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Background: Rates of invasive infections caused by caused group B Streptococcus (GBS) are increasing among adults. The burden of noninvasive GBS infections, including pneumonia, has not been well characterized. Here, we compare comorbidities and mortality associated with invasive and noninvasive pneumonia caused by GBS. Methods: Using the Veterans' Health Administration national data warehouse, we studied a retrospective cohort review of veterans diagnosed with GBS pneumonia between 2008 and 2017. Invasive pneumonia was defined as blood cultures positive for GBS associated with an order for a chest x-ray and an International Classification of Disease (ICD) code for pneumonia. Noninvasive pneumonia was defined as a respiratory culture positive for GBS associated with both an order for a chest x-ray and an ICD code for pneumonia among patients with negative or without blood cultures. Patients with respiratory cultures positive for GBS without either an associated chest x-ray or ICD code for pneumonia were considered colonized. We compared demographics, comorbid conditions, and mortality among patients with invasive and noninvasive GBS pneumonia. Results: Between 2008 and 2017, we detected 706 cases of invasive GBS pneumonia, 1,244 cases of noninvasive GBS pneumonia, and 1,470 cases of respiratory colonization with GBS. Most patients were male (97%), with an average age of 69.0 years (SD, 12.0 years). The prevalence of several comorbid conditions differed between those with invasive and noninvasive disease: diabetes mellitus (61% and 46%, respectively); chronic pulmonary diseases (53% and 65%, respectively); chronic heart disease (58% and 44%, respectively), chronic kidney disease (43% and 27%, respectively). Mortality was similar among those with invasive and noninvasive GBS pneumonia at 30 days (17% and 18%, respectively) and at 1 year (38% and 43%, respectively) (Fig. 1). Conclusions: We identified important differences in underlying comorbid conditions between patients with invasive and noninvasive GBS pneumonia, which may give rise to differences in their clinical presentation. Overall mortality, however, was similar: more than one-third of patients with GBS pneumonia died within 1 year. These findings indicate that noninvasive GBS pneumonia is an important clinical entity.

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## Presentation Type:

Poster Presentation

Surgical Site Infections with Predominance of Multidrug Resistant in Benin: A Multicenter Study

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Background: Surgical site infections remain common and widespread; they contribute to increasing antimicrobial resistance among the etiological agents. Antimicrobial resistance is the ability of a microorganism like bacteria to stop an antimicrobial from working against it. This study was conducted to determine the spectrum of bacterial isolates from surgical site infections and their susceptibility patterns. A secondary outcome was to compare bacterial identification by a local lab and a European one. Methods: This descriptive cross-sectional study was conducted between January and August 2019 in 6 public hospitals in Benin. Pus specimens were processed using standard microbiological procedures, and identification was performed using the analytical profile index (API). Antimicrobial susceptibility testing was performed in Benin following the modified Kirby-Bauer disk-diffusion technique and was confirmed in Belgium by MALDI-TOF mass spectrometry. A second antimicrobial susceptibility test was performed using BD Phoenix automated microbiology system (Becton Dickinson). Clinical data of enrolled patients were obtained from hospital records. Results: The mean age of patients was 32  $\pm$  11 years (range, 18–76). The median time for surgical site infections was 9 postoperative days. Of the 229 patients from whom wound swabs were collected, 195 (85.15%) showed positive aerobic bacterial growth. In total, 164 pathogenic bacteria were isolated, including 41 gram-positive organisms (25%), 78 gram-negative fermentative bacteria (47.5%), and 45 gramnegative nonfermentative bacteria (27.5%). We observed 3 discrepancies between API technique and MALDI-TOF. Two Klebsiella pneumoniae and 1 Pseudomonas spp (API) versus, respectively, Klebsiella varicola and Pseudomonas mendocina (MALDI-TOF). The most prevalent bacterial species were E. coli (31%), followed by S. aureus (25%), Pseudomonas aeruginosa (18%), and Klebsiella pneumoniae (11%). Of the 41 S. aureus, 26 (63,41%) were methicillin-resistant Staphylococcus aureus (MRSA), and 3 of these were carrying both MRSA and induced clindamycin resistance (ICR). Extended-spectrum β-lactamase (ESBL)-producing Enterobacteriaceae were observed in 60 of 78 isolates tested (77%). All of 2 Morganella morgannii and 89% of K. pneumoniae were ESBL producers. Conclusions: Among S. aureus, 2 of 3 were MRSA, whereas almost K. pneumo*niae* and *E. coli* were ESBL producers. Three strains are pan-drug resistant in nonfermentative bacteria, and no isolate was susceptible to all antibiotics. These findings are of high interest for better management of patients and control of antimicrobial resistance in Benin.

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