

## **One-Stage Exchange for Early Postoperative Infection after Uncemented THA: Favorable Results at 5 Years**

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**INTRODUCTION:** For early postoperative periprosthetic joint infection (PJI), debridement, antibiotics, and implant retention (DAIR) remains the most common treatment. However, when uncemented implants that can be removed easily are present, some surgeons have advocated that treatment with early one-stage exchange may provide a higher infection cure rate. This study evaluated survivorship free of reinfection, complications, antibiotic treatment protocol, and patient mortality in selected patients who underwent one-stage exchange for acute postoperative PJI after uncemented total hip arthroplasties (THAs).

**METHODS:** We identified 17 patients who underwent one-stage exchange for acute postoperative PJI at a single tertiary care academic institution. All infections were diagnosed within 90 days of THA. Methicillin-sensitive (35%) and methicillin-resistant (12%) *Staphylococcus aureus* were the most common infecting organisms. 41% were McPherson Grade A hosts. Mean age was 66 years, mean BMI was 35 kg/m<sup>2</sup>, and 83% were male. Mean follow-up was 3 years.

**RESULTS:** The 5-year survivorship free of revision for reinfection was 88%. There were two reinfections (12%) with one undergoing a subsequent two-stage exchange and the other a definitive resection arthroplasty. Both had polymicrobial PJIs at the time of reinfection. There were no additional reoperations for reinfection. All patients received at least six weeks of postoperative IV antibiotics and 71% remained on chronic antibiotic suppression at final follow-up per institutional protocol. One hip dislocated and was treated with closed reduction. Three patients died after their initial one-stage exchange (2, 42, and 47 months postoperatively).

**DISCUSSION AND CONCLUSION:** This series of one-stage exchange arthroplasties for acute PJI after uncemented THA demonstrated promising results in selected patients at 5-year follow-up, with an 88% survivorship free of reinfection at 5 years. A majority remained on chronic antibiotic suppression per institutional protocol. These results are favorable when compared to reported reinfection rates after DAIR.