

## Total Elbow Arthroplasty in Septic Elbow: A Case Report

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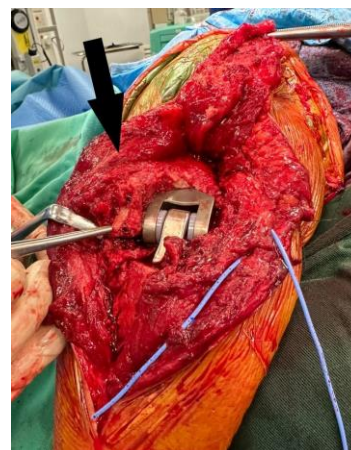
### INTRODUCTION:

Total elbow arthroplasty is a low-volume procedure with typically high complication rate. Although seemed counterintuitive, arthroplasty can be performed in septic arthritis with prior eradication of infection.

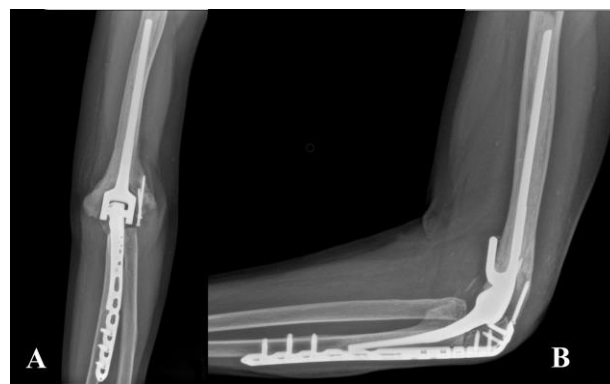
### REPORT:

A 56-year-old lady presented with history of fall 1 year prior where she sustained open fracture of right olecranon. She underwent internal fixation of olecranon but was complicated with septic arthritis of the elbow. Her elbow was painful with wound breakdown and persistent seropurulent discharge. X-ray of right elbow revealed non-union of olecranon with osteomyelitic distal humerus. She was prescribed with 6 weeks intravenous antibiotics and 9 months of oral antibiotics. Concurrently, multiple debridement were performed with removal of implant. The total elbow arthroplasty was accomplished in two stages. The first stage comprised of radical debridement with antibiotic cement spacer insertion. The gentamicin-loaded cement was kept for 84 days until the wound healed and no signs of infection were observed clinically. Control of infection was evident by improvement of septic parameters in which the CRP remained below 0.5 and ESR reduced from 80 to 7. Removal of cement spacer, total elbow arthroplasty, and plating of the olecranon were performed during second stage. Intraoperatively, alpha-defensin test was done before implantation to ensure no residual infection was present. There was a severe bone loss over the lateral condyle of humerus from the previous debridement. Cortical bone graft was obtained from the ipsilateral coronoid process to address this issue. A cemented semi-constrained Coonrad-Morrey implant was utilized for the elbow arthroplasty while locking plate was used to fix the olecranon. Post surgery, she was pain-free with elbow motion ranging from 10 to 100 degrees.

Mayo elbow score analyzed at 6 months revealed a good score of 85.



**Figure 1:** Bone graft secured over lateral condyle (arrow).



**Figure 2:** AP (A) and lateral (B) view of post operative plain radiograph.

### CONCLUSION:

Total elbow arthroplasty is a viable option for septic elbow provided that the infection is comprehensively eradicated. The superior clinical outcome of arthroplasty is unparalleled when compared to other salvage surgery in patients with this perilous condition<sup>1</sup>.

### REFERENCES:

1. Rupp M. Successful Total Elbow Replacement after Septic Arthritis. ActaChir OrthopTraumatolCech.2018;85(1):70-74.