

Acute Periprosthetic Joint Infection in Primary Total Hip Arthroplasty & Is Index Approach Associated with Outcome?

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INTRODUCTION:

To date, it is unknown whether an association exists between index approach for primary total hip arthroplasty (THA) and outcome following periprosthetic joint infection (PJI). This study aimed to describe overall acute PJI eradication rates following primary THA and determine whether differences exist in PJI treatment types and outcomes with different index approaches.

METHODS:

This IRB-approved, multicenter, retrospective, multi-surgeon, consecutive cases series of 195 primary THAs (Anterior (AA):49, Lateral (LA):36, Posterior (PA):110) who underwent treatment for acute (within 6-weeks; mean:2±1.5 weeks) PJI at two tertiary-care centres. Patients were followed up for minimum 1-year (7.4±3.2 years) following initial treatment. We compared demographics, medical history, postoperative outcomes, including PJI treatment success (MSIS:1&2), number of revisions required, change of approach as part of treatment and ultimate PJI treatment success.

RESULTS:

There were no differences in demographics (age, gender, BMI, CCI and ASA) or 1st PJI surgery type (p=0.3) between approach groups (76% underwent DAIR, 16% two-stage and 8% single-stage revision). Success of PJI treatment after 1st treatment and at latest follow-up was 68.2% and 90.7%, respectively. Greater approach discordance between index and PJI treatment was seen with AA (AA:29% vs. LA:22% and PA:1%). Risk of failure of first PJI surgery was greater in the LA- (44%) compared to the PA- (34%) and AA- (18%) groups (p=0.03). Risk of PJI failure by follow-up was not different in the AA (4%), compared with to PA (10%) and LA (14%) groups (p=0.2).

DISCUSSION AND CONCLUSION:

Index surgical approach was associated with PJI treatment success. The higher failure rates seen with LA may be related to limited debridement performed to spare abductor function. Discordance of approach was not associated with reduced PJI eradication, which is encouraging for surgeons not facile with the AA or those concerned with soft tissue compromise and wishing to change approach during PJI management.