**PP-115** Antiviral drug response among patients of Hepatitis-B co-infected with Hepatitis-D virus

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**Background:** Since Hepatitis-B patients coinfected/superinfected with Hepatitis-D virus are increasing in South-East Asian countries like Pakistan and India, so the study was designed to observe the effects of antiviral drugs like lamivudine on sero-conversion of HBeAg positive cases.

**Methods:** This study was conducted at Hepatology clinic, Lahore Pakistan, over a period of 2 years from 2007 to 2009. A total of 97 ELISA confirmed Hepatitis-B positive patients with deranged liver functions for 6 months were recruited. All were screened for HBeAg, HBV-DNA and anti-HDV using ELISA test. They were subdivided in 2 groups. Group A included patients who were HBeAg and HBV-DNA positive but Anti-HDV negative, while group B comprised of patients positive for HBeAg, HBV-DNA and Anti-HDV (all positive). Reverse transcriptase inhibitor (RTI), lamivudine in a dose of 100mg/day was given to all till sero-conversion.

**Results:** Out of total 97 patients 64% (n = 62) were males, mean age 56±4 years. 55 cases were in group A and 42 were in group B. At the beginning of study, mean HBeAg was 284±179 in group A and 137±151 in group B. Within a period of 6 months, ALT became normal in 70% patients (n = 38) among group A, and 19% (n = 8) among group B. Serum viral markers did not change much till 1 year of treatment and was significantly slower among group B. 34% (n = 19) patients in group A and 12% (n = 5) patients in group B sero-converted completely at the end of 2 years therapy.

**Conclusions:** Hepatitis-B patients co-infected with Hepatitis-D virus have a chance of seroconversion and still the effective therapy options are available to treat such scenario.

Effort should be maximized to catch the diagnosis earlier and start the therapy in an optimal mode so as to get enhanced benefits of antiviral drugs like lamivudine.

**PP-116** Comparison of HBV DNA results detected by 5 HBV/HCV/HIV-1 blood screening kits

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**Background:** Public demand for higher standards of screening for infections agents in transfusion products has fueled the development and advancement of nucleic acid test technology. This report describes a comparison of the HBV NAT screening results by 1 foreign and 4 domestic HBV/HCV/HIV-1 NAT screening kits.

**Method:** 1 foreign and 4 domestic HBV/HCV/HIV-1 NAT screening kits were applied to detect 392 plasma samples from chronic hepatitis B patients and healthy people and an additional plasma for sensitivity. These results were compared with the result of Roche COBAS TaqMan HBV Test for quantification of HBV DNA in serum. In addition, results of HBSAg by Architect and HBV DNA by screening kits were also compared.

**Results:** 325 positive results and 69 negative results were found in 394 samples by reagent II. 216-311 positive results were found in the 325 positive samples and 38-69 negative results were detected in the 69 negative samples by 5 screening kits; The lowest concentration of HBV DNA by the foreign NAT kit and A/B/C domestic kit were 6 IU/mL and 50 IU/mL, respectively. The domestic kit D had false-positive results. In addition, 285 positive results and 109 negative results of HBSAg were detected in 394 samples by Artiject HBSAg. 212-282 positive results for HBV DNA were found in the 285 positive samples for HBSAg and 49-105 negative results for HBV DNA were found in 109 negative samples for HBSAg by 5 screening kits. Most of the different results came from the sera with HBV DNA concentration lower than 100 IU/mL.

**Conclusions:** Domestic reagents of HBV/HCV/HIV-1 for HBV DNA have lower sensitivity than foreign reagent. Further studies shall be concentrate on the accuracy of both foreign and domestic NAT reagents.

**PP-117** General practitioners and hepatitis B: a survey to determine current level of awareness and treatment capabilities of chronic hepatitis B

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**Background and Objectives:** In order to play the role of general practitioners in prevention and treatment of chronic hepatitis B better, we investigated the current level of the awareness and treatment capabilities of chronic hepatitis B among the general practitioners.

