

**OL-070** Analysis on the multi-drug resistance of *Neisseria gonorrhoeae* and plasmid profiles isolated from female patients

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**Objective:** To investigate antibiotic multi-drug resistance of *Neisseria gonorrhoeae* (*N. gonorrhoeae*) strains isolated from the local female patients and the role of plasmid-mediated on resistance of *N. gonorrhoeae*.

**Methods:** Antimicrobial susceptibility of *N. gonorrhoeae* to various antibiotics was analysed by K-B disk diffusion method, and strains of multi-drug resistance were screened out. The agar-dilution method was used to determine the minimum inhibitory concentration (MIC) of three antibiotics including Penicillin-G, Tetracycline, Ciprofloxacin. It was also compared that MIC of three antibiotics to PPNG positive and PPNG negative strains. Extraction and analysis of the plasmids in 69 *N. gonorrhoeae* were determined by alkaline-lysis and Sepharose electrophoresis technic.

**Results:** 58 multi-drug resistance strains (67.44%) were obtained by the K-B method. There were 15 strains (17.44%) to 4 antibiotics, 9 strains (10.47%) to 5 antibiotics, 23 strains (26.74%) to 6 antibiotics and 11 strains (12.79%) to 7 antibiotics resistance among *N. gonorrhoeae* strains. The MIC<sub>90</sub> for penicillin, tetracycline and ciprofloxacin to PPNG positive strains were 64.0, 32.0, 32.0 µg/ml and 8.0, 16.0, 2.0 µg/ml to negative strains, respectively. Four types of the plasmid with 4.2Kb, 7.4Kb, 39.5Kb and 42.5Kb molecular weight were found among 69 *N. gonorrhoeae* strains. The plasmid profiles types of 39.5kb (24.63%) and 39.5 + 42.5kb (13.04%) were prominent.

**Conclusion:** The study showed that the multi-resistance of *N. gonorrhoeae* in female patients was severe. Resistant plasmids transferred easily among *N. gonorrhoeae* strains. And the plasmids of 39.5Kb and 7.4Kb were relative with penicillin resistance.

**OL-071** Interaction between Hepatitis C and HIV infected patients

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Hepatitis C virus (HCV) is an important cause of liver disease in HIV-infected patients. One-third of HIV-infected individuals worldwide suffer from chronic hepatitis C, but HCV affects more than 75% of HIV positive subjects infected parenterally. The intersection of these 2 epidemics has significant clinical implications for both infections and their medical consequences.

Infection with HCV is more common after exposure to blood than by sexual transmission; thus male homosexual with HIV infection are less likely to be co-infected with HCV than intravenous drug users or hemophiliacs. Hepatitis C virus thought to be directly cytopathic, and thus hepatic damage should not be ameliorated by HIV-induced immunosuppression. A diagnosis of HCV infection, the possibility of false-positive Hepatitis C virus antibody results, especially in patients with hyperglobulinemia, warrants the use of supplementary testing for antibody with recombinant immunoblot as-say or direct assay of HCV viremia with the polymerase chain reaction. A recent study of the natural history of HCV and HIV in hemophiliacs found that 9% of co-infected patients developed liver failure,

whereas none of the patients infected with hepatitis C virus alone developed liver failure. Most of the patients with liver failure had CD4 counts <100/µl although none had progressed to AIDS. Whether the development of liver failure was related to HIV-induced immunosuppression, unrecognized opportunistic infection, or the adverse effects of antiretroviral therapy was not clear.

The decision to treat hepatitis C virus-related liver disease in patients co-infected with HIV is difficult because of the lack of controlled studies. Clinical trials have documented the enhanced antiviral efficacy of combination therapy with ribavirin and interferon Alfa, with sustained treatment responses ranging from 33% to 49%.

**Free Paper Presentation 10: Gastro-intestinal and Paediatrics**

Sunday, July 17, 2011, 07:30–09:00

Meeting Room 311A

**PL-010** Turmeric enema: a novel therapy for *C. difficile* colitis (CDAD): A randomized, double blinded, placebo controlled prospective clinical trial

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**Objectives:** CDAD is a growing clinical challenge in the USA. Emerging drug resistance is the primary cause of treatment failure causing recurrence. Oral Vancomycin and Metronidazole are the approved therapies. "Turmeric" has been used over centuries in Eastern culture and medicine. It is an antioxidant, anti-ulcerogenic, anti-inflammatory and antimicrobial agent. Turmeric enema has been used in Ulcerative colitis. This clinical trial evaluates the role of turmeric enema in moderate to severe community acquired CDAD.

**Methods:** Thirty-six patients (n = 36); mean age of 53 years with moderate to severe CDAD were randomized into three groups: Group A – Placebo (n = 11), Group B – Vancomycin enema (n = 12), 250 mgBD and Group C – Turmeric enema (n = 13), 1 gm twice daily for 10 days. All patients received oral metronidazole 500 mg thrice daily for 14 days. ATLAS score for clinical severity, stool for *C. Difficile* toxin A/B were measured initially and at the end of therapy. Flexible sigmoidoscopy was performed, pre- and post-therapy after 21 days. Multivariate analysis was obtained among all the groups with clinical score, endoscopic appearance and cost.

**Results:** All patients tolerated the enemas well except Group C with complaints of staining of fomites. 7/11 (66%) in group A compare to 10/12 (83%) in group B, and 10/13 (76%) in group C eradicated the infection. Groups B and C had reduced ATLAS score and endoscopic score of 60% compared to Group A's 38%. The recurrence rate was lower in both Group B – 1/10 (10%) and Group C – 1/11 (9%) over placebo – 2/7 (29%). Post-treatment endoscopic appearance of luminal ulcers with Vancomycin (p = 0.037) and Turmeric (p = 0.031) compared with the Placebo had a significant difference. Post treatment mucosal bleeding was statistically significant in Turmeric (p = 0.001) to vanco (p = 0.027).

**Conclusion:** This study demonstrates no significant difference between Turmeric and Vancomycin enema in moderate to severe CDAD. Patient tolerated both enemas with significant cost benefit in turmeric over Vancomycin. A larger control trial is necessary to validate the efficacy.