Pneumonia (PJP) is inflammation of the gastric mucosa with Helicobacter pylori (H. pylori) is associated with gastric cancer, the highest incidence of which is observed in South Korea. The objective of this study was to evaluate the seroprevalence and risk factors of H. pylori infection in Korean HIV-infected patients.

Methods. In a hospital-based survey, HIV-infected patients attending Outpatient Department of Pusan National University Hospital were enrolled between October 2018 and January 2019. Socio-demographic information was evaluated using questionnaires, serological status of H. pylori infection was tested with commercial H. pylori serology kits (Helicobacter pylori IgG ELISA, IBL, Germany).

Results. A total of 362 patients were included in the study. Two hundred and Sixty-one patients (86.4%) were males and 41 (13.6%) were females. Their median age was 54 years (range, 23–81 years), median CD4+ count was 667 /μL (7–1,699 /μL). The overall seropositivity of H. pylori in HIV-infected patients was 30.1%. Age-specific seropositivity was as follows: 20–29 years, 12.5%; 30–39 years, 15.6%; 40–49 years, 38.6%; 50–59 years, 36.2%; 60–69 years, 27.9%; and ≥70 years, 18.2%. A lower seroprevalence of H. pylori was observed among patients younger than 40 years; however, it was not significant (P = 0.063). The risk factors associated with H. pylori seropositivity were alcohol consumption [adjusted odds ratio (OR): 1.99, 95% confidence interval (CI): 1.17 to 3.39, P = 0.011] and CD4 cell count ≥250/μL (OR: 4.32; 95% CI 1.51–12.36; P = 0.006).

Conclusion. HIV-infected patients had a lower seroprevalence of H. pylori compared with general population (30.1% vs. 49.1%). Alcohol consumption and CD4 cell count are worthy of further studies in H. pylori seropositivity.

Disclosures. All authors: No reported disclosures.

379. Clinical Management of HIV-associated Pneumocystis jiroveci Pneumonia in Rural Nigerian Communities: Public Health Interventions and Impact

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Session: 47. HIV Complications: Opportunistic Infections

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Background. Human Immunodeficiency Virus (HIV) patients are at increased risk of opportunistic infections and malignancies. Evaluation for the etiology of fever and/or cytopenia with conventional means such as cultures and serology can remain negative. Bone marrow aspiration or biopsy (BMAB) has the advantage of diagnosing disseminated infections, hematological abnormalities and oncological malignancies in HIV patients.

Methods. We performed a retrospective descriptive study of HIV patients with fever and/or cytopenia who underwent bone marrow aspiration or biopsy (BMAB). Patients with a diagnosis of HIV, 18 years and older who underwent BMAB in University Health (UH) Hospital or in UH clinics from January 2012 to February 2018 were included.

Results. There were a total of 42 patients who underwent Bone Marrow Aspiration or Biopsy. The median age was 41.5 years. Twenty-eight patients were Male and 14 were female. Preexisting Hematological malignancy was present in 10 patients at the time of BMAB. Average CD4 count at the time of BMAB was 92.8 patients were compliant to ART and 12 patients were compliant with clinic appointments. White Blood Cell (WBC) count below 4.4 cells / L was present in 30 patients at the time of BMAB. Disseminated Mycobacterium Avium Complex infection (2 patients), Disseminated Histoplasmosis (2 patients), Disseminated Cryptococcus (1 patient) and Parvovirus B19 (based on Immunohistochemistry, 1 patient) were diagnosed from BMAB. CD4 count of these 6 patients range from 0 to 12 at the time of BMAB. All 6 patients presented to the hospital with fever for evaluation. Average WBC count, Hemoglobin and platelet count in these patients are 4.1 cells / liter, 8.7 g/dL and 74.8 k/micro liter, respectively. All 6 patients were non compliant to HIV medications and clinic appointments.

Conclusion. Since the advent of Anti Retroviral drugs with excellent efficacy and early diagnosis of HIV patients, incidence of disseminated fungal and mycobacterial infections have decreased in the United States. But patients with low CD4 count and cytopenias warrant a Bone Marrow aspiration or Biopsy to make a clear and early diagnosis.

