O9 CONSTRUCTION OF A HEPATITIS B VIRUS NEUTRALIZING CHIMERIC MONOCLONAL ANTIBODY RECOGNIZING ESCAPE MUTANTS OF THE VIRAL SURFACE ANTIGEN (HBSAG)

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Abstract

Hepatitis B virus (HBV) infection is a global burden on the health-care system; AND is considered as the tenth leading cause of death in the world. Over 248 million patients are currently suffering from chronic HBV infection worldwide and annual mortality rate of this infection is 686000. The “a” determinant is a hydrophilic region present in all antigenic subtypes of hepatitis B surface antigen (HBsAg), and antibodies against this region can neutralize the virus and are protective against all subtypes. We have recently generated a murine anti-HBs monoclonal antibody (4G4), which can neutralize HBV infection in HepaRG cells and recognize most of the escape mutant forms of HBsAg. Here, we describe the production and characterization of the chimeric human-murine antibody 4G4 (c-4G4). Variable region genes of heavy and light chains of the m-4G4 were cloned and fused to constant regions of human kappa and IgG1 by splice overlap extension (SOE) PCR. The chimeric antibody was expressed in Chinese Hamster Ovary (CHO)-K1 cells and purified from culture supernatant. Competition ELISA proved that both antibodies bind the same epitope within HBsAg. Antigen-binding studies using ELISA and Western blot showed that c-4G4 has retained the affinity and specificity of the parental murine antibody, and displayed a similar pattern of reactivity to 13 escape mutant forms of HBsAg. Both, the parental and c-4G4 showed a comparably high HBV neutralization capacity in cell culture even at the lowest concentration (0.6ug/ml). Due to the ability of c-4G4 to recognize most of the sub-genotypes and escape mutants of HBsAg, this antibody either alone or in combination with other anti-HBs antibodies could be considered as a potent alternative for Hepatitis B immune globulin (HBIG) as an HBV infection prophylactic or for passive immunotherapy against HBV infection.

O19 ESTIMATING THE PREVALENCE OF HEPATITIS B VIRUS INFECTION AND EXPOSURE AMONG GENERAL POPULATION IN IRAN

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Abstract

Introduction: Accurate and updated data describing hepatitis B virus (HBV) epidemiology is crucial for development of national policies to control HBV infection in each country. This study was conducted to estimate the prevalence of HBV infection and exposure in Iran, using the available provincial data.

Methods: Medline, Web of Science, Scopus, Google Scholar and Scientific Information Database were searched for studies assessing the prevalence of hepatitis B surface antigen (HBs Ag) or hepatitis B core antibody (anti-HBc Ab) in general population during 2006 to 2016 in at least one city of Iran. National prevalence was estimated by two methods. Method 1 used only the prevalence estimates of the provinces with available survey data. In method 2, all provinces were classified based on the risk of HBV infection among blood donors. Then the prevalence in provinces with missing data was extrapolated from the provinces with available data and with comparable risk of HBV infection among blood donors. In both methods, the national prevalence was estimated using pooled provincial prevalence estimates, weighted by the province population size.

Results: Thirteen studies from 12 provinces were included. The prevalence of HBs Ag and anit-HBc Ab varied markedly across provinces. Provincial HBs Ag prevalence was from 0.76% to 5.10% (I-squared=91.7%) and provincial anti-HBc Ab prevalence was from 4.17% to 36.90% (I-squared=99.3%). Using method 1, the national prevalence of HBs Ag and anti-HBc Ab was estimated as 1.84% (95%CI: 1.61%- 2.09%), and 13.59% (95%CI: 12.92%- 14.29%), respectively. Using method 2, the national prevalence of HBs Ag was estimated as 1.79% (95% uncertainty range: 1.67%-1.91%), equating

to 1,347,000 (1,253,000-1,434,000) individuals living with chronic HBV infection in Iran. The prevalence of HBs Ag and anti-HBc Ab was higher among men compared to women.

Conclusion: HBV prevalence in Iran is low and decreased during the last decades. However, the risk of HBV infection varies across provinces with some provinces having high HBV prevalence. More detailed data of the HBV epidemiology and transmission in the provinces where HBV infection is endemic can help in designing the appropriate interventions to control HBV epidemics.

