

and RAPD4, with environmental resource. The major RAPD profile was RAPD1 profile (n=64, 50.4%), which includes 31 (72.1%) MDR isolates with one environmental reservoir. In summary we found three different profiles for MDR strains. Different RAPD profiles suggested the different exogenous or endogenous sources of infection.

**Conclusion:** Our findings highlighted the need for further attention to disinfection inanimate hospital environment to limit transfer of *P. aeruginosa* in this BU; moreover, use of some antimicrobial agents must be restricted.

**PP-017** The primary investigation of catheter-related infection in severe patients of emergency intensive care unit of Ruijin Hospital

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**Background:** Infection control is of key importance especially in critically ill patients. We investigated catheter-related infections retrospectively in severe patients in Emergency intensive care unit (EICU) in our hospital in order to adopt effective measures to decrease mortality in severe patients.

**Methods:** The patient's data (from May, 2008 to January, 2009) were collected retrospectively, including ICU stay, day of catheterization (central line, urinary catheter, artificial airway), number of catheter infection and catheter-related bloodstream infection, number of catheter-related urinary system infection, number of hospital-acquired pneumonia (HAP) and ventilator-associated pneumonia (VAP), and microbiological culture results of sputum at different stages, respectively. Catheter-associated infection rate (per 1000 device-days) was calculated according to the National Nosocomial Infections Surveillance (NNIS) System.

**Results:** A total number of 153 severe patients were enrolled in the study and the total hospitalization day was 3023. Catheter-associated infection rate (per 1000 device-days) was 6.89 for central catheter, 8.91 for urinary catheter and 33.11 for artificial airway. The incidence rate of HAP is 21.57%, of which 44.12% was VAP. 84.62% of patients received mechanical ventilation more than 7 days presents VAP. The main pathogens of HAP were gram negative bacteria, 81.64% (80/98), followed by gram positive bacteria, 81.64% (18/98), which was mainly composed of MRSA(+) bacteria (77.78%). Non-fermentation gram negative bacilli (NFGNB) were the major component of gram negative bacteria (67.5%).

**Conclusion:** Our rates of catheter-associated infection (per 1000 device-days) are higher than the corresponding NNIS rates in 2008.

**PP-018** Botryomycosis as a umbilical nodule, as a differential diagnosis for umbilical hernia

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**Case Description:** A 54 year old obese woman presented with chronic periumbilical pain. An ultrasound showed a nodule in the umbilicus, presumably an umbilical hernia. During surgery an abscess in the aponeurosis, under the umbilicum was identified. Transoperative frozen section examination showed no cellular displasia. Definitive anatomopathological examination showed bacterial and fibrous tissue, consistent with botryomycosis. Gram positive cocci strains and gram negative bacillus were isolated from the secretion, no bacteria growth was identified in cultures.

**Revision of literature:** Botryomycosis is a rare bacterial chronic infection, mostly seen in skin and cutaneous tissue, but also described in lung, liver, spleen and other viscera. It is more frequently associated to immunosuppressed individuals, such as AIDS, alcoholism and diabetes mellitus.



Few cases of botryomycosis of the abdominal wall were described, and mostly were related to uterine devices, in such case *Actinomyces* were isolated.

**PP-019** *In vitro* activity of tigecycline against panresistant *Klebsiella pneumoniae* clinical isolates

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**Objectives:** to evaluate the *in vitro* activity of tigecycline against panresistant *K. pneumoniae* clinical isolates from ICU patients with nosocomial infection.

