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 NKG2D 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 untransfected cells, NKG2D 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 NKG2D.

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 full text 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), Polymyalgia 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.1 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 hight risk for CHB. But 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 = 8.627, P = 0.003), with crude ORGG = 2.024, 95% CI: 1.009-4.06; ORG = 3.367, 95% CI: 1.169-9.709. RANTES In1.1TC genotype occurred more frequently in the CHB than that in the controls (χ² = 6.190, P = 0.018), with crude ORTC = 2.278, 95% CI: 1.079-4.808; ORTT = 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.
Conclusions: SNPs in IL-6 –572 and RANTES gene affect the chronic hepatitis B infection independently and jointly. The IL-6 –572GG and RANTES In1.1TC are the high risks of CHB.

**PP-122** S100A11, transcriptional regulated by hepatitis B virus X antigen and growth inhibition on BEL-7402 cell line

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Objective: S100A11 is a putative tumor suppressor gene. This study aimed to uncover the function that S100A11 protein playing on BEL-7402 cell growth and investigate the effect of transcriptional regulation of HBx on S100A11 gene.

Methods: HBx recombinant expression plasmid and S100A11-p promoter reporter vectors were constructed. After transfection into BEL-7402 cell, reporter gene expression was detected by luciferase. The expression vector S100A11 (experimental group) was constructed and transfected BEL-7402 cells. Stabilized expression was screened. The rate in BEL-7402 S phase is detected by Flow Cytometry (FCM). Living cell rate of two groups were detected by Celltitter-Glo luminescent cell viability assay.

Results: Compared with the group which cotransfected with pGL4.10-S100A11-promoter and pcDNA3.1(–)HBX, the promoter activity of the group which cotransfected with pcDNA3.1(–) and pGL4.10-S100A11-promoter was obviously decreased. Fluorescein reporters is 1/3 fold lower. In control group and mocked transfected group, BEL-7402 cells were detected by FCM and S phase cell population in each group was 26.49±1.94% and 30.42±1.62% respectively. Celltitter-Glo luminescent cell viability assay showed that after 36 hour of transfection, the proliferation was obviously decreased in experimental group than control.

Conclusion: S100A11 has obvious growth inhibiting effect on BEL-7402 cell line. HBxAg has inhibiting effect on promoter activity of S100A11 gene, indicating that HBV may play a role of carcinogenesis by regulating anti-oncogene S100A11.

**PP-123** Screening of the target genes transactivated by human gene 5 transactivated by HBV X protein using suppression subtractive hybridization technique

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Objective: Clone and identification of human gene 5 transactivated by HBxAg protein (XTP5) by constructing a cDNA subtractive library with suppression subtractive hybridization (SSH) technique were investigated, which indicated its modulation function. Moreover, Suppression subtractive hybridization (SSH) and bioinformatics techniques were used for screening and cloning of the target genes transactivated by XTP5 protein.

Methods: The mRNAs was isolated from HepG2 cells transfected pcDNA3.1(–)-XTP5 and pcDNA3.1(–) empty vector, respectively, and SSH method was employed to analyze the differentially expressed DNA sequence between the two groups. After restriction enzyme RsaI digestion, small sizes cDNAs were obtained. Then tester cDNA was divided into two groups and ligated to the specific adaptor 1 and adaptor 2, respectively. After tester cDNA was hybridized with driver cDNA twice and underwent polymerase chain reaction (PCR) twice and then was subcloned into pGEM-T easy plasmid vectors to set up the subtractive library. Amplification of the library was carried out with E. coli strain DH5α. The cDNA was sequenced and analyzed in GenBank with Blast search after PCR.

Results: The subtractive library of genes transactivated by XTP5 was constructed successfully. The amplified library contains 101 positive clones. Colony PCR showed that these clones contain 200–1000bp inserts. Sequence analysis was performed in 28 clones, at random, and the full length sequences were obtained with bioinformatics method. Altogether 18 coding sequences were gotten, which consisted of 14 known and 4 unknown ones.

Conclusion: The obtained sequences transactivated by XTP5, coded different proteins and played important roles in cell growth and metabolism, energy synthesis and metabolism, material transport and signal transduction. This finding brought some new clues not only for studying the biological functions of mHA-8, but also for exploring HBV infection mechanism.

**PP-124** Chinese herbs + adefovir dipivoxil short-term suppress HBV infection in personalized treatment

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Background and Objectives: Chinese herb (CB) consisting of 13 ingredients + Adefovir Dipivoxil (AD) made about 29% chronic HBV patients’ HBV DNA levels be less than 1000 copies/ml and get HBeAg/anti-HBe seroconversions for 130 weeks treatment. This study shows that improving previous CB prescription and personality treatment may suppress HBV infection for some CHB patients in short-term.

Methods: The improved main prescription consists of 15 herb ingredients, which is used for all CHB patients. The sub-prescription consist of 4-5 different herb ingredients, which is used for CHB patients with different symptoms. The net weight of each of the improved traditional Chinese herb prescriptions (ITCPs) is about 450g-600g. They will be decocted for patients’ taking. The CHB patients took the ITCPs two times each day. When a patient’s serum HBeAg has been lower than 70S/CO, he will take AD (10mg/day) additionally. Each selected CHB patient has baseline HBV DNA >1000 copies/mL, HBeAg >100S/CO, ALT> ULN.

Results: Among 88 CHB patients, there are about 8% (7/88) patients whose HBV DNA <1000cp/mL and obtained, and/or HBeAg/anti-HBe seroconversion in half a year’s therapy.

Conclusion: The short-Term Suppressing HBV Infection can be achieved to the CHB patients who have high baseline ALT (>8ULN), or low ALT (>1ULN and <1.5ULN) and low HBV DNA (<56 cp/mL). The analysis to the clinic data shows that the main anti-HBV infection function of the ITCPs is to raise and/ or activate patients immune responds and not only blocks the replications of patients’ HBV DNA.

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