O21 SERUM HOMOCYSTEINE LEVELS AS AN IMPORTANT NON-INVASIVE DIAGNOSTIC BIOMARKER IN PATIENTS WITH DIFFERENT STAGES OF NON-ALCOHOLIC FATTY LIVER DISEASE

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Abstract

Background: Homocysteine, an amino acid formed from the metabolism of Methionine has been established as a strong independent predictor of cardiovascular diseases. However, it is still unclear if Homocysteine (Hcy) itself has any correlation with different stages of disease progression in non-alcoholic fatty liver disease (NAFLD) patients.

Objective: To find out the correlation of serum Hcy levels in different stages of NAFLD.

Methodology: Total 187 patients over a period of one year had been recruited in this cross sectional study, conducted in our tertiary care hospital. 55 patients with biopsy proven NAFLD, 39 patients with non-alcoholic fatty liver (NAFL/steatosis) and 43 patients with non-alcoholic steatohepatitis (NASH), along with 50 healthy controls were selected. Serum samples of all the patients were collected for measurement of Hcy, vitamin B12, folic acid and insulin. Homeostatic model assessment of insulin resistance (HOMA-IR) was calculated. We used ANOVA in cases of more than 2 groups of continuous variables. We collected all the data and analysed with SPSS16.0. An alpha level of 5% or, $p<0.05$ was taken as significant.

Results: In this study we observed unexpected serum Hcy levels in NASH compared to NAFL patients (13.35±3.1 vs 15.57±3.46 mmol/L; $p<0.06$). However, Hcy levels were insignificant between NAFLD patients and controls (13.5±3.57 vs 14.4±3.2 mmol/L; $p=0.57$). Serum vitamin B_{12} levels and folic acid levels were insignificant between NAFL and NASH patients. We also observed that the lowering of Hcy level is significantly correlated with an increased grading of fibrosis ($p=0.007$) and portal inflammation ($p=0.019$).

Conclusion: We observed from our study that serum Hcy levels are significantly lower in NASH patients in comparison to the NAFL patients. Hence serum Hcy level can be a possible significant independent biomarker of NASH. However a large scale prospective cohort study is required to generalise the clinical efficacy of Hcy levels towards establishing it as a non-invasive biomarker for the assessment of different stages of NAFLD.

O22 "NORMAL" LIVER STIFFNESS MEASURE (LSM) VALUES ARE HIGHER IN BOTH LEAN AND OBESE INDIVIDUALS: A POPULATION-BASED STUDY FROM A DEVELOPING COUNTRY

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Abstract

Background: As we all know that the standard set of values for FibroScan has been seen in the European population. So, liver stiffness measurement (LSM) needs to be explored in ethnically and anthropometrically diverse healthy subjects and also in patients with liver diseases.

Objectives: To determine a set of "normal" LSM values, that would be informative and useful for the application of fibrosis in Indian Population.

Materials and Methods: In this Prospective cohort study we involved two sets of subjects; a healthy subjects (HS) cohort selected from a systematically maintained population laboratory and an asymptomatic liver disease (LD) cohort attending our institution for evaluation. We choose 437 individuals as Healthy Subjects (HS) with normal alanine aminotransferase (ALT) levels and 274 patients with liver diseases including 188 with nonalcoholic fatty liver disease (NAFLD) and 86 with chronic hepatitis and other aetiologies. LSM was performed by transient elastography (TE) using FibroScan in all the subjects. Liver biopsy was performed in 125 patients. The range

of normal values for LSM, defined by 5th and 95th percentile values in healthy subjects, was 3.2 and 8.5 kPa respectively. An alpha level <0.05 was adopted for statistical significance.SPPS V-16.0 was for statistical analysis.

Results: We found that healthy subjects with a lower body mass index (BMI; <18.5 kg/m2) had a higher LSM compared with subjects who had a normal BMI; this LSM value was comparable to that of obese subjects (6.05±1.78 versus 5.51±1.59 and 6.60 ±1.21, P=0.016 and 0.349, respectively). We also found out a significant pattern that, in healthy individuals, undernutrition and leanness, manifested by lower BMI, increase liver stiffness values in a similar way as obesity does providing a U-shaped distribution of normal LSM values. Liver disease patients without histologic fibrosis had significantly higher LSM values compared with healthy subjects (7.52 ±5.49 versus 5.63±1.64, P < 0.001).LSM did not correlate with inflammatory activity and ALT in both NAFLD and chronic hepatitis groups.

