($P < .01$). The arc of motion improved from 106° to 117° ($P = .27$). Radiographic ulnohumeral degeneration progressed in 40% of cases but was not symptomatic in any. Subsequent surgery was required in 5 elbows (31%). Revision of the radial head component was necessary in 4 patients (25%). In 3 patients this was a result of loosening of the stem. The radial component was subsequently removed because of persistent pain in 1. Radiographic loosening not requiring revision was found in 2 patients.

CONCLUSION

The overall Mayo Elbow Performance Score was good to excellent after radiocapitellar arthroplasty. Both the revision and reoperation rates were high, and one should consider this before performing this procedure. Loosening of the radial head component was a problem. An improved fixation technique or an adaptation of the design is needed before this type of surgery can be recommended as a standard procedure.

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