

P0825 **S. capitis in periprosthetic joint infections: a matched case-control study**

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Background: Periprosthetic Joint Infections (PJI) are devastating but frequent complication of joint arthroplasty. Especially coagulase negative Staphylococci (ConS) are the pathogens most frequently isolated from bacteriological samples obtained from site of potential PJI. In recent years *Staphylococcus capitis* (SC) has been identified as a cause of nosocomial infections. Up to now only a single report has been published on the role of SC in PJI. The goal of this study was to investigate features of PJI caused by SC and to identify potential risk factors that are associated with this pathogen.

Materials/methods: We performed a multicenter matched case-control study analysis of cases in which orthopedic devices sent for sonication from 04/2014-10/2017 to our institution. We matched cases with monomicrobial growth of *S. capitis* with 3 cases that resulted in growth of a monomicrobial *S. epidermidis* from the same center and year if possible.

Results: We were able to identify 16 cases which yielded growth of *S. capitis* from 11 different centers. Of those 4 were from female patients. From hips 9 and for knee 3 samples were positive for *S. capitis* respectively. In 6 patients a late hematogenous infection was diagnosed, 4 had a late infection, while only one had an early infection. Underlying reasons for primary implantations were degenerative joint disease in 8 Patients, dysplasia and fracture in 1 patient each. 3 Patient had at least 1 revision prior to explantation. 6 Patients had the pathogen identified in their synovial fluid prior to explantation. In 3 of the cases resistance against Cefuroxim was detected.

Patients with SC were surgically treated with debridement and implant retention (DAIR) in 2 cases with additional exchange of mobile parts, 2 with a 1 step- and 5 with a 2 step exchange.

Univariate analysis revealed that patients with a PJI due to *S. capitis* were more likely to have a fistula (OR=10.85; CI95%1.04-113.17) at the time of surgical intervention.

Conclusions: Presumably PJI caused by *S. capitis* are not different in their epidemiology than PJIs caused by other ConS like *S. epidermidis*. However potential differences in the outcome after treatment need to be evaluated in future studies.