313. Outpatient Treatment and Recurrence of Prosthetic Joint Infection (PJI) in Infectious Disease (ID) Physician Office Infusion Centers (POICs): A 2-Year Retrospective Multicenter Analysis

Brian S. Metzger, MD, MPH; John S. Adams, MD, FIDSA, FSHEA; Jorge R. Bernett, MD; Richard M. Mandell, MD, FIDSA; Richard C. Prokesch, MD, FACP, FIDSA; Carson T. Lee, MD; Thomas C. Hardin, PharmD; Claudia P. Schroeder, PharmD, PhD and Lucinda J. Van Anglen, PharmD; 1 Austin Infectious Disease Consultants, Austin, Texas; 2 Knoxville Infectious Disease Consultants, PC, Knoxville, Tennessee; 3 Infection Disease Doctors Medical Group, Walnut Creek, California; 4 Southern Arizona Infectious Disease Specialists, PC, Tucson, Arizona; 5 Infectious Disease Associates, Riverside, Georgia; 6 West Houston Infectious Disease Associates, Katy, Texas; 7 Heals Infusion Therapy, Sugar Land, Texas

Session: 54. Bone and Joint Infections
Thursday, October 4, 2018: 12:30 PM

Background. A significant complication of prosthetic joint replacement is the development of a PJI. Therapy includes prolonged IV antibiotics (IVAB), usually delivered in the outpatient setting. Follow-up (FU) in this population can be difficult, particularly for the treating ID physician. We report our experience treating PJIs in an ID POIC.

Methods. Retrospective chart review was conducted of patients (patients) with initial knee or hip PJI, who received 23 days of IVAB in 14 ID POICs from July 2015 to July 2017. Initial clinical success (ICS) was defined as no evidence of infection at the completion of outpatient parenteral antimicrobial therapy (OPAT), although continued oral antibiotics were allowed. Available FU patients were assessed at 6 months for recurrence and associated factors analyzed using χ² and Fisher's exact test.

Results. We evaluated 171 patients (122 knees, 49 hips) with a median age of 65 years (range 18–97) and 64% male. Infection occurred within 90 days of the implant in 40% (25% within 30 days). Pseudomonas spp. pathogens (43% MSSA, 43% CoNS, 13% MRSA) were isolated in 112 patients. Most commonly prescribed IVABs were vancomycin (41%) and cefazolin (37%). ICS was achieved in 163 patients (95%), independent of recurrence and associated factors analyzed using χ² and Fisher's exact test.

Conclusion. This real-world evaluation underscores the challenges of successful treatment of PJI. ICS was achieved in 95% of patients with a significantly lower rate of recurrence in patients with staphylococcal PJI (P = 0.004).

Disclosures. B. S. Metzger, Allergan: Speaker's Bureau, Speaker honorarium. L. J. Van Anglen, Merck & Co.: Investigator, Research grant.

314. Discordant Microbiology Cultures From Paired Osteomyelitis Bone Specimens Should Question the Current Approach to Evaluation

Neal Barches, MD, MPH; Barbara W. Trautner, MD, PhD, FIDSA; Cezarina Mindru, MD and Maria Rodriguez-Barradá, MD; 1 M.D. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas; 2 Baylor College of Medicine, Houston, Texas; 3 Internal Medicine- Infectious Disease, MD, M.D. DeBakey VA Medical Center, Houston, Texas; 4 Department of Medicine, Baylor College of Medicine, Houston, Texas; 5 Medical Care Line, Michael E. DeBakey Veterans Affairs Medical Center, Houston, Texas

Session: 54. Bone and Joint Infections
Thursday, October 4, 2018: 12:30 PM

Background. Published foot osteomyelitis series typically report treatment failure rates of 20% or more. The role of persistent vs. new infections in this treatment failure is unclear.

