

P0838 Septic knee arthritis after anterior cruciate ligament reconstruction (ACLR): focus on 3 underestimated pathogens (*Cutibacterium acnes*, *Staphylococcus lugdunensis*, *Staphylococcus caprae*)

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Background: In previous studies it has been shown that the 2 most frequent pathogens involved in post-ACLR infection are *S. aureus* and *S. epidermidis*. The aim of our study was to identify other frequent pathogens, to describe their clinical features, their antimicrobial susceptibility, and treatment and outcome of patients.

Materials/methods: We conducted a retrospective observational study including all patients with ACLR infection in 3 orthopedic centers sharing the same infectious disease specialist

Results: During a seven-year period (2011-2017) we identified 74 infected patients among 9858 patients who had ACLR (incidence rate = 0.0075). Fourteen patients had polymicrobial infection. We identified 89 pathogens. Twenty four patients (34.4 %) were infected with *S. aureus* (27% of all isolates)(only one oxacillin-resistant strain). *C. acnes* was the second most frequent pathogen, identified in 14 patients (18.9%) (15.7% of all isolates). *S. lugdunensis* was identified in 9 patients (12.2%) (10.1% of all isolates). *S. caprae* was as frequent as *S. epidermidis* identified in 8 patients each (10.8%) (9 % of all isolates for each). No strain of *S. lugdunensis* and *S. caprae* was resistant to oxacillin, levofloxacin or rifampicin. Ten patients infected by *C. acnes*, 8 infected by *S. lugdunensis*, and 7 infected by *S. caprae* had an early acute infection. In all cases but one an arthroscopic lavage was performed, in 14 cases two lavages were required and in 4, 3 lavages. All patients infected by a strain susceptible to levofloxacin and rifampicin, including those with *C. acnes*, *S. caprae* and *S. lugdunensis* infection, were treated with an oral combination of levofloxacin and rifampicin, after a couple of days of IV empirical treatment with vancomycin and a broad spectrum beta-lactam. The median duration of treatment was 6 weeks. Seventy one patients were considered cured.

Conclusions: To our knowledge this is the largest reported series of infection after ACLR. *S. aureus* is the main pathogen (27% of all strains). *C. acnes*, *S. lugdunensis* and *S. caprae* accounted for almost 35% of pathogens and 38% of infections. A conservative strategy consisting in arthroscopic lavage(s) and a 6-week treatment with levofloxacin and rifampicin was effective.