**Methods:** A written examination survey was conducted to 102 general practitioners in a district of Beijing. They came from 40 regional community health service centers, 2 or 3 doctors per center.

**Results:** The survey revealed that 58.8% of general practitioners knew the basic diagnostic points, and 91.2% were aware of the control of disease prevention. Whereas, only 56.8% of the surveyed doctors were aware of the severity of the disease and could make a correct assessment of prognosis of the disease. Only 27.5% had the antivirus therapy concept. Only 19.6% knew the common side effects of interferon, and 6.9% knew the types of antiviral drugs and were sure of which agent to use.

**Conclusion:** To facilitate the hepatitis B patients to be better managed in both of the specialty hospitals and the community, improving the level of the awareness and practice of chronic hepatitis B management in general practitioner community seems warranted and professional knowledge training is necessary.

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**PP-118** Effect of hepatitis B virus X protein on function of natural killer cell in NK-92 cells

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**Background:** Many viruses have evolved strategies to modulate the activity of NK cells in response to the selective pressure exerted by NK cells, such as envelope protein E2 of HCV, UL16 of HCMV, et al. Whether Hepatitis B virus can produce any protein that can modulate the activity of NK cells is not clear. Here in the present research, we
investigate the influence of the hepatitis B virus X protein on function of natural killer (NK) cell in NK-92 cells.

**Methods:** The recombinant eukaryotic expression plasmid pcDNA3.1 (+)-HBX was transfected into NK-92 cells with lipofectamine. The expression of HBV X gene was detected by RT-PCR and Western blotting. Western blotting was also applied for the determination of NKGD2 level in NK-92 cells. ELISA was employed to determine the IFN-γ level secreted by NK-92 cells. And finally the cytotoxicities of NK cells were analyzed by MTT colorimetry, with the hepatoblastoma cell line (HePG2) as target cell.

**Results:** RT-PCR and western blotting confirmed the expression of HBV X gene in the NK-92 cells transfected with pcDNA3.1 (+)-HBX. Compare to empty vector transfected and uninfected cells, NKGD2 level significantly decreased, cytotoxicity function and IFN-γ secretion markedly attenuated in NK-92 cells transfected with cDNA3.1 (+)-HBX.

**Conclusions:** Transient expression of HBV X gene can decrease IFN-γ secretion and cytotoxicities of NK-92 cells. The influence of the hepatitis B virus X protein on cytotoxicities of NK cell was probably associated with downregulation of expression of NKGD2.

**PP-119 Lamivudine in hepatitis B reactivation in patients with rheumatologic diseases on chronic immunosuppression**

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**Introduction/Objectives:** Chronic immunosuppression is a mainstay of treatment for rheumatologic diseases, but has been associated with hepatitis B reactivation. This review focused on the effectiveness of lamivudine as prophylaxis or treatment of hepatitis B reactivation among patients with rheumatologic diseases on chronic immunosuppression.

**Methods:** A search of Medline, Pubmed and Cochrane databases was performed which yielded 18 studies including 4 observational cohort studies (1 prospective, 3 retrospective). Case reports and reviews were excluded. Authors were contacted to get fulltext articles.

**Results:** Forty-four rheumatologic patients on prednisolone alone or in combination with DMARDS or biologics, received lamivudine 100 mg/day as treatment (n = 22) for reactivation or as prophylaxis (n = 22). One study included 5 Lupus Nephritis patients while the 3 studies included patients with Rheumatoid Arthritis (n = 14), Systemic Lupus Erythematosus (n = 6), Ankylosing Spondylitis (n = 4), Polyarthritis Rheumatica (n = 5), Psoriatic Arthritis (n = 3) and 1 patient each with Systemic Sclerosis, Sjogren’s Syndrome, Dermatomyositis/Polymyositis, Takayasu Arteritis, Henoch-Schonlein Purpura and Behcet’s syndrome. Elevated levels of alanine transferase (ALT) at baseline (n = 22) normalized shortly after lamivudine therapy. HBV-DNA levels were significantly suppressed in 17 patients after treatment. Two patients developed treatment-resistant YMDD mutation of HBV and had to be shifted to adefovir. There were no major adverse events reported and lamivudine treatment appeared safe and well-tolerated.