**Methods:** We examined 13 non duplicated panresistant *K. pneumoniae* isolates recovered 10 from blood cultures, 1 from urine sample, 1 from nose and 1 from bed derived from ICU-patients during June 2008 to February 2009. The identification of the isolates and the susceptibility testing were performed by the VITEK 2 system (bioMerieux®, France). The susceptibility testing for tigecycline was performed by Kirby-Bauer disk diffusion method. Paper disks containing tigecycline at 15 µg per disk were used (Oxoid Ltd, England). The determination of tigecycline MICs values was performed by E-test strips (AB-Biodisk, Sweden). Isolates with an inhibition zone diameter of ≥19 mm and with an MIC level ≤1 µg/mL were considered as susceptible to tigecycline (MIC susceptibility limits determined by EUCAST). All isolates were screened for MBL production and for extended-spectrum β-lactamase. *K. pneumoniae* ATCC 70603 was used as a positive ESBLs strain.

**Results:** All the *K. pneumoniae* clinical isolates were resistant to β-lactams, aminoglycosides, carbapenems, monobactams, cephalosporines, furanes, cinolones and colistin. The phenotypic test for ESBL-production was positive in all isolates that were identified as possible KPC-producers. The tigecycline was found absolute active to all the examined isolates. The inhibition diameter zones were found of ≥21 mm and the MIC levels of <0.5 µg/mL.

**Conclusion:** Tigecycline is absolute active to panresistant *K. pneumoniae* isolates. Tigecycline presented consistently low MIC<sub>90</sub> values and broad spectrum of activity, including otherwise resistant strains.

**PP-020** A comparative study of therapeutic effects of Zataria Multiflora vaginal cream and metronidazole vaginal gel on bacterial vaginosis

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**Introduction:** Bacterial vaginosis (BV) is one of most prevalent complications among reproductive aged women. Metronidazole prescription which is considered as the first line treatment of BV

is usually followed by a few side effects. Besides there is a growing tendency toward herbal medicines for treatment of vaginitis. Antibacterial and antifungal effects of *Zataria multiflora* have been demonstrated *in vitro* and *in vivo*. This study aimed to compare therapeutic effects of *Zataria Multiflora* vaginal cream and Metronidazole vaginal cream on bacterial vaginosis.

**Material and Methods:** This was a randomized clinical trial on 90 married women aged 18-40 affected by BV who attended for treatment to gynaecology clinic of Shabih-Khani hospital. They randomly divided to two groups of 45 participants. Diagnostic criteria was Amsel's criteria and gram-stain. *Zataria Multiflora* vaginal cream or Metronidazole vaginal gel for 5 night usage were prescribed to each group and after 2 to 7 days therapeutic effects on participants' complications and their Amsel criteria were assessed. Data analysis was performed by McNemar and Fisher exact tests.

**Results:** patients' complication and their Amsel criteria were significantly decreased after treatment with *Zataria Multiflora* or Metronidazole ( $P < 0.05$ ). Relative risk for unresponsiveness to treatment with *Zataria Multiflora*, to unresponsiveness to Metronidazole was 1.5 which was not significant.

**Conclusion:** Therapeutic effects of *Zataria Multiflora* vaginal cream is similar to Metronidazole vaginal gel on BV. Therefore it could be an appropriate choice to BV treatment for those interested in herbal medicines or affected by side-effects of Metronidazole.

**PP-021** Follow up of standard agglutination (SAT) and 2ME tests in 175 clinically cured cases of human brucellosis

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**Background:** Standard Agglutination (SAT) and 2-mercaptoethanol (2-ME) test are usually used for follow up of treated cases of human brucellosis. The purpose of this study was to monitor the levels of these tests after two years on clinically cured cases of brucellosis.

**Methods:** From April 2003 to September 2008, 175 clinically cured cases of brucellosis (103 males, 72 females) were evaluated. Diagnosis of brucellosis was established with SAT  $\geq 1:320$  and 2ME  $\geq 1:80$  with clinical symptoms and signs compatible with brucellosis. SAT and 2-ME were retested at the end of therapy and every 3-months interval for two years. Serologic cure for SAT or 2ME were considered when the titers decreased to  $\leq 1:160$  and  $< 1:80$ , respectively.

