children ≥4Y. Among S. aureus cultures, 70–76% were methicillin sensitive (MSSA). Overall clindamycin susceptibility was 97%, with all resistant strains detected in children ≥4Y with MSSA. This is strikingly different than the institutional antibiogram showing 79% overall clindamycin sensitivity in S. aureus [82% in MSSA, 72% in methicillin resistant (MRSA)]. K. kingae was exclusively identified in children <4Y (21% of positives), which was also the group with the highest rate of culture-negative infection (41%). Intravenous clindamycin alone was the most frequent initial antibiotic regimen, prescribed for 41% of all patients. Initial antibiotic regimens matched organism susceptibilities in 90% of MRSA and 100% of MSSA infections. In conclusion, we revealed higher resistance of clindamycin-susceptible S. aureus in older children and K. kingae and culture-negative infection in children <4 years with OAI. Antibiotic susceptibilities differing from our institutional antibiogram suggest that disease-specific antibiograms will aid with empiric treatment decisions.

Disclosures. All authors: No reported disclosures.

392. Epidemiology and Treatment Outcome of Gram-Negative Polymicrobial, Gram-Positive Polymicrobial and Mixed Polymicrobial Prosthetic Joint Infection Babak Hoooshmand, MD; Dima Youssif, MD; Kathleen M. Riederer, MT (ASCMP); Susan M. Szpunar, PhD; Meredith M. Coyle, MD; and Ashish Bhargava, MD; Ascension Health, Saint John Hospital and Medical Center, Grosse Pointe Woods, Michigan; 2 Ascension St. John Hospital, Grosse Pointe, Michigan; 3 St. John’s Ascension, Detroit, Michigan; 4 Ascension St. John, Grosse Pointe Woods, Michigan

Session: 48. Infections of Joints
Thursday, October 3, 2019: 12:15 PM

Background. Prosthetic joint infection (PJI) is a rare but treatable condition. Published studies of the PMPJIs without differentiating the causative pathogens. We assessed clinical features and treatment outcomes among Gram-negative polymicrobial (GNPM), Gram-positive polymicrobial (GPPM) and mixed polymicrobial (MPPM) PJIs.

Methods. A retrospective cohort study was conducted at three Ascension hospitals in Detroit, MI, from January 2012 to December 2018. Cases were identified using the International Classification of Diseases, 9th and 10th Revision codes specific for PJIs. Patient’s electronic medical records were reviewed.

Results. 38 patients with PMPJI with a mean age of 67 years were identified. 71% patients were female and 29% were Caucasian. Ninety (50%) patients had PMJP, 16 (42%) had GPMJP and 3 had GNPM. Among MPM PJIs, 14 (74%) involved hips, 4 (21%) knee and 1 (1%) ankle joint. Among GPMJP PJIs, 7 (44%) involved hips, 8 (50%) knee and 1 (6%) shoulder joints. Among GNPM PJIs, 13 (33%) involved hip and 2 (67%) involved knee. 3 patients died (11%), 1 (33%) clinic-diagnosed diabetes among MPM, GPM and GNPM, respectively. Subject onset of less than a week was noted in 13 (68%), 5 (31%), 3 (100%) and of more than 3 weeks in 16 (3%), 7 (43%) and 0 in among MPM, GPM and GNPM, respectively. 18 (95%), 12 (75%) and 2 (67%) patients presented with pain, 16 (84%), 6 (38%) and 3 (100%) patients had drainage among MPM, GPM and GNPM, respectively. Among MPM PJIs, 12 (63%) underwent debridement, antibiotic and implant retention (DAIR), 2 (11%) for two stage exchange, 4 (21%) for chronic suppressive therapy and 1 (5%) had an amputation. 6 (38%) were readmitted within 6 months; 3 (50%) required prosthetic removal, 1 (4%) each died, was made hospice and was lost to follow-up. Among GPMJP PJIs, 12 (75%) underwent DAIR and 4 (25%) went for two stage exchange. 9 (69%) patients among GPMJP PJIs were readmitted in 6 months and 3 (50%) required prosthetic removal. All 3 of GNPM PJIs underwent DAIR and none were readmitted in 6 months.

Conclusions. Pain and drainage were common presenting symptoms. All GNPM PJIs presented within 1 week of symptoms and were treated successfully with DAIR. MPM and GPM PJIs had high readmission rates and 6/26 (23%) managed with DAIR required prosthetic removal.

Disclosures. All authors: No reported disclosures.

393. Changing Trends, Risk Factors, and Treatment Challenges in Staphylococcus aureus Septic Arthritis Valerie Gobao, BA; 1 Mostafa Alfahawy, MD; 2 Neel Shah, MD; 2 Karin Byers, MD, MS; 3 Mohamed Yassin, MD, PhD 4 and Kenneth Urias, MD, PhD 4; University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania; 2 Alzahar University Giza, Al Irab, Egypt; 3 University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania; 4 University of Pittsburgh, Pittsburgh, Pennsylvania

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Background. Staphylococcus aureus is a common organism in native septic arthritis. It is traditionally believed to be self-limited with rapid and aggressive debridement and appropriate antibiotic selection. The incidence of S. aureus septic arthritis is increasing, and further characterization is needed to improve diagnosis and treatment. For patients presenting with native S. aureus septic arthritis, we evaluated the reliability of methicillin-resistant S. aureus (MRSA) screening as a predictor to rule out MRSA septic arthritis, the risk factors associated with this disease, and the treatment and surgical outcomes.

Methods. A retrospective case-control study of patients diagnosed with septic arthritis in the UPMC health system (Pittsburgh, PA) between 2012 and 2016 was completed. The primary outcomes of interest were surgical intervention and the need to alter antibiotic treatment. Patient demographics, characteristics, and outcomes were recorded.

Results. A total of 215 cases of septic arthritis were identified, and 64% (n = 138) had S. aureus cultured. In this set, 36% (50/138) of these patients were identified with MRSA. Of the patients diagnosed with MRSA septic arthritis, 50% screened prior to admission had a positive result (8/16) and 48% screened during admission had a positive result (14/29). Compared with septic arthritis with other organisms, risk factors associated with S. aureus included history of intravenous drug use (OR: 4.3; CI: 1.7 to 10.8, P = 0.002) and being immunocompetent (OR: 0.3; CI: 0.1 to 0.6, P = 0.002). These infections were associated with concurrent infections of the spine (OR: 5.7; CI: 2.1 to 15.1, P = 0.0005). As compared with other organisms, there was a high prob-