Methods. We identified treatment failure among all cases of probable or definite osteomyelitis at a single Houston hospital between 2011 and 2016. Treatment typically consisted of surgical resection of grossly affected bone and 2–12 weeks of antimicrobial therapy selected based on bone culture results. Treatment failure was defined as either: (1) unplanned resection of additional bone contiguous the previous area of treatment; or (2) leg (above-ankle) amputation. Cases were included if paired bone cultures (initial operation + reoperation for treatment failure) were obtained. Cohen’s kappa was calculated to estimate concordance between isolates seen at the initial and reoperation.

Results. 208 cases of definite or probable osteomyelitis were reviewed. Treatment failure occurred in 55 cases (26%), 35 of which had microbiology results from paired bone specimens. Initial cultures identified 70 bacterial and 1 fungal isolate. Repeat cultures identified 77 bacterial and 3 fungal isolates. Overall concordance was poor (kappa = 0.180). Species and group-specific concordance ranged from poor to moderate (see table). Staphylococcus aureus, pseudomonal Gram-negative aerobes, and anaerobes were the most common discordant bacteria to be seen at reoperation for treatment failure. Enterococcus appeared to be the most persistent organism, i.e., most commonly seen in both specimens.

Conclusion. Microbial isolates identified by conventional cultures at the time of reoperations for treatment failure differ significantly from those seen at the initial operation. Better diagnostic methods may help in understanding the degree the role of persistent unidentified microbes vs. new microbes in treatment failure.

Disclosures. B. W. Trautner, Paratek: Consultant, Consulting fee

315. Oral Vs. Intravenous Antibiotic Treatment for Gram-Positive Prosthetic Joint Infections: A Retrospective Study

Alexandre Coelho, Student; Olivier Robineau, MD; Marie Titecat, MD PhD; Sophie Putman, MD; Nicolas Blondiaux, PharmD PhD; Michel Valette, MD; Eric Beltrand, MD; Henri Mignaud, MD; and Eric Senneville, MD, PhD; 1 CH, Dron, Tourcoing, France; 2 Infectious Diseases, Dron Hospital, Tourcoing, France; 3 CHRU de Lille, Lille, France, 4 Dron Hospital, Tourcoing, France, 5 Roger Salengro Hospital, Lille, France

Session: 54. Bone and Joint Infections
Thursday, October 4, 2018: 12:30 PM

Background. Intravenous antibiotic infusion is the current standard for prosthetic joint infections (PJsIs) management. Antibiotic used for PJsIs have a good oral bioavailability, especially rifampin, suggesting that oral and IV route could be as efficient. Our aim was to compare the outcome of PJsIs treated by oral antibiotics to those treated intravenously.

Methods. A retrospective survey was done in two reference centers between 2014 and 2016 and included all patients presenting Gram-positive PJsIs. In these centers, patients suffering from Gram-positive PJsIs could receive IV or early oral antibiotic regimens (started the day final antibiogram were received). First, we compared these two groups in terms of demographic and infection characteristics. Then, the outcome, judged by the percentage of patient with a relapse or a new infection on the same site during the follow-up, was compared.

Results. Within this period, 87 patients were treated for Gram-positive PJsIs, 51 (59%) received early oral therapy and 36 were treated intravenously. Median age was 65 [IQR = 56–75], 50 (57%) were female. Overall, 18 cases suffered from polymicrobial infections containing at least one staphylococci. S. aureus was found in 30 (34%) cases and 7 (8%) strains were resistant to ampicillin. The median time of follow-up was 467 days [IQR=218–729]. The median time of treatment was 60 days [IQR=44–84]. When comparing the oral therapy group and IV group, we did not find any difference in terms of comorbidities, infection characteristics, type of surgery and infection severity. In the oral therapy group, the oral antibiotic regimen was started before day 7 following surgery for 33 (76%) individuals and before day 10 for 44 (86%). Treatment failures were observed in 9/36 (25%) and 12/31 (33%) (P = 1) in IV and oral therapy group, respectively.

Conclusion. Oral antibiotic treatment seems to be as efficient as an intravenous regimen to treat prosthetic Gram-positive prosthetic joint infections.

Disclosures. All authors: No reported disclosures.