Poster Presentations

**Poster Presentation – Antibiotics including MRSA**

**PP-001** Study on relationship between active efflux system in methicillin-resistant Staphylococci aureus and multi-antibiotic resistance

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**Objective:** To study the active efflux gene qacA/B, qacB and qacC in Methicillin-resistant Staphylococcus aureus (MRSA) and to analyze their effect on the multi-drug resistance of MRSA.

**Methods:** Primers of active efflux gene (qacA/B, qacB qacC) were designed. A total of 80 clinical isolates of MRSA were amplified respectively by polymerase chain reaction (PCR) with above mentioned primers and the PCR products were separated by electrophoresis in order to investigate the active efflux gene and to analyze their resistance.

**Results:** 19 of 80 strains MRSA had qacA/B, the detection rate was 23.75%; 18 strains had qacB, the detection rate was 22.5%, and 34 strains had qacC gene, the detection rate was 42.5%. Detected genotypes were multi-drug resistant, the resistance rate was 30.0%-100%, but all strains were sensitive to vancomycin. The resistance rate was higher in the presence of qacA/B, qacB gene of MRSA than qacC gene.

**Conclusion:** MRSA have many kinds of active efflux systems such as qacA/B, qacB and qacC, which play a very important role in multiple antibiotic resistances.

**PP-002** Retrospective analysis of antibiotic resistance of urogenital mycoplasma

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**Objective:** NGU is one of the major STDs, and many of them are caused by urogenital mycoplasma. As the detection rate of mycoplasma from urogenital tract infection rising and the irregular use of antibiotics, the drug resistance of urogenital mycoplasma is rising gradually. Therefore, in order to provide some useful information to the clinical therapy, 18 kinds' antibiotic resistance rates of Uu and Mh were analyzed.

**Methods:** The articles from the China’s medical database during 2003–2007 reported urogenital infections caused by Uu and Mh were collected. There are 71 articles which are referred 14 provinces, 3 cities. The total strains of Uu and Mh infections from these articles were summed. Mean resistance rates about the 18 common antimicrobial agents in clinical therapy were calculated. Simultaneously, the differences among drug resistant rates in different regions were compared by χ² test in SPSS 13.0.

**Results:** The drug-resistant rate of Uu and Mh to the same drug is different and the resistant rate of the effective drug in each type of antibiotics in single infection is less than combined infection. The highest resistant rate of single Uu, Mh and combined infection were Ciprofloxacin 60.78%, Erythromycin 64.99% and Lomenfloxac 80.2% respectively. And the most sensitive drugs for them were pristinamycin 3.08%, Lincomycin 7.82% and Josamycin 17.85% respectively. Meanwhile, the resistant rates in difference areas were different.

**Conclusion:** The antimicrobial susceptibility test is necessary in clinical practice, by that we can treat these Mycoplasma infectious diseases with higher effective, lower cost.

**PP-003** Occurrence of methicillin resistance mecA gene among Staphylococcus spp. isolated from burn patients at Taleghani burn hospital

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**Aim:** The aim of this study was to know the prevalence of methicillin resistance among clinical isolates of Staphylococcus spp. from burn patients and comparison of PCR detection of mecA gene and conventional susceptibility testing.

**Materials and methods:** A total of 185 clinical staphylococcal isolates were evaluated for susceptibility to oxacillin by disk diffusion method and for presence of mecA gene using the polymerase chain reaction. We also used cefoxitin disk, E-test and agar screen by MH agar, each containing 4 and 6 microgram of oxacillin/ml to confirm our data.

**Results:** The frequency of MRSA and MRSCoN by Oxacillin disk and PCR were 89% & 60% respectively. We also determined the mecA gene based PCR assay and compared to E-test for detection of MICs. More than 93% of the S. aureus isolates were methicillin resistant with MIC values more than 256 μg/ml. Similarly, 15% of Coagulase negative staphylococci were methicillin resistant with MIC value more than 256 μg/ml and 83% in a range between 0.6-6 μg/ml. The cefoxitin disk diffusion test for predicting mecA-mediated oxacillin resistance in Staphylococci gave better results than oxacillin disk for predicting mecA in S. aureus and Coagulase negative staphylococci.

**Conclusion:** MRSA screen test accurately & rapidly detected the oxacillin resistant among the burn patients isolates. This procedure can be useful for those labs which do not have PCR facilities.