Background. Although Group B Streptococcus (GBS) has been recognized as an important cause of infections in adults, most studies have concentrated on patients with invasive disease. CDC estimates that there are >25,000 adult invasive cases in the United States/year. The objective of this study was to determine the burden of invasive and noninvasive GBS infections in hospitalized patients in Louisville, KY with the goal of determining the total burden of GBS infections in the United States.

Methods. We conducted a population-based, observational study of all hospitalized adults with GBS isolated from cultures and clinical evidence of active infection from 2014 to 2016 in a well-defined catchment area. Data regarding demographics, medical history, infection sites and microbiology were extracted from electronic medical records. If GBS was isolated from more than one clinical site, the most invasive or deepest site was considered the primary infected site.

Results. Of 1428 GBS isolates 352 were considered colonizations therefore 1076 infections were included. Fifty-one percent were males and the median age was 52 years. Twenty-four percent were black and 2% Hispanic. Sixty-six (6%) presented from a nursing home. The median length of hospital stay was 5.2 days and 31 (3%) died. Patients had the following comorbidities: 627 (59%) diabetes, 220 (21%) renal disease, 221 (21%) coronary artery disease, and 154 (14%) peripheral vascular disease. In 642 patients (69%) GBS was the only organism isolated (monomicrobial) and in 320 (30%) GBS was isolated from more than one clinical site. Two hundred and twelve (20%) of patients had isolates from normally sterile sites (invasive). The primary site of infection included 425 (40%) respiratory (soft tissue, 252; bone or joint, 115), 225 (21%) blood, 57 (5%) respiratory, 26 (2.4%) cardiovascular, and 25 (2.3%) abdominal.

Conclusion. To our knowledge, this is the first study to determine the total burden of both invasive and noninvasive GBS disease among adult hospitalized patients in the United States. Our results suggest that only 20% of cases are invasive indicating that the burden of GBS is up to five times higher than estimates based on invasive infections.

Disclosures. P. Peyrani, Pfizer Inc.: Employee, Salary. A. Quinn, Pfizer Inc.: Employee, Salary; B. L. Swerdlow, Pfizer Inc.: Employee and Shareholder, Salary.

2286. Revisiting Immune Interference: Evaluation of Immune Response to Yellow Fever Vaccine at Various Time Points Following Live-Attenuated Influenza Vaccination
Dana M. Blyth, MD; Zhaodong Liang, BS; Maya Williams, PHD and Clinton K. Murray, MD; Department of Medicine, Brooke Army Medical Center, Fort Sam Houston, Texas; 2Viral and Rickettsial Diseases Department, Naval Medical Research Center, Silver Springs, Maryland; 3Infectious Diseases Directorate, Naval Medical Research Center, Silver Springs, Maryland; 4FIDSA, 1st Area Medical Laboratory, Aberdeen Proving Ground, Maryland
Session: 244. Miscellaneous Vaccines Saturday, October 6, 2018: 12:30 PM

Background. Due to concerns for immune interference, current recommendations are to avoid other live virus vaccines for 30 days pre- and post-mass vaccination campaigns leading to interruptions in routine vaccination programs. During routine preparations for Operation United Assistance (OAU) which supplied humanitarian assistance during the Ebola epidemic, mass yellow fever vaccine (YFV) administration to deploying personnel was needed during ongoing live-attenuated influenza vaccine (LAIV) and YFV administration. This study is the first to compare seroconversion rates from medical records when given per guidelines (YFV) to rates when YFV is given 1-29 days post LAIV (NVBG).

Methods. All personnel who received LAIV concurrently or before YFV for OAU and had pre- and post-vaccination archived serum at the Department of Defense (DOD) were included. YFV was defined as YFV given 1-30 days after LAIV. This study is the first to compare seroconversion rates for YFV when given per guidelines (YFV) to rates when YFV is given 1-29 days post LAIV (NVBG). YFV seroresponse was determined by screening ELISA followed by confirmation with plaque reduction neutralization testing (PRNT) on all positive samples. YFV PRNT ≥1:20 was considered positive.

Results. Of 660 who met inclusion criteria, 507 were YFV (482 concurrently and 25 vaccinated ≥30 days post LAIV) and 153 were NVBG. Median age was 25 (IQR 22, 29) for both groups. Pre-vaccination serum was drawn a median of 154 days following YFV in both groups. Seroconversion rates were 98% for YFV and 95% for NVBG (P = 0.15). Median yellow fever titers were 320 (IQR 160, 640) in both groups post-vaccination. Seroconversion rates were 98% for those with LAIV and YFV concurrently (n = 471), 100%, 95%, 92%, 100%, and 100% for those with YFV on days 1-6 (n = 18), days 7–13 (n = 42), days 14–21 (n = 66), days 22–27 (n = 8), and ≥28 days (n = 44) post LAIV, respectively (P = 0.12).

Conclusion. In this healthy, adult population, YFV provided high levels of protection regardless of timing following LAIV.

Disclosures. All authors: No reported disclosures.

