

Revision THA for Aseptic Failure After Staged Exchange for PJ: High Rates of Reoperation and Reinfection

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Background

- Aseptic complications following two-stage exchange for hip PJI are frequent
- Literature regarding the outcomes of revision THA for aseptic failures following staged revision for PJI is scarce

Purpose

- Evaluate the mid-term survivorship and outcomes of revision THA for aseptic failure in patients with a history of two-stage exchange for hip PJJ

Patients and Methods

- Mayo Clinic Total Joint Registry from 2000 – 2020
- 54 aseptic revision THAs following staged revision
- Mean age 63 years
- Mean BMI 33 kg/m²
- 59% female
- Median number of previous surgeries: 5 (range, 3 to 9)
- All patients were culture-negative and MSIS-negative at the time of aseptic revision
- Most common indications for aseptic revision THA:
 - 61% revisions for dislocation (Fig. 1A)
 - 19% revisions for aseptic loosening (Fig. 1B)
 - 4% for periprosthetic fractures
- Mean follow-up was 7 years

Results

5-Year and 10-Year Survivorship

- Survivorship Free of Reoperation for Infection (Fig. 2):
 - 5-year: 80%
 - 10-year: 74%
- Survivorship Free of Any Re-revision (Fig. 3):
 - 5-year: 63%
 - 10-year: 48%
- Survivorship Free of Any Reoperation (Fig. 4):
 - 5-year: 61%
 - 10-year: 46.4%
- 46% of subsequent reoperation were for PJL

Figure 1. Dislocation (A) and Aseptic Loosening (B) following Two-Stage Exchange for P-JI

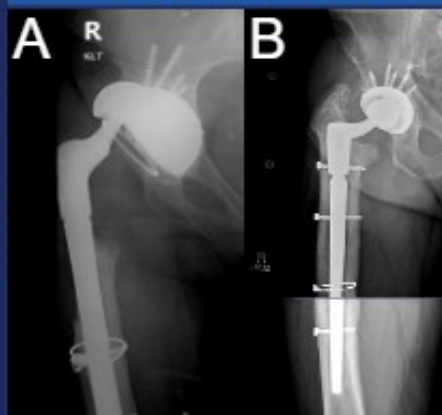


Figure 2. Survivorship Free of Reoperation for Infection

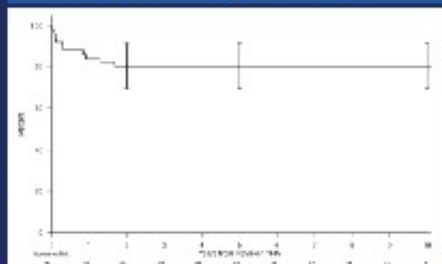


Figure 3. Survivorship Free of Any Re-revision

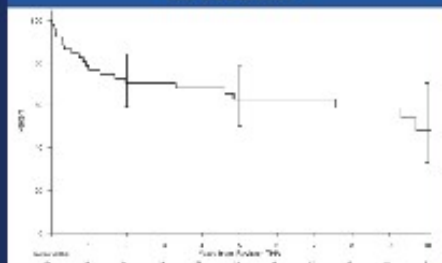
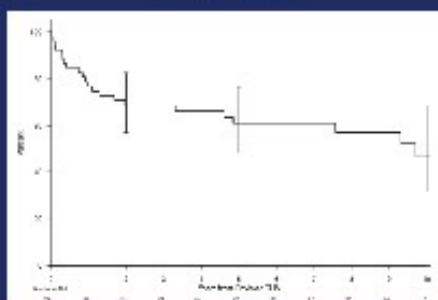


Figure 4. Survivorship Free of Any Reoperation



Results (continued)

- Total of 21 revisions and 1 additional reoperation
- Reasons for aseptic re-revision:
 - Dislocation (n=7)
 - Aseptic loosening (n=4)
- Reason for aseptic reoperation:
 - Periprosthetic fracture (n=1)
- No risk factors identified for increased reoperation, re-revision, or reoperation for infection were identified using univariate Cox models
- At last follow-up, patients who underwent a reoperation had an average of 2 subsequent surgeries (range 0 to 8)

Conclusions

- Aseptic revision THA following two-stage exchange for PJI is associated with high risks of reoperation, re-revision, and reinfection at 5 years and 10 years
- Our data highlight the importance of stable constructs and robust fixation at the time of revision to avoid a spiral of reoperations
- While most revision THAs were for clear indications, surgeons should exercise caution when offering surgery for relative indications in this setting