

or intermediate to ertapenem and the emergence of *P. mirabilis* isolates resistant to imipenem.

Acinetobacter baumannii showed a worryingly high level of resistance: 9/10 strains resistant to cefepime, 8/10 to carbapenems.

Conclusions: Over 40% of skin and soft tissue infections are produced by Gram-negative bacteria with increased antibiotic resistance. The level of MRSA was over 30%, higher than what we found in former studies performed in this clinic.

OL-049 Epidemiology and molecular characteristics of community-associated methicillin-resistant and methicillin-susceptible *Staphylococcus aureus* from skin/soft tissue infections in Beijing Children's Hospital, China

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Background: Recently, community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA) have rapidly emerged worldwide. And majority of CA-MRSA infections are skin and soft tissue infections (SSTIs) involving children without health care-associated risk factors.

Methods: Prospective community-acquired *S. aureus* SSTIs surveillance was conducted at the Beijing Children's Hospital, Beijing, China, for a 12-month period from August 1, 2008, to July 30, 2009. Susceptibility to 12 antimicrobials was determined by the agar dilution method. Genotypic characteristics of CA-MRSA isolates were tested by SCCmec typing, *spa* typing, and multilocus sequence typing (MLST). Panton-Valentine leukocidin gene was detected. *spa* typing analysis of 120 MSSA isolates was performed, followed by pulsed-field gel electrophoresis and MLST of a selected number of isolates.

Result: Of 1104 cases, 31.8% (351) were community-acquired *S. aureus*. The most common lesions caused by community-acquired *S. aureus* strains were abscess (33.9%), paronychia (26.5%), and omphalitis (17.4%), followed by wound infection (14%), impetigo (4%), furuncles (2%), congenital deformity infection (1.4%), and carbuncle (0.9%). CA-MRSA accounted for 4% (14) of *S. aureus*. Among 14 CA-MRSA and 120 MSSA isolates tested, 100% and 91.7% were multidrug resistant, respectively. ST59-MRSA-IVa-t437 (42.9%) was the most common form of CA-MRSA. The most common *spa* types among MSSA were t084 (8.3%), t091 (5.8%), t034 (5%), t127 (4.2%), t002 (4.2%), and t796 (4.2%). No predominant *spa* type was seen. Of the MSSA isolates that could be classified into *spa*-CCs, 15.0% had a genetic background observed in CA-MRSA clones (*spa*-CC437, *spa*-CC342, and *spa*-CC377). 71.4% of CA-MRSA and 4.17% of MSSA isolates harbored *pvl*.

Conclusion: CA-MRSA infections are not common among Chinese children with SSTIs. ST59-MRSA-IVa-t437 is circulating in this community. And MSSA strains have diverse genetic backgrounds.

OL-050 Clinical and economic impact of imipenem-resistant *Acinetobacter baumannii* in a teaching hospital in China

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Background: The description of imipenem-resistant *Acinetobacter baumannii* (IRAB) strains is increasingly more common, but the impact of this antimicrobial resistance on

clinical and economic outcomes among hospitalized patients is not very clearly now.

Objective: To investigate the impact of antimicrobial resistance on clinical and economic outcomes among hospitalized patients with IRAB infection in a tertiary care university teaching hospital in China.

Methods: A retrospective matched case-control (1:1) study was performed to compare the differences in clinical and economic outcomes of patients with IRAB infection and patients with imipenem-susceptible *A. baumannii* (ISAB) infection at a tertiary care university teaching hospital in China from January 2007 to June 2009. Case patients were matched to control patients on the basis of sex, age, severity of underlying diseases, source of infection, duration of the same period (± 3 months) and length of hospital stay before onset of infection.

Results: One hundred and thirty eight (90.8%) of 152 cases with IRAB infection were eligible for the study and matched with appropriate controls. The crude mortality rate for IRAB infection patients was higher than that for ISAB infection patients significantly (39.1% vs 20.3%; $P=0.001$).

For the 72 matched case-control pairs had concordant outcomes, cases and controls had a significantly difference in length of ICU stay (14.5 days vs 0 days; $P=0.05$), total hospital stay (28.5 days vs 23.0 days; $P=0.014$), total hospitalization cost (US\$ 13487.2 vs US\$ 6933.9; $P=0.001$), and antibiotic therapy cost (US\$ 2388.0 vs US\$ 1260.6; $P<0.001$) after the onset of infection.

Conclusions: Patients with IRAB infection had a higher mortality rate and greater medical costs than patients with ISAB infection.

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PL-011 Plasmid based DNA vaccines against tuberculosis

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TB is a pre-historic disease and it is a significant cause of morbidity and mortality in human and cattle, in many parts of world. The problem has further exacerbated due to emergence of increasingly more resistant strains of *M. tb* and failure of BCG vaccine.

By keeping in view, DNA vaccination which is more efficacious and cost effective way to protect against TB, six *M. tb* genes (*hspx*, *cfp10*, *ag85a*, *ag85b*, *ag85c* and *esat6*) were selected and used in this study. The genes were cloned in pcDNA3.1 Topo (Invitrogen, USA) vector with Kozak sequences upstream the ATG and finally ligated in pND-a mammalian expression vector. The cell line expression of the constructs were checked by Western blots analyses.

All of the *M. tb* gene constructs in pND gave good expression under *in vitro* conditions except *esat6* gene. The endotoxin free pND-*M. tb* gene constructs were subjected to eight weeks old female Balb/c mice @ of 50 μ g DNA/leg intramuscularly and 25 μ g interdermally. The animals were divided into six groups including positive and negative control groups. Eight animals were used for *hspx*-pND vaccine, eight for *cfp10*-pND vaccine, two for *esat6*-pND vaccine and two for equally mixed (*ag85a*, *b* and *c*)-pND vaccines. Blood collection was done by tail bleeding and