Disclosures. All authors: No reported disclosures.

380. Characterizing Host Factors, Treatment Strategy, and Clinical Outcomes of Group A Streptococcus Orthopneumonia

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Session: 48. Infections of Joints

Thursday, October 3, 2019: 12:15 PM

Background. The annual incidence of invasive β-hemolytic group A streptococcal infections in the United States is approximately 3.8 cases per 100,000 patients with 10–30% mortality. But data in GAS orthopneumonia is limited. We sought to characterize patient factors, medical and surgical management, and clinical outcomes from GAS orthopneumonia at our medical center.

Methods. A total of 12 patients with GAS orthopneumonia (necrotizing fasciitis, osteomyelitis, prosthetic joint infection, septic arthritis, or tenosynovitis) from...
Results. Twenty-six PMPJIs managed with DAIR were identified. Mean age of the infected patients was 66 years. 18 (69%) patients were female and 19 (73%) were Caucasians. Infected sites were hip in 15 (58%), knee in 10 (38%) and ankle in 1 (4%) patient. 22 (85%) patients had osteoarthritis, 3 (12%) had diabetes, 3 (12%) were on steroids and 1 (4%) had rheumatoid arthritis. Symptom onset of less than a week was noted in 14 (58%) and 3 or more weeks in 8 (31%) patients. Pain, swelling and drainage were present in 21 (81%), 13 (50%) and 18 (69%) cases. Fever on admission was noted in 7 (27%) patients. 11 (42%) patients were re-admitted in the following 12 months after DAIR. 2 (9%) patients developed superficial surgical site infection (SSSI) while 9 (38%) patients died in the first 90 days. 7 (27%) patients required additional debridement and antibiotics. 5 (19%) had good outcome with 3–6 months of antibiotics. 3 (12%) patients required long-term chronic suppressive therapy. One patient died from a cardiac event during follow-up.

Disclosures. All authors: No reported disclosures.

382. Difference in Pathogens Between Hip and Knee Prosthetic Joint Infection Michael Henry, MD; Milan Kapadia1; Joseph Nguyen; Barry Beaus, FIDSA (MD) and Andy O. Miller, MD;2 Hospital for Special Surgery, New York, New York;3 Weill Cornell University Medical College, New York, New York

Session: 48. Infections of Joints
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Background. There is contradicting evidence characterizing the difference in pathogens that cause hip and knee prosthetic joint infection (PJI). A possible difference in microbiota may inform choice in antibiotic etiology, prophylaxis, and empiric treatment. We sought to analyze a large cohort of PJIs to see whether there was a significant difference in pathogen between joints.

Methods. A retrospective cohort of hip and knee PJIs, from 2008 to 2016, were identified by ICD code and surgical codes. The PJI pathogen was identified from synovial or intra-articular tissue cultures. The Student’s t-test was used to compare continuous variables. Chi-square tests were used to compare the categorical variables to joint.

Results. 807 PJI cases were identified including 444 knees and 363 hips. There were no significant differences between hip and knee PJIs in age, sex, history of PJI, rheumatoid arthritis, Charlson comorbidity index and laterality. There was a higher frequency of diabetes in knee PJIs (25.3%) compared with hip PJIs (15.7%), P < 0.001. No significant difference was found in the prevalence of fungal, staphylococcal (including Staphylococcus aureus), streptococcal, or enterococcal pathogens between hip and knee PJIs.

Conclusion. In this single-center cohort, hip and knee PJIs are infected with similar pathogens. Multiple site studies are needed to characterize the microbiology of PJIs at a larger scale.

Disclosures. All authors: No reported disclosures.

