

### Free Papers E

#### [O87] FUNCTIONAL OUTCOME OF DEBRIDEMENT, ANTIBIOTICS AND IMPLANT RETENTION (DAIR) IN HIP PERI-PROSTHETIC JOINT INFECTION – A CASE-CONTROL STUDY

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**Aim:** Advocates of Debridement-Antibiotics-and-Implant-Retention (DAIR) in hip peri-prosthetic joint infection (PJI) argue that a procedure not disturbing a sound prosthesis-bone interface is likely to lead to better survival and functional outcome compared to revision. However, no evidence supports this. This case-control study's aims were to compare outcome of DAIRs for infected 1° total hip arthroplasty (THA) with outcomes following 1° THA and 2-stage revisions of infected 1° THAs.

**Method:** We retrospectively reviewed all DAIRs, performed for confirmed infected 1° THR (DAIR-Group, n=80), in our unit between 1997-2013. Data recorded included patient demographics, medical history, type of surgery and organism identified. Outcome measures included complications, mortality, implant survivorship and functional outcome using the Oxford Hip Score (OHS). Outcome was compared with 2 control groups matched for gender and age; a cohort of 1° THA (1°-THA-Group, n=120) and a cohort of 2-stage revisions for infection (2-Stage-Revision-Group, n=66).

**Results:** The mean age at DAIR was 69 years and mean follow-up was 8 years (SD:5). 60% of DAIRs were for early PJI (< six weeks). Greater infection eradication with DAIR was detected with early-PJI, interval less than a week between onset of symptoms and exchange of modular components with the DAIR procedure. Infection eradication, complications and re-operation rates were similar in the DAIR- and 2-stage-revision Groups (p>0.05). For hips with successful infection eradication with DAIR, the 5-yr survival (98%) was similar to the 1°THA-Group (98%) (p=0.3). The DAIR-Group had inferior OHS (38) compared to the 1°THA-Group (42) (p=0.02) but significantly better OHS compared to the 2-stage-revision-Group (31) (p=0.008). Patients that required only one DAIR for infection eradication had similar OHS (41) to the 1° THA-Group (p=0.2).

**Conclusions:** DAIRs are associated with similar complication and infection eradication to 2-stage revisions. Exchange of modular components is advised for improved chances of infection eradication. Functional outcome following DAIRs was better than a 2-stage revision and as good as that of a 1° THA if a single DAIR was necessary for infection eradication.