203. Assessment of a Modified Antibiotic Prophylaxis Open Fracture Protocol Brandon Hill, PharmD, MD2; Kamla Sanasi-Bhola, MD, MD2; Stella Okoye, MD2; Margaret Madera, PharmD Candidate1; Janie Ferren, PharmD Candidate1; Julie Ann Justo, PharmD, MS, BCPS-AQ ID3 and P Brandon Bookstaver, PharmD, FCCP, FIDSA, AAHIVP1, Palmetto Health Richland, Columbia, South Carolina, 1University of South Carolina School of Medicine, Columbia, South Carolina, 2University of South Carolina College of Pharmacy, Columbia, South Carolina, 3Department of Clinical Pharmacy and Outcomes Sciences, University of South Carolina College of Pharmacy, Columbia, South Carolina
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Background. National guidelines support antibiotic prophylaxis for open fracture versus orthopedic surgery for fracture grade 0 and comprising of low-grade fractures. The purpose of this study was to assess a modified adult antibiotic prophylaxis open fracture protocol (AOFP) which recommended weight-based cefazolin for low-grade fractures or ciprofloxacin plus vancomycin for high-grade fractures.

Conclusion. Adult patients with open fractures admitted to Palmetto Health Richland between January 2012 and December 2016 were screened for study inclusion. Exclusion criteria were receipt of antibiotics for reasons other than open fracture, death prior to wound closure, and local admission time >48 hours after time of injury. Compliance to all elements of AOFP was assessed. Clinical endpoints including open fracture infection rates, epidemiology, and drug-related adverse events were compared between pre-implementation (January 2012 – December 2012) and post-implementation period (November 2015 – December 2016);

Results. Following exclusions 189 patients were included in the analysis (90 pre- vs. 99 post-AOFP, respectively). Post-AOFP, a 17% (16/93) adherence rate to all AOFP elements was found. Appropriate agents were selected in 82.8% (77/93). The most comparable AEs. ic-associated AEs were rare and comparable between groups. Change in median days of acute kidney injury, of open fracture site infections in pre- and post-AOFP groups, respectively. Incidence of acute kidney injury, Caudal diffusion adverse events were 23.3% (21/90) and 7.1% (7/99) in pre- vs. post-AOFP groups, respectively (P = 0.001). Infections primary caused by Gram-negative pathogens in pre-AOFP and Gram-negative organisms comprised 62 and 40% of open fracture site infections in pre- and post-AOFP groups, respectively. Incidence of acute kidney injury, Chlamydial infection adverse events were 23.3% (21/90) and 71.7% (7/99) in pre- vs. post-AOFP groups, respectively (P = 0.001). Infections primary caused by Gram-negative pathogens in pre-AOFP and Gram-negative organisms comprised 62 and 40% of open fracture site infections in pre- and post-AOFP groups, respectively.

Conclusion. Following exclusions 189 patients were included in the analysis (90 pre- vs. 99 post-AOFP, respectively). Post-AOFP, a 17% (16/93) adherence rate to all AOFP elements was found. Appropriate agents were selected in 82.8% (77/93). The most comparable AEs. ic-associated AEs were rare and comparable between groups. Change in median days of acute kidney injury, of open fracture site infections in pre- and post-AOFP groups, respectively. Incidence of acute kidney injury, Caudal diffusion adverse events were 23.3% (21/90) and 7.1% (7/99) in pre- vs. post-AOFP groups, respectively (P = 0.001). Infections primary caused by Gram-negative pathogens in pre-AOFP and Gram-negative organisms comprised 62 and 40% of open fracture site infections in pre- and post-AOFP groups, respectively.

Disclosures. P. B. Bookstaver

204. Pubic Osteomyelitis: Epidemiology and Factors Associated with Management Failure in Two French Reference Centers Tristan Ferry, MD, PhD1; Agathe Becker, MD2; Florent Valour, MD, PhD2; Thomas Perpoint, MD1; Loïc Bousell, MD, MD3; Alain Ruffon, MD, MD3; Frederic Laurent, DPharm, PhD2; Eric Senneville, MD, PhD2; Christian Chaliac, MD2; Philippe Dulac2; and Lyon BH Study group.1 Inserm 1111, UCB2, Hospices Civils de Lyon, Lyon, France, 2D Department, Regional Reference Center for Bji, Hospices Civils de Lyon, Lyon, France, 3Hospices Civils de Lyon - Hôpital de la Croix Rousse, Lyon, France, 4Hospices Civils de Lyon - Centre Hospices Civils de Lyon Sud-Beaulieu, Lyon, France, 5Laboratory of Bacteriology, Regional Reference Center for Bji, Hospices Civils de Lyon, Lyon, France, 6Infectious Diseases, Dron Hospital, Tourcoing, France
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Background. Pubic osteomyelitis (PO) is a neglected bone and joint infections (BJI), as its management is still poorly codified. We aim to describe PO epidemiology and to look for factors associated with management failure.

Methods. We performed a retrospective cohort study in two French reference centers including patients with PO in 2010–2016. Treatment failure was defined by clinical (persistence or recurrence of clinical signs) and/or microbiological failure. Factors associated with treatment failure were determined by univariate Cox analysis (hazard ratio [HR] and 95% confidence interval calculation). Kaplan–Meier curve was compared between groups by log-rank test.

