875. Sex Differences in Academic Achievement and Faculty Rank in Academic Infectious Diseases

Jennifer Manne-Goehler, MD, DSc, MSc1, Neena Kapoor, MD2, Daniel Blumenthal, MD, MBA3 and Wendy Stead, MD4, 1Beth Israel Deaconess Medical Center, Boston, Massachusetts, 2Brigham and Women's Hospital, Boston, Massachusetts, 3Massachusetts General Hospital, Boston, Massachusetts and 4Infectious Diseases, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts

Session: 90. Featured Oral Abstract

Thursday, October 4, 2018: 4:05 PM

Background. Sex differences in faculty achievement in academic medicine have been described, but little is known about these differences in infectious diseases (ID). This study assesses differences in faculty rank between female and male infectious disease faculty with academic appointments at US medical schools.

Methods. We analyzed a complete database of US physicians with medical school faculty appointments in 2014. This database consists of a linkage between the American Association of Medical Colleges faculty roster and a comprehensive physician database from Doximity, a professional networking website for doctors and includes physician age, sex, years since residency completion, publications, National Institutes of Health grants, and registered clinical trials for all academic physicians by specialty. We estimated sex differences in key metrics of academic achievement, including publications and faculty rank, among faculty physicians within ID. Multivariable regression models with medical school-specific fixed effects were used to assess sex differences in full professorship by specialty and the relationship between these factors and achieving the rank of full professor within ID.

Results. Among 2,016 academic ID physicians [Female: 742 (37%)], women accounted for 48.1% of assistant professors, 39.7% of associate professors, and 19.2% of full professors, when compared with men at each level. Women faculty members were younger than men (mean: 48.4 years vs. 54.0 years, P = 0.001) and had fewer total publications (2.6 vs. 37.8, P < 0.001) and last-first author publications (mean: 16.7 vs. 32.2, P < 0.001). In adjusted models, the rate of full professorship (vs. assistant or associate) among female compared with male infectious disease physicians was large and highly significant (absolute adjusted difference = -8.0%; 95% confidence interval [CI]: -11.9% to -4.1%). This adjusted difference was greater in ID than in cardiology (-4.7%, 95% CI: -7.9% to -1.3%), hematology (-1.5%, 95% CI: -6.2% to 3.2%), or endocrinology (-0.2%, 95% CI: -4.9% to 4.6%).

Conclusion. Significant sex differences in publications and achieving the rank of full professor exist in academic ID, after adjustment for multiple factors known to influence these outcomes. Greater efforts should be made to address equity in academic ID.

Disclosures. All authors: No reported disclosures.

918. Typhoid Fever in the US Pediatric Population, 1999–2015, and the Potential Benefits of New Vaccines

Jarred McAtee, MD1; Gordana Derado, PhD2; Michael Hughes, MPH3; Anelia Bhattachar, PhD4; Felicita Medalla, MD, MS5; Kevin Chatham-Stephens, MD, MPH6; Grace D. Appiah, MD, MS, FAAP7 and Eric D. Mintz, MD, MPH8, 1Waterboro Disease Prevention Branch, Centers for Disease Control and Prevention, Atlanta, Georgia, 2Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, 3Atlanta Research and Education Foundation, Inc., Atlanta, Georgia, 4Division of Foodborne, Waterborne, and Environmental Diseases, US Centers for Disease Control and Prevention Atlanta, Atlanta, Georgia, 5Division of Foodborne, Waterboro and Environmental Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia

Session: 112. Bacterial Infections and Antimicrobial Stewardship

Friday, October 5, 2018: 8:45 AM

Background. Typhoid fever is a rare, but significant disease, potentially leading to significant morbidity and mortality. This study aimed to describe the epidemiology and clinical characteristics of children with typhoid fever in the US

Methods. We reviewed laboratory-confirmed Salmonella enterica serotype Typhi infections reported to NTFPS and antimicrobial resistance data on Typhi isolates in the National Antimicrobial Resistance Monitoring System (NARMS) from 1999 to 2015.

