

## Free Papers A

### [O10] THE UNSUSPECTED PROSTHETIC JOINT INFECTION: THE INCIDENCE AND CONSEQUENCES OF POSITIVE INTRAOPERATIVE CULTURES IN PRESUMED ASEPTIC KNEE AND HIP REVISIONS

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**Aim:** Despite a preoperative workup with no evidence to suspect a prosthetic joint infection (PJI) before revision surgery, routinely obtained intraoperative cultures still can be unexpectedly positive. The purpose of this study was (1) to assess the incidence of unexpected positive intraoperative cultures in presumed aseptic knee and hip revisions and (2) to determine whether a difference exists between the infection-free implant survival rate of patients with and without unexpected positive intraoperative cultures.

**Method:** We selected patients who underwent a one-stage revision total knee arthroplasty (TKA) or total hip arthroplasty (THA) for different reasons. Three or more separate intraoperative cultures were obtained during each procedure. A negative result was defined as less than two positive cultures with the same microorganism. An unsuspected PJI was defined as having two or more positive cultures with the same microorganism. Patients' medical records were reviewed to collect demographics, preoperative laboratory results, culture results, and the occurrence of infection during follow-up.

**Results:** A total of 340 and 339 patients with a presumed aseptic knee and hip revision, respectively, were analyzed. The incidence of unsuspected PJIs was 7.9% and 12.1% in the knees and hips, respectively. Of these unsuspected PJIs, the infection-free prosthetic survival rate at 2 year follow-up was 88% (95%CI 59-97) and 92% (95%CI 73-98) in knees and hips, respectively. In the knee group, the infection-free prosthetic survival rate of patients with an unsuspected PJI was significantly lower compared to that of patients with negative intraoperative culture results (88% (95%CI 59-97) versus 97% (95%CI 93-99) with  $p=0.01$ ). In the hip group, there was no such a difference (92% (95%CI 73-98) versus 93% (95%CI 88-96) with  $p=0.41$ ).

**Conclusions:** We found incidences of unsuspected PJI and infection-free prosthetic survival rates that are comparable with previous studies.<sup>1-6</sup> During follow-up after one-stage revision TKA, a higher incidence of infection was observed in patients with an unsuspected PJI. This difference was not observed in the hip revisions.

#### References:

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