Free Paper Presentation 8: Bacterial Infections  
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Meeting Room 311B

**PL-008 Risk factors of multi-drug resistant Acinetobacter baumannii outbreak in a teaching county hospital**

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**Background:** Over the last four decades, many nosocomial outbreaks of Multi-Drug Resistant Acinetobacter baumannii (MDR-AB) have been reported. In the spring of 2009, an outbreak of MDR-AB at Kern Medical Center (KMC) was detected. The purpose of this study was to perform an outbreak investigation and to identify risk factors of acquiring MDR-AB.

**Methods:** Retrospective study utilized microbiology and infection control line listing data during the outbreak at KMC (April 2009-January 2010). MDR-AB was defined as resistant to three main antibiotic classes (Cephalosporins, Fluoroquinolones and Carbapenems). Demographics, comorbidities and potential risk factors were evaluated.

**Results:** During this outbreak total of 43 cases (N = 43) were identified. Among these 63% were male. Age group of 40-60 years old had the highest incident. The first positive culture in 65% of cases developed during admission to Intensive Care Unit (ICU). The majority of cultures (72%) were from respiratory tract followed by urine and wound. Microbiological findings revealed identical susceptibility pattern to antibiotics among all the isolates of MDR-AB (Susceptible to Tigecyclin and Colistine and resistant to all other classes of antibiotics). Subsequently, Pulse Field Gel Electrophoresis study of isolates from 13 patients plus 6 environmental cultures confirmed an indistinguishable clone of MDR-AB. 81% of cases had endotracheal intubation. 72% had exposure to operating room. 60% had admission to ICU and 51% to surgical services. Admission to ICU [RR: 2.7 (95%CI: 1.3–5.7); (P < 0.01)] and endotracheal intubation [RR: 15 (95%CI: 1–233); (P = 0.05)] were significant risk factors for acquisition of MDR-AB in this outbreak.

**Conclusion:** Admission to Intensive Care Unit and endotracheal intubation were statistically significant risk factors for acquisition of Multi-Drug Resistant Acinetobacter baumannii. Careful attention to risk factors in conjunction with infection control interventions resulted in complete control of this outbreak.

**OL-058 Increasing resistance and clonal transmission of Shigella sonnei in diarrheal patients between 2002 and 2007 in Beijing**

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**Background:** Shigellosis causes diarrhea in humans from both developed and developing countries. Specially S. sonnei has increased obviously and become the dominant serotype in Asia recent years. In this study, we evaluated the antibiotic resistance and prevalence clonal as well as its related risk factors of S. sonnei so that provide baseline data for developing treatment and prevent guidelines appropriate in the future.

**Methods:** From January 2002 to December 2007, a total of 362 S. sonnei isolates were isolated from diarrheal patients in Beijing of China.

**Results:** Total 272 S. sonnei strain isolated from 272 diarrheal patients including 52 inpatients and 220 outpatients, whose age is from 1–88 years old and average is 17.2±15.9 years old. S. sonnei serotype was responsible for 24.5% in 2004 and 55.29% in 2007 of episodes. Antimicrobial susceptibility tests revealed high resistance levels were sulfamethoxazole/trimethoprim (43.8%), ampicillin (43.8%), piperacillin (41.9%) and ceftriaxone (18.0%). Among 272 S. sonnei isolates, 263 (96.7%) were determined to be serotype in diarrheal patients of Beijing. The type A2 was the most genotype and take 86.6%, 82.1%, 53.8%, 30.9% and 42.9% from 2002 to 2007 except 2003 respectively. The resistant patterns to ampicillin (P < 0.0001) and ceftriaxone (P = 0.0310) of S. sonnei were statistically related to the A2 genotype clonal transmission.

**Conclusion:** This study shows shigella sonnei are becoming the dominant pathogen of diarrhea in Beijing of China. The high resistant rate of antibiotic was sulfamethoxazole/trimethoprim, ampicillin, piperacillin and ceftriaxone. There are clonal are spreading in Beijing, which is related to the resistant patterns to ampicillin and ceftriaxone of S. sonnei.