383. Rheumatic Disease Patients Have More Culture Negative Prosthetic Joint Infections: Are There Clinical Differences? Milan Kapadia1; Andy O. Miller, MD; Allina Nocnen, PhD MPH2; Peter Solodov, MD; Susan M. Sepanek, PhD; Ashish Bhargava, MD;3 Ascension Health, Saint John Hospital and Medical Center, Grosse Pointe Woods, Michigan;4 Ascension St. John Hospital, Grosse Pointe, Michigan;5 Ascension St John, Grosse Pointe Woods, Michigan

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Background. Rheumatic disease (RD) patients are at increased risk for prosthetic joint infections (PJI), however, diagnosis is challenging because active RD may mimic joint infection. We aimed to assess the incidence of culture-negative (CN) PJI in a population of RD and osteoarthritic (OA) PJI using an institutional PJI registry. Baseline clinical differences between CN-RD and culture-positive (CP-RD) as well as the relationship of culture negativity to survivorship of the prostheses were also evaluated.

Methods. A retrospective cohort of hip and knee PJIs, from 2009 to 2016, were identified by ICD code and use of RD-specific medications. CN cases were defined as PJIs with no evidence of microbial growth in intraoperative cultures. Demographics, medications, microbiology, surgical therapy and outcome were abstracted. Baseline characteristics were evaluated using Fisher’s exact and Chi-Square tests. Kaplan-Meier estimates were used to calculate survivorship.

Results. 803 PJI cases were identified including 36 RD (33 rheumatoid arthritis and 3 systemic lupus erythematosus) and 771 OA. A higher proportion of RD PJI were CN (N = 10, 27%) vs. OA PJI (N = 109, 14%, P = 0.02). Fewer CN-RD cases met PJI histopathology criteria compared with CN-OA, (P = 0.08). On average, RD-CN were younger than OA-CN (59 vs 69, P = 0.01), but no different than RD-CP cases. One year survivorship of CN-OA and CN-RD were 87% and 66%, respectively and 10% difference was observed comparing CN-RD vs. CP-RD, no difference was observed comparing smoking, diabetes, or Charlson comorbidities, but a trend toward higher prevalence of prior PJI in the CN-RD group. Clinically, no differences were found in surgical treatment (P = 0.92) or use of biologics and DMARDs (P = 0.12) between CN and CP RD patients.

Disclosures. All authors: No reported disclosures.

381. Clinical Outcome of Polymicrobial Prosthetic Joint Infection Managed with Debridement, Antibiotics, and Implant Retention (DAIR) Babak Hooshmand, MD;1 Dimas Youssef, MD; Khalil M. Rieke, MD (ASCP)1 and Susan M. Sepanek, PhD; Ashish Bhargava, MD;2 Ascension Health, Saint John Hospital and Medical Center, Grosse Pointe Woods, Michigan;3 Ascension St. John Hospital, Grosse Pointe, Michigan;4 Ascension St John, Grosse Pointe Woods, Michigan

Session: 48. Infections of Joints
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Background. Polymicrobial (PM) prosthetic joint infections (PJIs) account for 4% to 37% of all PJIs. There is limited literature on surgical debridement, antibiotic and implant retention (DAIR) in PMPJIs. We aimed to assess clinical outcomes of PMPJIs managed with DAIR.

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

Results. Twenty-six PMPJIs managed with DAIR were identified. Mean age of the infected patients was 66 years. 18 (69%) patients were female and 19 (73%) were Caucasians. Infected sites were hip in 15 (58%), knee in 10 (38%) and ankle in 1 (4%) patient. 22 (85%) patients had osteoarthritis, 3 (12%) had diabetes, 3 (12%) were on steroids and 1 (4%) had rheumatoid arthritis. Symptom onset of less than a week was noted in 14 (58%) and 3 or more weeks in 8 (31%) patients. Pain, swelling and drainage were present in 21 (81%), 13 (50%) and 18 (69%) cases. Fever on admission was noted in 7 (27%) patients. 11 (42%) patients were re-admitted in the following 12 months after DAIR. 2 (9%) patients developed superficial surgical site infection (SSSI) while 9 (38%) patients died in the first 90 days. 7 (27%) patients required additional debridement and antibiotics. 5 (19%) had good outcome with 3–6 months of antibiotics. 3 (12%) patients required long-term chronic suppressive therapy. One patient died from a cardiac event during follow-up.

Conclusion. In our study, PMPJIs managed with DAIR had high readmission rates and deep surgical site infections. DAIR failure, noted in 23% of our cases, required implant removal within 12 months of follow-up.

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