2287. Recently Approved HEPLISAV-B(R) [Hepatitis B Vaccine (Recombinant), Adjuvanted] Shows A Higher Proportion of Subjects Achieving Seroprotection With A More Consistent Immune Response Compared With Engerix-B(R) [Hepatitis B Vaccine (Recombiant)] in Three Comparative Trials
Randall N. Fyer, MD, PhD, MPH and Robert Jansen, MD; Dynavax Technologies Corporation, Berkeley, California
Session: 244. Miscellaneous Vaccines Saturday, October 6, 2018: 12:30 PM

Background. Although recombinant zoster vaccine (RZV) is recommended preferentially in adults aged ≥50 years in the United States, zoster vaccine live (ZVL) remains a recommended vaccine in immunocompetent adults aged ≥60 years and is preferred in adults aged ≥60 years and is currently or before YFV. Sixteen were excluded due to positive pre-vaccination PRNT. Of 307 who met inclusion criteria, 507 were YFV (482 concurrently and 25 vaccinated ≥30 days post LAIV) and 153 were NVBG. Median age was 25 (IQR 22, 29) for both groups. Pre-vaccination serum was drawn a median of 154 days following YFV in both groups. Seroconversion rates were 98% for YFV and 95% for NVBG (P = 0.15). Post-YFV serum was drawn a median of 154 days following YFV in both groups. Seroconversion rates were 98% for YFV and 95% for NVBG (P = 0.15). Post-YFV serum was drawn a median of 154 days following YFV in both groups. Seroconversion rates were 98% for YFV and 95% for NVBG (P = 0.15). Median yellow fever titers were 320 (IQR 160, 640) in both groups post-vaccination. Seroconversion rates were 98% for those with LAIV and YFV concurrently (n = 471), 100%, 95%, 92%, 100%, and 100% for those with YFV on days 1-6 (n = 18), days 7–13 (n = 42), days 14–21 (n = 66), days 22–27 (n = 8), and ≥28 days (n = 44) post LAIV, respectively (P = 0.12).

Conclusion. In this healthy, adult population, YFV provided high levels of protection regardless of timing following LAIV.

Disclosures. All authors: No reported disclosures.
Disclosures. R. N. Hyer, Dynavax Technologies Corporation: Employee and Shareholder, Salary and Stock options. R. Janssen, Dynavax Technologies Corporation: Employee and Shareholder, Salary and Stock options.

2288. Adherence to Hepatitis B Screening and Treatment Guidelines in Oncology Patients Starting Anti-CD20 Therapy
Anusha Govind, MD; Nathan L'Etile, MD; Roberto Fratamico, MD; Joanna Fidler-O'Hara, MD; and Joseph DeSimone Jr., MD, Infectious Disease, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania, 1Medical Oncology, Sidney Kimmel Cancer Center, Philadelphia, Pennsylvania
Session: 244. Miscellaneous Vaccines
Saturday, October 6, 2018: 12:30 PM

Background. Hepatitis B virus (HBV) reactivation is a common complication in the treatment of oncology patients when using anti-CD20 monoclonal antibodies (mAb) such as rituximab, obinutuzumab, and ofatumumab. In such patients, the reactivation of HBV is seen in up to 70% who are HBV DNA positive. Antiviral therapy in high-risk patients has been shown to improve outcomes.

Methods. This retrospective review evaluated patients at Thomas Jefferson University Hospital who received rituximab, obinutuzumab, or ofatumumab as a component of hematologic malignancy therapy between 2013 and 2016. We determined the number of patients who had appropriate HBV testing prior to therapy, the number who received appropriate antiviral therapy, and the number who developed reactivation of HBV and their outcomes.

Results. 402 patients received one of the above anti-CD20 mAbs between November 2013 and December 2016. Of these 402 patients, 52 (13.4%) did not have either HBsAg or HBeAg performed prior to anti-CD20 therapy. 39 (9.7%) patients had positive HBsAg or HBeAg prior to therapy. Of these 39 high-risk patients, only 16/39 (41.3%) were placed on appropriate antiviral therapy. Two of the 39 high-risk patients (5.1%), who were not started on antiviral therapy, developed HBV reactivation as a complication of anti-CD20 MAB therapy.

Conclusion. A significant number of patients were not appropriately screened with HBV markers prior to anti-CD20 therapy for hematologic malignancies at our institution. In addition, less than half of highrisk HBV patients received appropriate antiviral therapy. System-wide changes are anticipated to improve this process at our institution.

Disclosures. All authors: No reported disclosures.

