

Changing Surgical Hip Approach During PJI Treatment Is Not Associated with Increased Risk of Failure

Tom Schmidt-Braekling, Farouk J Khury, Daniel Waren, Hesham Abdelbary, Anzar Sarfraz, Simon Garceau, Ran Schwarzkopf, George Grammatopoulos

INTRODUCTION:

Hip approach discordance in aseptic revision total hip arthroplasty (THA) is not associated with increased dislocation or re-revision risk. Whether the same holds true for the treatment of periprosthetic joint infection (PJI) is unknown. This study aims to report the rate of hip approach discordance that occurs during PJI treatment, identify factors associated with approach discordance and test for possible association with outcome (septic and aseptic failures).

METHODS:

This is an IRB-approved, multicenter, consecutive case series of 521 primary THAs (age: 65±12 years, BMI:31±7, 53% females) treated for PJI at two, academic, tertiary-referral centers. Most index approaches were posterior (PA:303, 58%), followed by lateral (LA:112, 22%) and anterior (AA:106, 20%). Acute PJI was seen in 41% of cases. Initial treatment was DAIR (61%), followed by 1st- (34%) and single-stage- (5%) revisions. Patients were followed up for minimum 1-year (8±4 years). Outcomes of interest included PJI success (MSIS tiers 1/2) and aseptic (dislocation, fracture, aseptic loosening) complications.

RESULTS:

Change of approach was seen in 23%, mostly occurring at first PJI surgery (20%). Approach discordance was more common with AA (49%), followed by LA (44%) and PA (1%) ($p<0.001$). Approach discordance was more common with First-Stage revisions (31%) compared to DAIR (17%) and Single-Stage (11%) revisions ($p<0.001$). No patient factors were associated with approach discordance. Success of PJI treatment by latest follow-up was 89%, and not associated with approach change ($p=0.34$). Aseptic complications were seen in 7% of cases, with dislocation being most common (4%). There was no difference in overall complication- or dislocation- rates when approach was changed ($p=0.45-0.72$).

DISCUSSION AND CONCLUSION:

Comparable outcomes are seen in PJI treatment with concordant and discordant approaches between primary and PJI treatment. This data provides reassurance to surgeons that change of approach is safe and efficacious in PJI treatment without increased septic- or aseptic- risks.