Results. Twenty-five patients were included over 13 years (median age 67 years; 19 men, median ASA score 3). Six (24%) had a PO from haematogenous origin. Those were all monomicrobial infection, due to Staphylococcus aureus, mostly identified in young patients without comorbidities, especially in athletes. No surgery was required if no abscess or bone sequestrum were found. Nineteen patients (76%) had a post-operative chronic PO (developed from 1 month to 11 years after a pelvic surgery); 15 of them had history of pelvic cancer (60%); 12 received radium therapy at the site of infection (48%). Infection was polymicrobial in 68% of cases, including 32% of cases with multidrug-resistant pathogens. A clinical success was recorded in only 14 patients (48%). There was no relationship between time to PO and repeat ER visit/readmission. Nearly 30% of patients in Time#1 had PICC or OA-related ER visits/readmissions after discharge, while 0% did for Time#2 (P < 0.01).

Conclusion. Length of initial IV therapy and PICC line use continues to vary significantly for all elements of OA1. In our children's hospital, a shift towards earlier transition to oral therapy has been adopted steadily – and prior to national and planned local guidelines – with a general decrease in LOH, duration of IV therapy, PICC line issues following discharge, and overall improved outcomes. Pediatric OA1 management represents an ideal focus for institutional quality and antibiotic stewardship efforts.
207. Septic Arthritis due to Oral Streptococcal Species Following Intra-articular Injection: A Case Series and Retrospective Chart Review

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Background. Oral streptococcal species are a rare cause of septic arthritis. We hypothesized that one possible source of infection is oral bacteria from the mouth of a practitioner performing joint injection without a mask. While the use of a face mask is standard practice during lumbar puncture and other spinal procedures due to the risk of iatrogenic meningitis, mask usage during joint injection is not a standard recommendation.

Methods. The clinical microbiology laboratory database was reviewed to identify joint fluid cultures positive for oral streptococcal bacteria between January 2007 and December 2015. The corresponding patient charts were reviewed for evidence of joint injection within 90 days prior to the positive culture.

Results. We identified 18 cases of septic arthritis due to oral streptococcal species. Of those joint injection was performed prior to the development of acute septic arthritis in four (22%) cases. The implicated pathogen was Streptococcus mitis/oralis in two cases, Streptococcus sanguinis in one case, and Abiotrophia defectiva in one case. All four cases occurred in males over the age of 60 and affected native joints. Three of four patients had underlying osteoarthritis, and three of four had a history of diabetes. The patients all presented with acute worsening of joint pain and swelling 2-5 days after undergoing joint injection. Three cases involved corticosteroid injection and one followed an MRI arthrogram. All four patients underwent at least one surgical procedure (two required repeat irrigation and debridement) to treat the infection and received at least 4 weeks of antibiotic therapy.

Conclusion. Oral streptococcal species should be considered in the differential of causative species of septic arthritis in patients presenting with worsening pain after a joint injection. The use of a face mask during joint injection should be explored as a simple and inexpensive precaution to prevent this rare but serious complication.

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208. Clinical Comparison between Native Vertebral Osteomyelitis with Abscess vs Without Abscess in Clinical Features and Outcomes

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Background. It is well documented that native vertebral osteomyelitis (NVO) is accompanied by abscess formation (epidural, paravertebral, and psoas muscle) that is complicated by neurological deficit. There are few studies comparing between NVO with abscess and NVO without abscess in clinical features and outcomes.

Methods. We conducted a retrospective cohort study at St. Luke’s Int’l Hosp. in Tokyo, Japan (acute care hospital, 520 beds) from 2004 to 2015. Diagnosis of acute NVO was made by clinical signs and symptoms, and MRI. Clinical features and outcomes of NVO patients with abscess were compared with ones without abscess. Fisher’s exact test, Mann–Whitney U-test, and Kaplan–Meier curve with log-rank test were used in univariate analysis and the association to length of stay was analyzed by Cox-regression model controlling confounding.

Results. Among 122 patients with NVO, 83 patients (68%) had abscess (group A) and 39 patients (32%) had no abscess (group B). Median age: (group A: 69 vs. group B: 66, P = 0.641). Median length of stay (LOS) in hosp: (A: 48 vs. B: 43 days, P = 0.007) (Table 1). Group A had higher rate of neurological symptoms (16.9 vs. 2.6%, P = 0.035), blood cultures positivity (62.7 vs. 35.9%, P = 0.007), infective endocarditis (IE) (15.7 vs. 2.6%, P = 0.036), and longer duration of therapy (75 vs. 56 days, P = 0.025) than group B in univariate analysis. Also, group A had trend toward higher rate of methicillin-susceptible S. aureus (28.9 vs. 5.1%, P = 0.056). Kaplan–Meier analysis revealed LOS was significantly longer in group A (P = 0.013) (Figure 1). The result of Cox’s proportional hazards model suggested abscess was associated with longer LOS (Table 2). Blood culture positivity was independently associated with longer LOS. No statistically significant associations were observed between abscess and 90-day mortality (5.1 vs. 3.6%, P = 0.654), or neurological sequelae (6 vs. 0%, P = 0.227).

Conclusion. LOS of NVO patients with abscess was longer than those without abscess. In particular, LOS was significantly longer in patients with positive blood culture than those with negative results.

Disclosures. All authors: No reported disclosures.