2289. Accuracy of a Rapid Multiplex PCR Plus a Chromogenic Phenotypic Test Algorithm for the Detection of ESBL and Carbapenemase-Producing Gram Negatives Directly From Blood Cultures
Shahrokh Vasoos, MBBS, MRCGP, D(ABIM), D(ABMM), D(AB)P; Pei-Yun Hon, BSc; Sharon ST. Wei, BSc; Jonathan W.Z. Chia, MBBS; Shehara M. Mendis, MBBS; Ezhin Izharrudin, MBBS; Ray H. Lin, MBBS, MRCP; Po-Ying Chia, MBBS, MRCP; Rees C.S. Sim, BSc; Mark I.C. Chen, MBBS, MMed, PhD; Angela Chow, MBBS, MMed, MS, PhD; Joanne Young, FDN; David Lye, FRCGP, FAMS, FRCP; Christine Teng, MSc; Paul Tambayab, MBBS, MD, FSHEA; Rui Banerjee, MD, PhD; Robin Patel, MD, FIDSA, D(ABMM)1 and Partha P. De, MBBS, FRCPath2
1Infectious Diseases, National Center for Infectious Diseases and Tan Tock Seng Hospital, Singapore, Singapore, 2Infectious Diseases, Singapore General Hospital, Singapore, Singapore, 3Clinical Research and Innovation Office, Tan Tock Seng Hospital, Singapore, Singapore, 4Department of Laboratory Medicine, Tan Tock Seng Hospital, Singapore, Singapore, 5Tan Tock Seng Hospital, Singapore, Singapore, 6Infectious Diseases, SingHealth, Singapore, Singapore, 7Infectious Diseases, Tan Tock Seng Hospital, Singapore, Singapore, 8Saw Swee Hock School of Public Health, National University of Singapore, Singapore, Singapore, 9National University of Singapore, Singapore, Singapore, 10Division of Infectious Disease, National University Hospital, Singapore, Singapore, 11Division of Infection and Inflammatory Diseases, Vanderbilt University, Nashville, Tennessee, 12Division of Clinical Microbiology and Infectious Diseases, Mayo Clinic, Rochester, Minnesota
Session: 245. Molecular & Sequence Based Diagnostics
Saturday, October 6, 2018: 12:30 PM

Background. We studied the multiplex PCR panel (BioFire Blood Culture ID panel, “BCID”) with phenotypic testing using the Rosco Diagnostica Rapid ESBL Screen kit 98022 (RE) and the Neo-Rapid CARB kit 98024 (RC) for extended spectrum β-lactamase (ESBL) (carbapenemase producing Gram negative bacilli (CPGNB)) detection directly from blood culture bottles, in patients with Gram negative bacteremia.

Methods. The RE and RC kits were evaluated in a verification phase with 98 blood cultures, comprising 43 spiked with GNB: 23 Escherichia coli, 9 Klebsiella pneumoniae, 7 Enterobacter cloacae, 2 Serratia marcescens, one Pseudomonas aeruginosa, one Acinetobacter baumannii, and one Citrobacter freundii with varying resistance genotypes (11 CTX-M-15, 5 CTX-M-9, one SHV-18, one SHV-3, one TEM-10, 3 IMP, 4 KPC, 2 NDM, one OXA-23+OXA-51-like, OXA-232, one OXA-48, one SME-1, 1 VIM-1, 1 AmpC from reference and clinical isolate banks, and ATCC 25922), and 54 clinical blood cultures with GNB (5 phenotypic ESBL positive, one KPC, 48 no known β-lactamase). In a prospective phase, a further 123 clinical blood cultures positive for GNB were tested simultaneously with the BCID, RE and RC kits.

Results. In the verification phase, the RE kit detected 24/25 of ESBL-positive samples (sensitivity 96%, specificity 99%). The RE kit did not detect the 2 AmpC producers, and was positive for a K. oxytoca complex which is known to produce chromosomally encoded β-lactamases. The RC kit detected 11/12 of CPGNB (sensitivity 50%, specificity 100%). It missed OXA-23+OXA-51-like, OXA-232, OXA-48, SME-1 and VIM CPGNB (weak carbapenemases), but detected NDM, KPC, IMP. In the prospective phase, the RE kit detected 20/20 ESBL-positive samples (sensitivity 100%). The single OXA-48 positive sample was detected by both the RE and RC kits. The 123 blood cultures had a total of 125 panel-represented targets detectable by BCID. The BCID detected 124/125 (missed one K. pneumoniae in a polymicrobial bacteremia), and there were 3 Proteus false-positives (sensitivity 99%, specificity 98%). No KPC-positive samples were detected by BCID.

Conclusion. An algorithm comprising the BCID and the RE/RC kits applied to positive blood cultures allows both rapid and accurate pathogen identification and detection of ESBLs and some carbapenemases (e.g., KPC, NDM, IMP). This may allow the institution of timely, directed therapy.

Disclosures. S. Vasoos, bioMérieux: Grant Investigator, Research support. Rosco Diagnostics: In-kind support, Research support. R. Banerjee, Accelerate Diagnostics, Biomerieux, BioFire: Grant Investigator, Research grant and Research support. R. Patel, CD Diagnostics, BioFire, Curetis, Merck, Hutchison Biofilm Medical Solutions, Accelerate Diagnostics, Allergan, and The Medicines Company: Grant Investigator, Research grant - monies paid to Mayo Clinic. Curetis, Specific Technologies, Selux Dx, Biomerieux, BioFire: Grant Investigator, Research grant and Research support.