**Results:** Injection of Bap subunit resulted in high antibody titers. Survival rate of immunize and unimmunized mice challenged with different doses of bacteria, shows the protective property of Bap subunit. Also moderate inflammation was observed in liver tissue of immunized mice, in comparison to slight inflammation of unimmunized group. Antibodies against Bap subunit reacted with several strains, suggesting the conservativity and similarity in epitope presentation of Bap subunit among A. baumannii clinical isolates.

**Conclusion:** It is demonstrated that immunodominant region of Bap possess target sites for a protective humoral immune response to A. baumannii. This region seems to be conserved. Hence, Bap stands out as an appropriate vaccine candidate. This is the first report of immunization with cell wall-localized biofilm-associated protein.

**PP-016** Clinical spectrum and prognostic indicators of leptospirosis in an rural endemic tertiary center

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**Background:** Leptospirosis is a common zoonosis worldwide. Infection is endemic and is common in tropical and subtropical regions. In India since last two decades, leptospirosis cases have been reported with increasing frequency. We studied sixty-six patients with leptospirosis for clinical presentation and prognostic factors.

**Aim:**
1. To study the clinical profile of patients presenting with leptospirosis.
2. To determine the prognostic indicators for leptospirosis.

**Settings and Design:** This was a retrospective study of leptospira positive patients who were admitted to Sri Devaraj Urs Medical College, Kolar, Karnataka, India.

**Materials and Methods:** All patients presenting from 1st October to 28th February who tested IgM positive for leptospirosis were taken into the study. Their presenting complaints, clinical findings and lab findings were recorded and analyzed based on the modified Faine’s criteria and all variables between patients who died and those who survived were compared.

**Results:** Out of total 66 patients, 32 were males and 34 females, with a mean age of 31. Predominant complaints were fever (98.5) jaundice (31.8%) myalgia (60.6%) and headache (86.6%). All were IgM positive for leptospira.12.8% patients expired and 87.8% recovered. Age >36yrs, temp >38, myalgia, conjunctival suffusion and jaundice were more in the expired patients. On multi-variable analysis, serum bilirubin (>15mg), hyperkalemia (>5.4), A/G ratio reversal, renal, neurological, respiratory dysfunction were found to be significant predictors of mortality (p = 0.001).

**Conclusion:** The presence of dyspnea, oliguria, hyperkalemia, hypotension, reversed A/G ratio and high serum bilirubin on admission in patients with leptospirosis indicated high risk of death. Intensive care and early intervention should be provided for patients who present with these risk factors.

**PP-017** A diagnostic multiplex polymerase chain reaction assay for the simultaneous detection of typhoidal *Salmonella* and quinolone resistance from the patient’s blood

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**Background:** Typhoid remains an important public health problem in developing countries. The problem of typhoid fever has been exacerbated by the appearance of multiple drug resistant strains. Nalidixic acid-resistant (NAR) S. typhi and S. paratyphi A are endemic in many Asian countries. NAR isolates have reduced susceptibility to fluoroquinolones, which is associated with higher rates of morbidity and mortality. Early detection of the disease is very important for its control, effective treatment and reduced carrier state and transmission. The available diagnostic modalities are not very effective in prompt and correct diagnosis. We set out to design a diagnostic multiplex Polymerase Chain Reaction assay that could reliably detect the presence of *Salmonella* from patient’s blood sample and also check for the presence of quinolone resistance gene in the bacteria for early and effective treatment.

**Method:** Eighty six nalidixic acid resistant typhoidal *Salmonella* strains collected from routine clinical samples were artificially inoculated in 3 ml of blood collected from healthy donors with EDTA by adding various amounts of bacteria from serially diluted cultures of 0.3 O.D (600 nm). Five nalidixic acid sensitive *Salmonella* isolates and five non-*Salmonella* isolates were also run as controls.

**Results:** The multiplex PCR correctly detected the presence of typhoidal *Salmonella* in all the tested samples and was able to amplify the quinolone resistance gene in all of them. One round of PCR amplification with 35 cycles was able to detect as low as ≥ 6 bacteria/ml of blood.

**Conclusion:** Typhoid fever is a very debilitating disease and hence demands very accurate and prompt diagnosis. To our knowledge, a multiplex PCR for the diagnosis and drug resistance detection for typhoidal *Salmonella* directly from the patient’s blood in a single PCR round has so far not been done anywhere in the world.

**PP-018** Detection of metallo-beta-lactamase producing *Pseudomonas aeruginosa* isolated from burn patients in Tehran, Iran

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**Objectives:** Production of metallo-beta-lactamases (MBLs) is one of resistance mechanism in *Pseudomonas aeruginosa*. There is not enough information regarding prevalence of MBL-producing *P. aeruginosa* and type of involved genes in Iran. In this study, prevalence of MBL-producing strains was determined among 100 *P. aeruginosa* isolated from infections in burn patients in Tehran, Iran.

**Methods:** Production of MBL were determined by an increase of >7mm in inhibition zone diameter of EDTA (930μg) containing imipenem disk compared to imipenem disk. The PCR test was used for detection of four genes encoding MBLs (IMP-1, IMP-2, VIM-1 and VIM-2). Also, resistance to various antibiotics was determined by disk diffusion test.