Results. Of 2,051 pediatric (<18 years) cases of typhoid fever, 80% had traveled internationally within 30 days of illness onset (most frequently to South Asia (82%)), 81% were hospitalized (median duration 6 days; range 0–77 days), and none died. Eight hundred twenty-seven (40%) were <6 years old; 219 (26%) were 6 months–2 years old. While 76% of pediatric cases were vaccine eligible (travelers <2 years old), only 6% were known to be vaccinated. Of 2,020 isolates tested for antimicrobial susceptibility, 1,211 (60%) had decreased susceptibility or resistance to ciprofloxacin, of which 277 (23%) were also resistant to ampicillin, chloramphenicol, and trimethoprim/sulfamethoxazole (multidrug-resistant [MDR]). None were resistant to ceftriaxone or azithromycin. MDR isolates were more likely in children than adults (16% vs. P < 0.05) and in travel-associated than domestically acquired cases (16% vs. P < 0.05).

Conclusion. Among pediatric cases of typhoid fever, 94% of currently vaccine-eligible travelers were unvaccinated. Emphasis on current vaccine indications and an effective pretravel typhoid vaccine for children between 6 months and 2 years old available during routine immunization visits could begin to reduce the burden of disease, and help prevent drug-resistant infections, in this vulnerable age group.

Disclosures. All authors: No reported disclosures.

919. Clinical and Microbiologic Characteristics Associated With Long-Term Orthopedic Complications Following Staphylococcus aureus Acute Hematogenous Osteoarticular Infections in Children

J. Chase McNeil, MD1; Eric Kok, BS2; Lauren Sommer, MS3; Jesus G. Vallejo, MD, FIDSA4; Kristina G. Hulten, PhD5; and Sheldon L. Kaplan, MD, FIDSA6, 1Pediatrics, Section of Infectious Disease, Baylor College of Medicine, Houston, Texas, 2Pediatrics, Yale College of Medicine and Texas Children's Hospital, Houston, Texas and 3Baylor College of Medicine and Texas Children's Hospital, Houston, Texas

Session: 112. Bacterial Infections and Antimicrobial Stewardship

Friday, October 5, 2018: 8:45 AM

Background. Staphylococcus aureus is the most common cause of acute hematogenous osteoarticular infections (AHOAs) in children. While the vast majority of patients do well, a small proportion experience significant morbidity, including chronic infection and pathologic fractures. We sought to describe clinical and microbiologic variables present on the index admission that may predict long-term orthopedic complications (OC).

Methods. Cases of S. aureus AHOAI were identified from 2011 to 2016 at Texas Children's Hospital (TCH). All cases were reviewed for the development of OC until April 1, 2018. OC included chronic osteomyelitis (CO), growth arrest/limb length discrepancy, avascular necrosis, chronic dislocation, and pathologic fracture (PF) with or without angular deformity. All S. aureus isolates were characterized by PCR for Panton–Valentine Leukocidin (PVL) genes and agr group. Statistical Analyses were performed with STATA.

Results. A total of 252 cases were identified meeting inclusion criteria (figure). Twenty-five (6%) developed OC of which, 50% were CO and 25% PF. Patients who developed CO more often had positive blood cultures during the index admission (P < 0.001), surgical drainage after hospital day 2 (33.3% vs. 8.8%, P = 0.02) as well as a longer time to 50% reduction in C-reactive protein (CRP; 9 vs. 7 days, P = 0.01). Patients who developed PF more often had infection due to PVL-positive organisms (83.3% vs. 38.6%, P = 0.03) and had a longer duration of fever after admission (9.5 vs. 2.5 days, P = 0.03). Overall, OC were associated with ICU admission (P = 0.04) and a greater proportion of patients with surgery after hospital day 2 (P = 0.04) as well as infection secondary to agr III isolates (P = 0.03). There was no statistically significant relationship between OC and patient age, affected bone, time to initiation of effective antimicrobial therapy, duration of intravenous therapy, or final antibiotic choice.