

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 93.5% in all participants. 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 independently is insufficient to confidently rule out MRSA as the causative pathogen in septic arthritis. When used in combination with MRSA risk factors, the absence of MRSA risk factors may help clinicians rule out MRSA as a causative pathogen.

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248. Outcomes of Patients with Prosthetic Septic Arthritis with Debridement and Implant Retention

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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, antibiotics 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% involved knee joint. 50% had late-onset infection (>12 months). The top organisms were Streptococcus spp. (34%), CoNS (26 %) and MSSA (18 %). 15% were associated with bacteremia. Ceftriaxone was the most common antibiotic used (54 %). 38 % of patients received Rifampin PO along with IV antibiotics. All patients received PO antibiotic(s) after completing the course of IV therapy, and 7 patients were also on concomitant rifampin PO. The duration of PO antibiotic therapy was varied. 30% of patients received PO antibiotics for 6 months post IV treatment. Life-long suppression therapy were noted in 9 patients. Treatment failure within 2 years occurred in 8 patients (31%). Among those, 75% had Staphylococcal infection. All patients required hardware removal except one patient who required amputation. 2 patients developed recurrent PJI after completing 6 months and one year of PO suppression therapy, one patient had a recurrent infection while on life-long suppression. Staphylococcal infection was significantly associated with treatment failure.

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 variation of treatments and outcomes in our small cohort.

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249. Evaluation of 99 Radiologically-proven Osteomyelitis Cases

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Background. Herein we aimed to evaluate osteomyelitis cases in our setting.

Methods. We evaluated the hospital records of patients with osteomyelitis between January 2013 and December 2020 retrospectively. Osteomyelitis was confirmed by direct radiography or magnetic resonance imaging or pathology. Demographic features, risk factors, clinical/laboratory findings, treatment response and mortality rates were evaluated. Clinical response was defined as (resolution of clinical signs including fever and purulent discharge and other symptoms) and/or negative culture at the end of antimicrobial therapy.

Results. Patients were 33 female, aged 29–85 years (mean 59±12.6). Forty nine of the patients were diabetic foot infection, 30 were spondylodiscitis, eight were primary, seven were post-traumatic, and five were post-surgical osteomyelitis. Overall 62 patients had diabetes mellitus and 16 patients had chronic renal failure. Peripheral arterial disease, neuropathy, diabetic retinopathy and venous insufficiency rate in the DM subgroup is shown in table. Fever was present in 24.2% of the cohort. Increasing of CRP was in 95.9%, erythrocyte sedimentation rate in 83.9%, and leukocytosis in 37.3%. The radiological findings of osteomyelitis were detected via magnetic resonance imaging in 73 patients. Etiology in biopsy cultures were elucidated in 59.5% and the most common pathogen was *S. aureus* (30%) Table1. The most common empirical treatment regimens were tigecycline in 27 patients, ampicillin/sulbactam in 19 patients and ceftriaxone+teicoplanin in 12 cases. Duration of treatment was 36,2±17.3 days (range 6-104 days). Overall, clinical response was obtained in 91.9%. Fifty patients were performed surgical procedure + antibacterial treatment, clinical response was

96% (p<0.091). Surgical debridement could be performed in 22 patients, clinical response was obtained in all (p<0.193). Thirteen patients developed recurrence within one year. Sixty-seven patients received oral consecutive treatment after discharge. In hospital mortality rate was 2/99 (2,02%).

Table 1. Main features of cases with osteomyelitis

Female	33/99 (33,3 %)
Age	59±12,6 years
Diabetes mellitus (DM)	62/99 (62,6 %)
Chronic renal failure	16/99 (16,1 %)
Peripheral arterial disease in DM	26/62 (41,9%)
Venous insufficiency in DM	6/62 (9,6 %)
Peripheral neuropathy in DM	23/62 (37 %)
Diabetic retinopathy in DM	20/62 (32,2 %)
Fever	24/99 (24,2 %)
Microbiologically proven osteomyelitis	59/99 (59,5 %)
<i>S. aureus</i>	18/60 (30 %)
<i>P. aeruginosa</i>	10/60 (16,6 %)
<i>C. striatum</i>	7/60 (11,6 %)
<i>E. coli</i>	6/60 (10 %)
<i>Coagulase negative staphylococcus</i>	6/60 (10%)
<i>E. faecalis</i>	5/60 (8,3 %)
Pathologically proven osteomyelitis	7/99 (7,07%)
Proven osteomyelitis by direct radiography	37/99 (37,3 %)
Proven osteomyelitis by MRI	73/99 (73,7 %)
End-of treatment clinical response	91/99 (91,9 %)
Relapse during one year follow up	13/99 (13,1 %)
Clinical-response+no relapse during one year follow up	78/99 (78,8%)

Conclusion. Despite surgical debridement and/or developed antimicrobial treatment, approximately 1/5 of osteomyelitis cases required further treatment. Further interventions seem to be needed to reach better 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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Background. Approximately 10% of the population is labeled as penicillin (PCN) allergic, while 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 stays, 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 Washington 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 evaluable 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, compared to 87% of the non-PAL group who 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, but the PCN allergy 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

	non-PAL	PAL
Total number of patients	279	26
Age in years*	64 (59-72)	67 (60-73)
Gender		
Male	242 (83%)	20 (71%)
Race		
Black/African American	210 (72%)	18 (64%)
BMI (kg/m)*	29.5 (26.4 - 33.8)	31 (28-35)
ICU admission	12 (4%)	3 (11%)
MRSA nares colonization	10 (3%)	0
Positive cultures within 90 days of operation	10 (3%)	0
C. difficile rates	0	0
Total surgical procedures	289	28
Hip arthroplasty	133 (46%)	8 (29%)
Knee arthroplasty	156 (54%)	20 (71%)
* median (IQR)		