

### Free Papers A

#### [O11] SURVIVORSHIP AND FUNCTION OF MASSIVE ENDOPROSTHESES USED IN THE MANAGEMENT OF PERI-PROSTHETIC JOINT INFECTIONS AROUND THE HIP AND KNEE

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**Introduction:** The burden of peri-prosthetic joint infection (PJI) following hip and knee surgery is increasing. Endoprosthetic replacement (EPR) is an option for management of massive bone loss resulting from infection around failed lower limb implants.

**Aims:** To determine clinical outcome of EPRs for treatment of PJI around the hip and knee joint.

**Methods:** This was a retrospective consecutive case-series of hip and knee EPRs between 2007-2014 in our tertiary unit for the treatment of PJI following complex arthroplasty or fracture fixation. Data recorded included indication for EPR (infected primary/revision arthroplasty, infected non-union/failed osteosynthesis, gross bone loss following native joint infection), number of previous surgeries, and organism identified. Outcome measures included PJI eradication rate (with failure defined as EPR revision, amputation, or being on life-long suppressive antibiotics), complications, implant survival, mortality, and functional outcome (Oxford Hip/Knee Score; OHS/OKS).

**Results:** 58 EPRs (32 knee and 26 hip) were performed with a mean age of 68 years (range: 35-92). The mean number of previous surgeries prior to EPR was 3.4 (range: 1-10). At mean follow-up of 3.5 years, 11 (19%) patients were deceased. EPR was implanted as a two-stage procedure in 76% of cases. Plastic surgical involvement and flap coverage was necessary in 11 cases. Polymicrobial growth was detected in 40% of cases, followed by Coagulase-negative staphylococci (26%). The overall complication rate was 40%. Recurrence of infection post-EPR occurred in 14 patients (24%); 5 were treated with Debridement, Antibiotics and Implant Retention (DAIR), 3 with revision, 1 with above-knee amputation and the remaining 6 remained on long-term suppressive antibiotics. PJI eradication was achieved in 44 (76%) cases (69% knees and 85% hips). Of the remaining 14 cases, 9 remain on long-term antibiotics. The complication rate was similar in knees (41%) and hips (38%). PJI eradication was more successful in hips (85%) compared to knees (69%). To date, 6 EPRs have been revised (10%). The overall 5-year implant survivorship was 83% (95% CI: 68-98%). The mean OHS was 25 (range 7-39.) and the mean OKS was 20 (range 6-43), the best possible score being 48.

**Conclusions:** This mid-term study provides further support for the use of massive endoprostheses in the eradication of PJI in complex, previously multiply revised cases with subsequent limb salvage (in all but one case). We describe PJI eradication rate of 76% with acceptable functional outcomes. This eradication rate is comparable to that following treatment of PJI associated with standard arthroplasty.