otics, Piperacillin/Tazobactam was most commonly used (23 cases, 33.8%) and Cefobid was next. (20 cases, 29.4%). Successful response to initial antibiotics was 5 cases (72.4%) in MDI, 30 cases (85.7%) in CDI, and 24 cases (92.3%) in UF. Mortality rate was 4.4% and all death was related to infection.

**Conclusion:** There were no evident differences of clinical features between the 1st period and the 2nd period. But we found two specific clinical features. The rate of successful response to initial antibiotics was the highest in UF (92.3%). It means that we need to change or add the empirical antibiotics if we could guess the site of infection rather than use the recommended antibiotics in 2002 IDSA guidelines. And extremely high portion of gram-positive bacteria (85.7%) were isolated compared with other clinics in Korea. We think it might be an unique clinical feature in Jeju island.

In the future, empirical antibiotics that cover the gram-positive bacteria for NF may need to be routinely used in Jeju island.

*doi:10.1016/j.ijid.2008.05.585*

**40.076**

Cloning and Characterization of hemA Gene of *Vibrio cholerae* O139

N.M.N. Nik Zuraina1,∗, S.A. Atif1, A.R. Nurhaslindawathy1, Y.Y. Chan1, S. Kurunathan1, M.A. Nurul Ashikin1, P. Lalitha2, F.Z. Zainul2, M. Ravichandran1

1 School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Malaysia

2 School of Health Sciences, Universiti Sains Malaysia, Kubang Kerian, Malaysia

The hemA gene of *Vibrio cholerae* encodes for glutamyl tRNA reductase, an essential enzyme for the synthesis of aminolevulinic acid (ALA), which is a precursor in heme biosynthetic pathway. In this study, we have cloned and characterized the *hemA* gene of *V. cholerae* O139. The *hemA* gene was initially isolated from the wild type (WT) O139 *V. cholerae* as a 1,259 bp gene fragment (GenBank accession number: AF 227752). The *hemA* gene was adjacent to hemM gene with 159 bp intervening segment. The *hemA* gene was cloned in pPH5 expression vector to obtain a 50kDa recombinant *hemA* gene product, i.e., glutamyl tRNA reductase. The recombinant glutamyl tRNA reductase was expressed in pPH5 vector and purified using IMAC chromatography. An antibody against recombinant glutamyl tRNA reductase was raised in mice and rabbits. The anti glutamyl tRNA reductase antibody reacted specifically to the 50kDa protein. The *hemA* mutants were ALA auxothroph and were able to grow on LB and TCBS agar supplemented with ALA and also on blood and chocolate agar. The growth of the *hemA* mutants on blood and chocolate agar indicated that the exogenous hemoglobin could partially supports the growth of ALA mutants. The *hemA* mutants of *V. cholerae* were successfully complemented with a plasmid encoding *hemA* gene, indicating the role of *hemA* gene in ALA auxotrophy. ALA/PBG assay was used to study the synthesis of ALA in *hemA* mutants. It was observed that the level of ALA was decreased in *hemA* mutants when compared to WT. The *hemA* mutants’ motility was reduced and biofilm formation was enhanced when compared to the WT. In conclusion, we have characterized and confirmed the role of *hemA* gene of *V. cholerae* in ALA biosynthesis.

*doi:10.1016/j.ijid.2008.05.586*

**40.077**

Typhoid Ileocolitis - Endoscopic Aspects


Curry Cabral Hospital, Lisbon, Portugal

**Background:** Typhoid ileocolitis ulcerations occur more commonly over rich lymphoid areas in the intestine. *S. typhi* in Peyer’s patches of ileocecal region spread proximally running along marginal arteries, which explains lesser severity of lesions distally in the colon. The colon is involved in only a third of cases and rarely extensively.

**Methods:** Typhoid ulcerations are ovoid with the largest diameter parallel to the long axis of the gut, with soft, swollen, irregular, not undermined edges, looking umbilicated, ulcerated mounds ("punched-out" ulcers), with a white base and furry appearance, surrounded by normal-appearing mucosa.

**Results:** Typical aspects of ulcerations of typhoid ileocolitis are presented, along with microscopic aspects of biopsies.

**Discussion:** Colonoscopy is only advised when the diagnosis of typhoid is doubtful, or for endoscopic therapy in cases of hemorrhage for which conservative attitude or surgery is not indicated. Differential diagnosis of endoscopic ulcerations of typhoid includes *Y. enterocolitica, Mycobact. tuberculosis, E. hystolytica*, Campylobacter, other Salmonella, *Aerom. hydrophilia, H. capsulatum, CMV* in AIDS, Bechter’s disease, NAISID use. Serious complications of typhoid ulcerations are severe hemorrhage when an ulcer erodes into a blood vessel, and transmural perforation leading to peritonitis. Colonoscopic diagnosis can be helpful in some cases for an early diagnosis, favoring more quick treatment of typhoid fever, with lower number of complications.

*doi:10.1016/j.ijid.2008.05.587*

**40.078**

Efficacy of Initial Treatment of Purulent Meningitis with Ceftriaxone and Adjunctive Dexamethasone

Z. Milenkovic1,∗, K. Karovski1, V. Kirova1, M. Cvitanovska1, P. Stojovska1, K. Grozdanovski1, I. Demiri1, G. Petkov2, Z. Sopova1

1 Clinic for Infectious Diseases, Skopje, Former Yugoslav Republic of Macedonia

2 General Hospital, Gevgelija, Former Yugoslav Republic of Macedonia

Primary goal of the study was to appraise the influence of the duration of cephalosporins usage on its efficiency in the treatment of purulent meningitis (pm). In order to assess efficacy of initial antimicrobial monotherapy with ceftriaxone and adjunctive dexamethasone two compared consecutive five year periods (1998—2002 and 2003—2007)