Conclusion. The use of alternative antibiotics in pre-procedural prophyaxis can contribute to adverse events associated with high risk broader spectrum antimicrobials as well as increased costs associated with antimicrobials such as vancomycin. Our facility began implementation of a penicillin de-labeling program in 2018 via skin testing and direct oral challenge in collaboration with colleagues from Allergy and Environmental Medicine. Removal of PAL in this population can increase rates of appropriate prophyaxis.

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251. Poor Outcomes in the Treatment of Coagulase-Negative Staphylococci Periprosthetic Joint Infections
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Session: P-12. Bone and Joint

Background. Coagulase-negative staphylococci (CoNS) are a common skin flora often considered lab contaminants, but these pathogens can also be the cause of peri-prosthetic joint infections (PJIs). The role of these organisms in PJIs is not well characterized, with little data relating to treatment outcomes. We sought to evaluate success at one year for patients undergoing treatment for a CoNS PJI.

Methods. This is a retrospective cohort study of adults at a tertiary academic center, Duke University Medical Center, from 2009 to 2020 with CoNS PJI. An institutional database was queried to identify potential patients and manually reviewed by two infection disease specialists to confirm inclusion. Variables included sex, follow-up time, procedure type, age, race, Elixhauser score, success at one year, failure, and revisions. Both univariate and descriptive statistics were used to assess findings.

Results. We identified 61 patients with a CoNS PJI. The cohort was 50.8% male, with 49 patients identifying as Caucasian (80.3%), and 10 as African American (16.4%). The median age was 65 years old, the median Elixhauser score was 3.0, and the average follow-up time was 24.4 months. Of the 61 patients in the cohort, 24 underwent successful treatment (39.3%) at one year, and 37 failed treatment (60.7%). Within the failure group, 19 experienced persistence of the same organism (51.4%), 11 were infected by another organism (29.7%), and 28 underwent a revision surgery secondary to failure (76.9%). When stratified by treatment procedure after initial PJI, 26 (41.7%) received debridement, antibiotics, and implant retention (DAIR) whereas 35 (58.3%) underwent resection. Treatment success was not significantly different between the two procedures (p=0.964).

Summary of Treatment Success for CoNS PJI

| Procedure Type | Success at 1 Year |
|---------------|------------------|
| Debridement, antibiotics, and implant retention (DAIR) | 26 (41.7%) |
| Debridement and implant resection | 35 (58.3%) |

Conclusion. These results indicate that the success rate of treatment for CoNS PJI is less than for other organisms, such as coagulase-positive staphylococci. These results provide a focus for future research and clinical management of PJIs resulting from CoNS.

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252. Joint Decisions: Optimal Duration of Chronic Suppressive Antibiotics in Adults with Prosthetic Joint Infections Who Underwent Debridement, Antibiotics, Irrigation, and Retention of Prostheses
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Session: P-12. Bone and Joint

Background. Hip and knee arthroplasties are associated with complications including prosthetic joint infections (PJI). Management ranges from explantation to debridement, antibiotics, irrigation, and retention of prostheses (DAIR). In DAIR, patients receive intravenous antibiotics followed by chronic suppressive antibiotics. Current guidelines for suppressive antibiotics in DAIR are based on expert consensus. This study seeks to elucidate the optimal duration of chronic suppressive antibiotics after DAIR.

Methods. This is a retrospective cohort study of adults in the Southern California Kaiser Permanente System with hip and knee prosthetic joint infections who underwent DAIR from 2007-2017. Culture data and durations of suppressive antibiotics were collected and patients were followed for 1 year after completion. Treatment failure was determined by mortality, re-infection, or prosthesis removal. Patients who received no antibiotic therapy within 6 months vs 3 to 6 months vs greater than 1 year were compared.