**Results:** The mean age of the patients was  $31 \pm 13.5$  years. Six, 12, 18 and 24 months after treatment, SAT titers  $\geq 1:160$  were seen in 41 (23.4%), 22 (12.6%), 7 (4%) and in 6 (3.4%) cases, respectively, whereas 2ME titers  $\geq 1:80$  were seen in 51 (29.1%), 24 (13.7%), 12 (6.9%) and 8 (4.6%) cases, respectively. Serologic cure of SAT for patients with titers  $\leq 1:640$  was higher than that of  $> 1:640$  ( $p = 0.023$ ). Serologic cure of 2ME for patients with titers  $\leq 1:320$  was higher than that of  $> 1:320$  ( $p = 0.04$ ).

**Conclusion:** SAT and 2-ME may be in significant titers in less than 5% of clinically treated cases after two years. Serologic cure for both tests with lower titers were higher than that with higher titers.

**PP-022** *Leuconostoc peritonitis* infection in a man receiving peritoneal dialysis

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**Introduction:** Rarely pathogenic in humans, the *Leuconostoc*

species is a gram-positive cocci belonging to the Streptococaceae family. Unlike other gram-positive bacteria, *Leuconostoc* species have a high resistance to vancomycin and only been reported of peritoneal dialysis (PD) catheter infection in children. This is the first reported case of *Leuconostoc* PD catheter infection in adults.

**Case Report:** A 51-year-old man, with a significant medical history of end-stage renal disease on peritoneal dialysis (PD) for 9.5 years, presented with abdominal pain, nausea, and vomiting. He developed an infection with the PD catheter with methicillin-susceptible staphylococcus aureus (MSSA) and treated with intravenous (IV) nafcillin, but refused catheter removal/change due to religious reasons. He then developed diarrhea due to a *Clostridium difficile* (*C. diff.*) infection. The MSSA catheter infection cleared and the *C. diff.* improved. The patient was put on weekly IV Vancomycin suppression treatment for the MSSA catheter site infection. However, three weeks later, the patient developed peritonitis, with the PD fluid noted to be hazy. Two cultures were done one week apart and both confirmed a *Leuconostoc* infection. The patient received oral penicillin followed by intraperitoneal instillation of Cefazolin and Gentamicin, which cleared the infection.

Poster Presentation – Basic Science including Animal Models

**PP-023** The influence of CMV infection on regulatory T cell immunity of the host

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**Objects:** To study the influence of cytomegalovirus (CMV) infection on the number and function of regulatory T cells (Treg) and the relationship between Treg and Th1, Th2, Tc1, Tc2 immunity.

**Methods:** A disseminating infected murine model was established without using immunosuppressant. The infectious viral titer in organs was quantified by plaque formation assay to estimate the status of MCMV infection. The number and function of Treg and the dynamic status of Th1, Th2, Tc1, Tc2 were evaluated by flow cytometry at different time point post infection.

**Results:** Histopathological damages were observed in the livers, kidneys, lungs and hearts of the model. And infectious virus were not detected after 28d post infection. In chronic phase of MCMV infection, the percentage of CD4<sup>+</sup>CD25<sup>+</sup> cells and the expression of transcription factor Foxp3 both increased, which was correlated with the reduction of Th1, Th2 and Tc1 percentage.

**Conclusions:** 1. A systemic MCMV infected model was successfully established, which provided a tool for exploring the immune pathogenic mechanism of CMV infections. 2. MCMV could induce the formation and activation of Treg. And the activated Treg could suppress Th1, Th2, and Tc1 immunity during chronic phase, which may be one of the mechanisms of the persistent infection of CMV.

**PP-024** Expression of human X box binding protein 1-u and preparation of polyclonal antibody against protein

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**Objective:** To prokaryotic expression the human X-box binding protein 1-u (XBP1-u) recombinant plasmid, purify the protein and immunize rabbit, to obtain polyclonal antibody against protein.

**Methods:** Transformed the recombinant plasmid pET32a-XBP1u into host bacterium *E. coli* BL21 (DE3), then purified this protein,