**Results:** A high rate of resistance to antibiotics was seen in the 100 strains. Among these, MBL activity was detected in 65 of 69 imipenem-resistant strains. However, only 13 of these phenotypically-positive strains contained the MBL gene VIM-2. No other MBL genes were detected.
Conclusion: This study showed for the first time, the specific MBL gene present in P. aeruginosa isolated from burn patients in Tehran, Iran.

PP-019 Plasma lipids levels in patients with acute bacterial infections
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Objectives: The aim of present study was to assess impact of acute bacterial infections on plasma lipids levels. The other purpose was to determine the value of plasma lipid measurements in the diagnosis of acute bacterial infection.

Materials and Methods: A cross-sectional study was conducted on 112 patients with acute bacterial infections admitted in hospital and 112 healthy individuals as control. Levels of total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein and triglycerides were measured in blood samples of all subjects. Mean level of serum lipids were compared in both groups.

Results: Both groups were matched based on age (P = 0.10), gender (P = 0.789), BMI (P = 0.515) and history of diabetes mellitus (P = 0.231). Compared with control subjects, in patients with acute bacterial infections, significantly lower levels of total cholesterol (P = 0.013) and high-density lipoprotein cholesterol (P = 0.001) were found. There was no statistically significant differences in triglycerides (P = 0.194) and low-density lipoprotein (P = 0.075) serum level between patients and controls.

Conclusion: These results suggested that acute bacterial infection seem to be associated with decreased serum cholesterol and high-density lipoprotein level. Therefore plasma lipids levels may serve as indicators of acute bacterial infections.

PP-020 Botulism outbreak in northern Iran: five cases in one family
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Objectives: Despite many food borne diseases which require only supportive therapy, botulism needs special attention and specific therapy and has a high mortality without therapy.

Methods: We report an outbreak of botulism in five members of a family in north of Iran due to consumption of a sort of food. They presented with weakness, ptosis, blured vision and diplopia. They were treated with trivalent botulinum antitoxin. Toxicology on stool and food material was positive for botulinum toxin A.

Result: Two weeks after administration of antitoxin, clinical symptoms such as ptosis, blurred vision, diplopia, and muscle power improved and side effects like anaphylactic shock, local skin reaction and serum sickness were not seen.

Conclusion: Despite high mortality rate, appropriate diagnosis and treatment play a great role in patients’ improvement. Precise history taking, complete physical examination and considering botulism, will reduce mortality. It is necessary to teach people about preparation of canned food.

PP-021 Early intervention of video-assisted thoracoscopic surgery (VATS) improves outcome of adult thoracic empyema
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Background: To explore the optimal time for Video-assisted thoracoscopic surgery (VATS) of adult thoracic empyema.

Methods: A cohort of 90 adult patients with thoracic empyema from Jan 2007 to Dec 2010 were divided into three groups by the time from onset to surgery: 2 weeks (Group A, n = 30), 4 weeks (Group B, n = 30) and 6 weeks (Group C, n = 30). Demographics, comorbiditis and laboratory data were balanced among groups. All the patients were given routine therapy and underwent VATS debridement and decortication.

Results: Intraoperative bleeding of Group A (median loss 50 ml, range 25–100 ml) was significantly (Z = -2.51, P = 0.031) less than that of Group B (median loss 225 ml, range 150–450 ml) and C (median loss 250 ml, range 150–600 ml). Operation time, duration of postoperative chest drainage and postoperative hospital stay of Group A was significantly shorter than those of Group B and C (Z = -3.003–2.011, P = 0.018–0.042). No patients in Group A required conversion to thoracotomy, 5 (16.7%) and 7 (23.3%) patients in Group B and C required conversion thoracotomy respectively (P = 0.009, 0.007). Postoperative complications of Group A including atelectasis, prolonged air-leak, sepsis were reduced significantly compared with Group B and C (P = 0.021, 0.001).

Conclusion: Early intervention of VATS for adult empyema thoracis demonstrated better outcomes, less invasion, shorter hospitalization and lower conversion to thoracotomy.

PP-022 Video-assisted thoracic surgery (VATS) is superior to chest tube drainage in fibropurulent empyema
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Background: To evaluate the feasibility and efficacy of video-assisted thoracic surgery (VATS) for fibropurulent stage thoracic empyema.

Methods: Sixty eight patients with fibropulotulent thoracic empyema were enrolled prospectively between January 2008 and June 2010, closed tube drainage and antibiotic therapy had not achieved satisfactory results in this series. Sixty eight patients were allocated into two group, Group A (n = 32): underwent VATS debridement and decortication, Group B (n = 36): continued chest tube drainage, fibrinolytic therapy and pleural cavity irrigation. Demographics, comorbiditis and laboratory data were balanced between the two groups.

Results: Hospital stay (HS) and chest tube drainage time of Group A were significantly shorter than Group B (p = 0.031, 0.012). Fever duration of Group A was also significantly shorter than Group B (p = 0.042). Expense of two groups were similar (p = 0.54). 6.2% (n = 2) patients in Group A required conversion thoracotomy. There were no surgery-related complications and death in Group A. 22.2% (n = 8)