**OL-033** Detection of ESBLs and AmpC enzyme produced by *Enterobacter cloacae*

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**Objective:** To establish and evaluate a new method named five-disk agar diffusion method which can test ESBLs and AmpC of *Enterobacter cloacae* (*E. cloacae*) at the same time. The regular clinical methods, four-disk test which detect the AmpC and the double-disk synergy test which detect the ESBLs were compared.

**Methods:** Strains of *E. cloacae* were isolated and identified by automatic microbe system VITEK; ESBLs and AmpC enzyme were determined by five-disk agar diffusion method, four-disk test and double-disk synergy test, respectively.

**Results:** In 33 strains of *E. cloacae*, there were 12 (36.4%) strains produced ESBLs, 3 (9.1%) strains produced AmpC, and 7 (21.2%) strains produced both ESBLs and AmpC enzymes by five-disk test. There were 9 (27.3%) strains produced AmpC enzyme by four-disk test. Besides, there were 20 (60.6%) strains produced ESBLs by double-disk synergy test. Compared with four-disk test and double-disk synergy test, the coincidence rates of five-disk synchronous test were 90% and 95% respectively. The positive rates of ESBLs by five-disk test and double-disk test have no significance (P > 0.05). The positive rates of AmpC enzyme by five-disk test and four-disk test also have no significance (P > 0.05).

**Conclusion:** Five-disk test is simple, rapid and suitable for assay and differentiation of producing AmpC or ESBLs among *E. cloacae*. Because allows for testing of AmpC and ESBLs Enzyms on a single plate, it is also more cost-effective.

**OL-034** In vitro activity of daptomycin against *Staphylococcus epidermidis*, *Staphylococcus aureus*, *Enterococcus faecium* and *Enterococcus faecalis* isolates at a general hospital

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**Background:** Daptomycin is a new lipopeptide bactericidal antimicrobial agent and introduces a new mechanism of action against Gram-positive bacteria.

**Objectives:** To determine the in vitro activity of daptomycin against clinical isolates of *S. aureus*, *S. epidermidis*, *E. faecium* and *E. faecalis* from inpatients hospitalized in the intensive care unit of our hospital.

**Methods:** 235 non-duplicate isolates were chosen for susceptibility testing in 2008. All patients had the clinical signs and symptoms of sepsis. This collective comprised 55 isolates of *S. aureus* including 28.4% MRSA, 104 of *S. epidermidis* including 42.4% MRSE, 48 isolates of *E. faecalis* and 27 isolates of *E. faecium*. Identification and routine antibiograms of the isolates were carried out using the Vitek 2 automated system (BioMerieux®, Marcy l’Etoile, France). Minimum inhibitory concentrations (MICs) of daptomycin was determined by the agar dilution method according to Clinical Laboratory Standards Institute (CLSI) guidelines.

**Results:** All strains tested of *S. aureus* and *S. epidermidis* were susceptible to daptomycin (MICs ≤ 1 μg/mL) as well as all strains of *E. faecium* and *E. faecalis* (MICs ≤ 4 μg/mL). At established CLSI breakpoints for vancomycin (4 μg/mL) 100% respectively, of the all strains was susceptible. At established CLSI breakpoints for tigecycline (1 μg/mL), 98% of the *S. aureus*, 99% of the *S. epidermidis* and 98% of the *E. faecium* and *E. faecalis* were susceptible. MICs were ranging between 0.01–4 for *S. aureus*, 0.01–4 for *S. epidermidis*, 0.25–4 for *E. faecalis* and 0.5–4 for *E. faecium*, respectively.

**Conclusions:** The excellent in vitro bactericidal activity of daptomycin presents the potential role of treatment of severe infections due to these bacteria.

**OL-035** A novel sequence-based coa genotyping method to discriminate nosocomial methicillin resistant *Staphylococcus aureus* isolates

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**Background:** To evaluate a novel methicillin resistant *Staphylococcus aureus* genotyping method based on coagulase (coa) gene sequence.

**Methods:** Ninety nosocomial MRSA strains isolated from a Chinese university hospital were studied with *pvI, SCCmec*, spa, MLST, a novel sequence-based coa typing methods and antibiotic resistance features.

**Results:** The prevalent strains were ST239, ST641 or
Detection Streptococcus pneumoniae and identification of serotype in cerebral spinal fluid of childhood bacterial meningitis in China

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Objective: We aimed to a) applying PCR for identification of S. Pneumoniae pneumolysin from cerebral spinal fluid samples of patients with bacterial meningitis; b) apply nested PCR for detection of serotype (serogroups) of S. pneumonia cpsA-cpsB combined with sequencing and serotype (group) specific PCR.

Methods: From January 2006 to December 2008, a total number of 111 CSF samples of cases strictly met bacterial meningitis diagnosis criteria were investigated.

Results: Combining positive finding by all PCRs and culture, the positive ratio of S. pneumoniae meningitis was 14.4% in this study. The serotype was identified in 9 cases. The distribution was two serotype 14, two serotype 10A, and one for each serotype 2, 5, 19F, 9N and 23 F separately. It was different with the carriage studies in China and others with respiratory infection studies.

Conclusions: Serotype study including more bacterial meningitis cases should be included to obtain a more complete description of invasive S. pneumoniae serotype distribution.