**Conclusions:** Lamivudine as treatment and prophylaxis for hepatitis B reactivation is a promising strategy in rheumatologic patients on chronic immunosuppression. However, the studies are limited by small sample sizes and heterogeneity, in terms of the type of rheumatologic disease, type and dosage of immunosuppressive drugs, and duration of lamivudine treatment. There is a need for further prospective, preferably RCTs including a larger set of patients.

**PP-120** HBV contamination of medicine instruments in surgery department

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**Objectives:** Increase in occurrence of HBV (Hepatitis B Virus) among the medicine staffs and 3% prevalence of this infection in Iran and existence of the HBsAg positive individuals without any special symptom lead to general consideration about transmission of this infection by medicine instruments.

**Methods:** The purpose of this study was evaluation of HBV contamination in surfaces (such as cabinet and door handles, telephones, water valves and electrical buttons, …) and equipments in the surgery department of the Cina hospital on 2009. Sampling was performed with sterile cotton swabs in transport medium (BSAS: Bovine Serum Albumin in Sodium chloride). Samples were tested by PCR technique.

**Results:** As a result, 43.3% (13 out of 30 samples) of surfaces and 27.2% (25 out of 92 samples) of equipments were contaminated before disinfection. 16% (4 out of 25 contaminated samples) of equipments remained contaminated after disinfections.

**Conclusion:** There is high contamination percentage in the surfaces that expresses the necessity of effective and regulatory disinfection procedures in these sites. According to the high level of infection in the surfaces and equipments in the surgery department, these approaches to disinfect equipments are not sufficient to omit HBV infection.

**PP-121** A case–control study on the relationship between IL-6 –572, RANTES genetic polymorphisms and susceptibility to the chronic hepatitis B among Han adults

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**Objectives:** To investigate the association between the gene polymorphism of IL-6 and RANTES and the outcome of chronic hepatitis B among in Tangshan area. The research of genetic polymorphisms improved the understand of environment-individual susceptibility interaction in molecular machine and explored the risk factors of chronic hepatitis B form environmental and the genetic polymorphisms of IL-6 and RANTES.

**Methods:** A case–control study was adopted in the research, which included 118 and 61 patients with chronic and acute hepatitis B (CHB and AHB) virus infection respectively. PCR-RFLP was used to detect IL-6 and RANTES gene SNPs (–597G, –572C of IL-6, and –403G, –28C, In.I.T of RANTES). Information on environmental-related risk factors and pathological changes of tuberculosis was collected using a pre-tested standard questionnaire. Statistics analysis was conducted with SPSS for Windows software.

**Results:** The sex, age, BMI had no difference in case and control group. Drinking of man in the CHB was higher than AHB, the virus-load was also higher in the group of CHB than AHB. A special serum construction: the masculine of HBsAg, HBeAg, anti-HBcIgG and PreSAg at the same time was the high risk for CHB. The high level of ALT, AST, TBIL was the low risk for CHB. IL-6 –572GG genotype occurred more frequently in the CHB than that in the control (χ² = 6.190, P = 0.018), with crude ORGG = 2.024, 95% CI: 1.009–4.06; ORGG = 3.367, 95% CI: 1.169–9.709. RANTES In1.1C genotype occurred more frequently in the CHB than that in the controls (χ² = 6.190, P = 0.018), with crude ORCC = 2.278, 95% CI: 1.079–4.808; ORCC = 1.845, 95% CI: 0.770–4.425. There were no interaction between the gene of IL-6 –572 and the index which include ALT, HBeAg and virus load.