

Background:

The management of Prosthetic Joint Infections (PJI) usually involves surgical intervention, a prolonged course of antimicrobial therapy, and follow-up (IDSA guidelines, 2013). We performed a follow-up of the treatment outcomes of patients with a PJI between 1st July 2023 and 31st July 2024 at our centre.

Methods

The recently established prospective database of PJI was interrogated, and additional data points from laboratory systems and chart reviews were added as required. Variables included demographics, joints involved, type and timing of surgeries, microbiological results, and antimicrobial therapies.

The outcome measures at six months post-infection diagnosis were clinical cure (alive, absence of clinical or microbiological evidence of infection, and not requiring ongoing antimicrobial therapy) and treatment success (clinical cure plus index prosthesis in situ) (Davis et al., 2022). A descriptive analysis will be presented.

Results:

- 12 patients with Prosthetic Joint Infection (PJI) identified during the study period; 58% were male.
- Most common treatment strategy: **DAIR** (Debridement, Antibiotics, and Implant Retention) – 58%.

Joints involved:

- 75% total hip replacements
- 25% total knee replacements

Timing of infection:

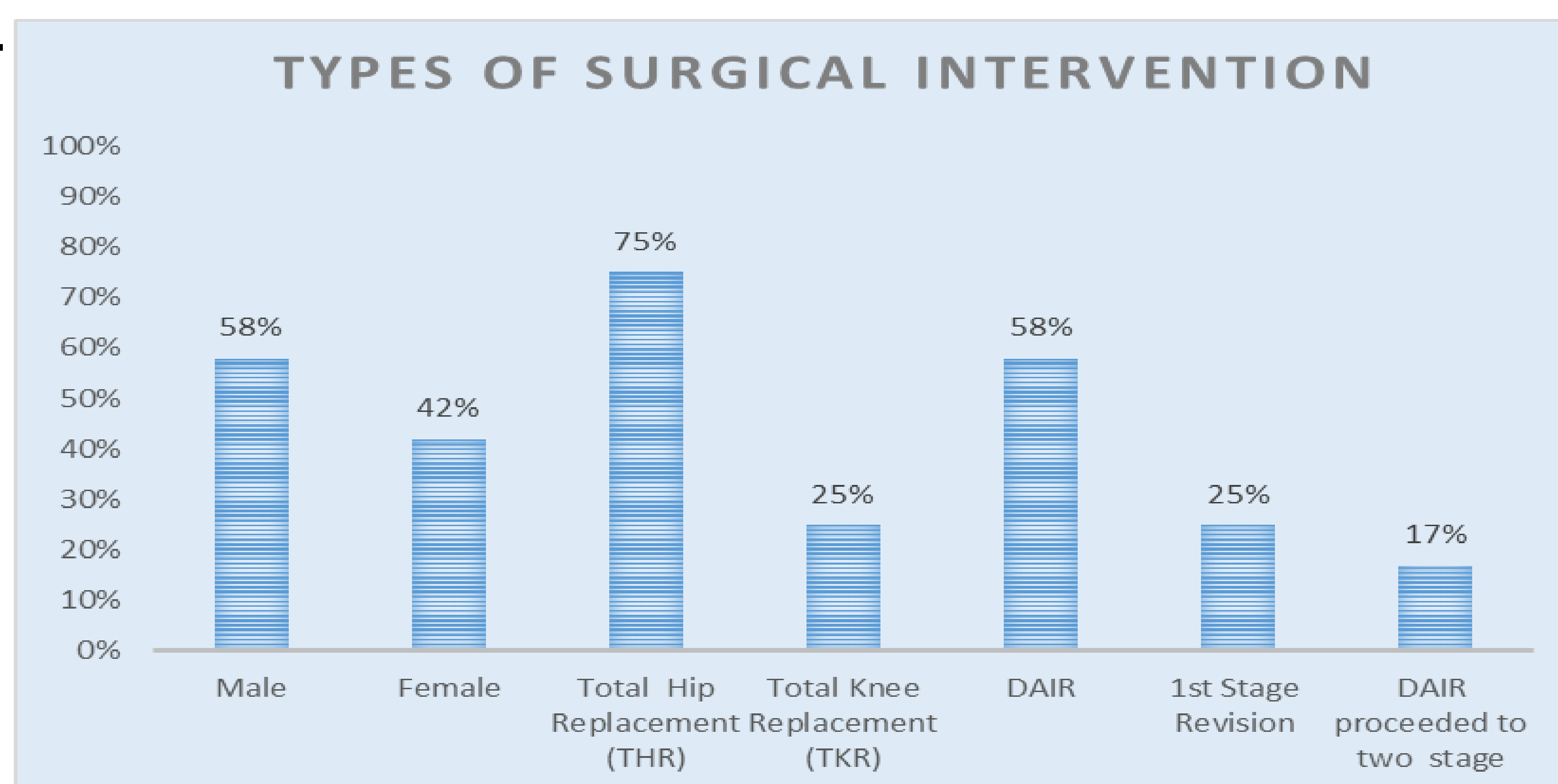
- 75% late (>30 days post-surgery)
- 25% early (<30 days post-surgery)

DAIR treatment details:

- 70% received **Daptomycin** as first-line therapy (no adverse reactions).
- 57% received adjunctive **rifampicin** (MSSA found in only 1 patient).
- 25% of patients underwent **two-stage revision** following PJI diagnosis.

Clinical outcomes:

- 83% overall clinical cure rate.
- 85% cure rate with DAIR.
- 100% cure rate with two-stage revision.
- 2 patients initially treated with DAIR later converted to two-stage revision, both had clinical cures at 6 months.



Pic 1 Types of surgical intervention post PJI



Pic 2 Total Hip Arthroplasty –image Wikipedia



Pic 3 Post operative pic of Bilateral Total Knee Arthroplasty – image Accatino et al.2024

Conclusion:

- This dataset shows excellent 6-month outcomes.
- The relatively high frequency of DAIR and the success rates are above what has been reported elsewhere.
- Close interdisciplinary working is needed to choose the most appropriate therapies for PJI patients.
- The use of a prospective dataset should allow ongoing review of strategies and better inform patient selection and, ultimately, outcomes.

References:

- 1.Davis J.S et.al.,(2022).Predictors of Treatment Success After Periprosthetic Joint Infection: 24-Month Follow up From a Multicentre Prospective Observational Cohort Study of 653 Patients
- 2.IDSA Guidelines for the Diagnosis and Management of Prosthetic Joint Infections (2012 & 2018).
- 3.National Guidelines on the Provision of OutPatient Parenteral Antimicrobial Therapy (2019)
- 4.Acctino et.al.,(2024). Bilateral Total Knee Arthroplasty (TKA) in a One-Stage Procedure Versus Two-Stage Procedure: A Retrospective Study

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