sensitivity, specificity, positive predictive value and negative predictive value for MRSA surveillance swabs.

Results. One hundred seventy-two patients met inclusion criteria. Thirty patients had positive MRSA surveillance swabs. The prevalence of MRSA in joint cultures was 11.04%. The positive predictive value of MRSA surveillance swabs was 42.3% and the negative predictive value was 95.3% in all patients. The MRSA surveillance swab had a negative predictive value of 100% in participants with no risk factors for MRSA colonization.

Conclusion. The negative predictive value of MRSA surveillance swabs used in conjunction with appropriately used clinical judgment is a useful tool in the evaluation of patients with suspected MRSA septic arthritis. When used in conjunction with MRSA risk factors, the absence of MRSA risk factors may help clinicians rule out MRSA as a causative pathogen.

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249. Evaluation of 99 Radiologically-proven Osteomyelitis Cases
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Session: P-12. Bone and Joint

Background. IDSA has published guidelines for the diagnosis and management of prosthetic joint infection (PJI). However, we have observed significant variability in the interpretation and application of these guidelines with respect to the management of those with PJI following debridement and implant retention (DAIR). It is not clear if variations in antimicrobial management are affecting clinical outcomes.

Methods. We performed a retrospective review at an academic hospital in rural New Hampshire. We included all adult patients from 1/1/2017 to 12/31/2018 with PJI of hip or knee who underwent DAIR. The demographic data, microbiology data, antibiotic treatment and duration were collected. The primary endpoint was overall re-infection rate within 2 years of surgery. Secondary endpoint was re-infection rate stratified by organism and antimicrobial type and duration.

Results. A total of 26 patients were included in our study. 65% of patients were males. The average age was 60. Of a total of 317 procedures performed, we identified 28 procedures in which patients had a PCN allergy label (PAL) and received a β-lactam alternative antibiotic for surgical prophylaxis. No patients in the PAL group received cefazolin for pre-operative prophylaxis. Only one of these patients carried a PCN allergy label (PAL) and received a β-lactam alternative antibiotic for surgical prophylaxis.

Conclusion. Treatment of PJI with DAIR is challenging. Despite long-term IV therapy followed by oral antibiotics, there was a high rate of treatment failure (31% in our study) particularly with Staphylococcal infection. There was no association of variations in antimicrobial management with clinical outcomes.

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250. An Assessment of the Penicillin Allergy Label in Patients Undergoing Orthopedic Procedures at a VA Medical Center
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Session: P-12. Bone and Joint

Background. Approximately 10% of the population is labeled as penicillin (PCN) allergic, but only 1% of these individuals have a true IgE mediated allergy. This label influences the prescription of the most appropriate antibiotic and ultimately leads to antimicrobial resistance, hospital readmission, increased length of hospital stay, use of critical care beds, and greater healthcare costs. Post-surgical complications in patients undergoing total knee arthroplasty (TKA) or total hip arthroplasty (THA) are also increased when patients receive an alternative antibiotic due to PCN allergy.

Methods. A retrospective chart review identified patients who underwent a TKA or THA during the 2018-2020 calendar years at the VA DC VA Medical Center. Multiple operations at different times on the same patient were regarded as separate events. The primary outcome was patients who were evaluated for penicillin allergy de-labeling and the secondary outcome was perioperative antibiotic choice.

Results. Patients in both groups were predominantly male, Black, and over the age of 60. Of a total of 317 procedures performed, we identified 28 procedures in which patients carried a PCN allergy label (PAL) and received a β-lactam alternative antibiotic for surgical prophylaxis. No patients in the PAL group received cefazolin for prophylaxis. Of all patients, 8% of the non-PAL group were appropriately given cefazolin. In the group carrying the PAL, 62% of patients received vancomycin and 29% of patients received clindamycin for pre-operative prophylaxis. Only one of these patients had a formal allergy consult note. The PCN allergy label (PAL) group was not addressed during that visit. Fewer patients (4%) required ICU admission during their hospitalization in the non-PAL group versus 10% of patients in the PAL group.

Table 1. Patient Demographics and Procedure Detail

| Total number of patients | non-PAL | PAL |
|--------------------------|---------|-----|
| Age in years*            | 59 (±12) | 67 (±07) |
| Gender                   | Male    | Female    |
| Race                     | White   | Black     |
| Black/African American   | 210 (67%) | 120 (67%) |
| NHW (kg/m²)              | 23.9 (±6.9) | 23.9 (±6.9) |
| ICU admission            | 12 (4%)  | 10 (3%)   |
| MRSA nares colonization   | 10 (3%)  | 10 (3%)   |
| Positive cultures within 90 days of operation | 10 (3%) | 10 (3%) |
| C. difficile rates        | 154 (51%) | 154 (51%) |
| Total surgical procedures| 878 (28%) | 878 (28%) |
| Hip arthroplasty          | 154 (51%) | 154 (51%) |
| Knee arthroplasty         | 154 (51%) | 154 (51%) |

All Authors: No reported disclosures
Conclusion. The use of alternative antibiotics in pre-procedural prophylaxis 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 Immunology. Removal of PAL in this population can increase rates of appropriate prophylaxis.

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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 admitted from July 1, 2009 to 2020 with CoNS PJIs. An electronic data database was queried to identify potential patients and manually reviewed by two infectious 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 65.0 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. Success was not significantly different between the two procedures (p=0.964).

Summary of Treatment Success for CoNS PJI

| Procedure Type | PJI Type | Patient Race (n) | Patient Age | Year of Treatment | Treatment Success |
|---------------|---------|------------------|-------------|-----------------|-------------------|
| Procedure 1   | Type 1  | Race 1           | Age 1       | Year 1          | Success 1         |
| Procedure 2   | Type 2  | Race 2           | Age 2       | Year 2          | Success 2         |

Conclusion. These results indicate that the success rate of treatment for CoNS PJIs is less than for other organisms, such as coagulase-positive staphylococci. These results provide a focus for future research and clinical management of PJI's 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 (PJIs). 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 on suppressive antibiotic use after DAIR are unclear and based on 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 antibiotics for less than 3 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 PJJIs 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=0.0196 & 0.0150).

Conclusion. This study shows the importance of suppression with oral antibiotics after PJJIs 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 the diagnostic and therapeutic difficulties. 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 sacroiliitis between 1992 and 2020. The diagnosis of brucellosis was based on positive white 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 hyperfixation of the sacroiliac joint. Sacroiliac computed tomography and magnetic resonance imaging, performed in 6 cases and 4 cases, respectively, showed signs of sacroiliac joint pain 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 with nafcillin/sulfamethoxazole 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 OVIFA 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 PJII), 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 and 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.