Results. 350 charts were reviewed and 145 patients were included. There were 87 knee and 58 hip PJIs with 32 patients (22%) who failed treatment. There were more cases of failure when patients didn’t receive suppressive antibiotics (27%) vs those who received any (19%), however the results were not significant. There were no significant differences in failure rates between short vs longer suppressive antibiotic courses regardless of the duration (Staph vs non-Staph, hip vs knee). Patients with Staphylococcal infections and knee infections were significantly more likely to fail treatment (p=0.0155 & 0.0150, logistic regression).

Conclusion. This study shows the importance of suppression with oral antibiotics after PJIs are treated with DAIR. The lack of difference in treatment failure between the durations of suppressive antibiotics makes it prudent to consider shorter courses of antibiotics, while placing attention on patients with knee and Staphylococcal infections as they are more likely to fail treatment. Limitations include sample size, difficulty in quantifying extent of initial infection and debridement, and provider dependent prolonging of antibiotic duration.

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253. Clinical and Therapeutic Particularities of Brucellar Sacroiliitis
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Session: P-12. Bone and Joint

Background. The misleading clinical presentation of brucellar sacroiliitis, which is usually confused with involvement of the lumbosacral hinge or the hip, is responsible for diagnostic and therapeutic delays. We aimed to study the epidemiological, clinical and therapeutic features of brucellar sacroiliitis.

Methods. We conducted a retrospective study including all patients hospitalized in the infectious disease department for brucellar sacroiliits between 1992 and 2020. The diagnosis of brucellosis was based on positive weight agglutination test and/or positive blood cultures.

Results. We included 12 patients, among whom 8 were males. The mean age was 35±13 years. Ten patients consumed unpasteurized milk and 9 had a close contact with animals. Three patients were previously treated for brucellosis and 4 patients had a family history of brucellosis. The revealing symptoms were sacroiliac joint pain (7 cases) and low back pain (5 cases), associated with fever and night sweats (9 cases). There were 8 cases localized on the left side of the joint. Spondylodiscitis was associated with sacroiliitis in 3 cases and genitourinary brucellosis in one case. An accelerated erythrocyte sedimentation rate and elevated C-reactive protein levels were noted in 7 cases, anemia in 7 cases and leukopenia in 4 cases. X-ray examination of sacroiliac joints revealed thickening of the sacroiliac joint (3 cases). Bone scintigraphy, which was performed in 8 cases, showed hypertension of the sacroiliac joint. Sacroilic computed tomography and magnetic resonance imaging, performed in 6 cases and 4 cases, respectively, showed signs of sacroiliitis in all cases and soft tissue abscess in 2 cases. Blood cultures were positive to Brucella in 2 cases. All patients received doxycycline and rifampicin, associated to ciprofloxacin in 2 cases. The median duration of treatment was 4.5 months [3-9 months]. The disease evolution was favorable in 10 cases. Sequelae represented by sacroiliac joint pain was noted in 4 cases. There were 2 relapsing cases.

Conclusion. The diagnosis of brucellar sacroiliitis is based mainly on the imaging results and serological testing. Respecting preventive measures is a priority in order to eradicate brucellosis.

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254. Excellent Outcomes with Oral Versus Intravenous Antibiotics for Bone and Joint Infections: A Single-Center Experience
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Session: P-12. Bone and Joint

Background. The OVIV A trial, published in 2019, demonstrated equivalent efficacy of oral (PO) versus intravenous (IV) antibiotics for bone and joint infections. We report our group’s one-year outcomes in a cohort of such patients who received PO or IV antibiotics.

Methods. Our orthopedic surgery and orthopedic infectious diseases (ID) groups agreed to employ early switch to PO in patients with a first episode of non-vertebral osteomyelitis (OMI), native or prosthetic joint infection (NJA or PJF), or hardware infections when a pathogen susceptible to highly bioavailable antibiotics had been identified and the patient was perceived to be at low risk for medication non- adherence. We reviewed patients 19+ years old seen in the Ortho ID clinic for one of these conditions from July 1st through December 31st, 2019. Data recorded included patient demographics, comorbidities, infection type and site, microbiology, and surgical and antibiotic management. Primary outcome was treatment failure at 1 year, defined as death, unplanned surgery at same site, or chronic antibiotic suppression.

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