Conclusion: LSM varies between 3.2 and 8.5 kPa in healthy subjects of South Asian origin. Liver stiffness begins to increase even before fibrosis appears in patients with liver diseases.

O27 MELD SCORE IS NOT ENOUGH FOR PREDICTING OUTCOME IN LIVER TRANSPLANT CANDIDATES: A PROSPECTIVE STUDY IN SHIRAZ, IRAN

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Abstract

Background: About 3000 liver transplants were done in Shiraz University of Medical Sciences, Pole of liver transplant in Iran. This study aimed to determine the predictors of mortality in patients on waiting list for liver transplant.

Methods: This prospective study that was conducted between 2011 and 2015 lasted 1251 days. We followed 1590 patients who were candidate for liver transplant. Studied items were Socioeconomic status, causes and findings of Liver disease, Kidney function, coagulopathy, hematologic markers, upper and lower gastrointestinal (GI)studies ,cancer ,thyroid function (TSH), past history of myocardial infarction(MI),nutrition status, patients' self -health assessment and their daily working hours. Child-Turcotte-Pugh (CTP) and Model for End-Stage Liver Disease (MELD) scores were also calculated. Single variable analysis was done using log Rank test and multiple variable analysis was done using Cox regression.

Results: Mean age of 1590 studied patients, was 45 ±15.2 years and male (1019) to female (563) ratio was 1.8. By the end of the study period, 450(28.3%) were liver transplanted compared to 1140(71.7%) who were not transplanted. Of all non -transplanted patients, 723(63.4%) were alive and 166(14.6%) were dead. The mean duration of follow up (FU) in all patients was 302.5± 293 days. Among dead patients, 26(15.7%) was dead in the first month of FU, while 18(10.8%),14(8.4%),32(19.3%) and 76(45.8%)were dead in the 2nd,3rd,between 3 to 6 months and after 6 months of FU respectively. Multiple variable analysis showed that hypothyroidism [Hazared Raio (HR): 3.4(1-11.3, P=0.04)], having cancer as HCC: hepatocellular carcinoma [HR:1.6(1-2.5),P=0.04], abnormal kidney function[HR:1.5(1-2.2),P=0.01], End sage liver disease's complications[HR:1.2(0.9-1.5),P=0.05] high MELD score[HR:1.1(1-1.1),P=0.003] are significant predictors of mortality among patients waiting for liver transplant.

Conclusions: In addition to high MELD score, abnormal kidney function and complications of end stage liver diseases, hypothyroidism as well as having cancer are the main determinants of mortality in pre-liver transplant patients which should be considered in the prioritization system of liver transplant.

O30 PROTECTIVE ROLE OF SPECIFIC PATHOGEN FREE MICROBIOTA IN BILE DUCT LIGATED AND CCL4 TREATED MICE

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Abstract

Background: In chronic liver disease the presence of gut-derived bacterial products and the resultant increase in inflammatory cytokines in the splanchnic and systemic circulation may contribute to the progression of fibrosis. However, the composition of the intestinal microbiota and the host-microbe interaction in the development of liver fibrosis remain largely unknown. We hypothesized that fibrosis is attenuated in a gnotobiotic model of limited intestinal colonization (altered Schaedler flora, ASF) compared to a more complex colonization with specific pathogen free flora (SPF). We aimed to investigate the development of fibrosis and portal hypertension in ASF and SPF mice.

Methods: Liver fibrosis was induced by common

bile duct ligation (BDL) for 14 days or intraperitoneal (IP) injection of 20% (dilution in olive oil) carbon tetrachloride (CCL4) for 10 weeks in ASF or SPF male, C57BL/6 mice. Hemodynamic measurements were performed after 14 days in BDL or 10 weeks in CCL4 treated mice. Liver histology and collagen deposition were evaluated using Sirius red staining for determination of fibrosis degree. To assess bacterial translocation, mesenteric lymph nodes, spleen and liver were dissected aseptically and then cultured on Luria Bertani or blood agar for aerobic and anaerobic culture respectively.

Results: There were no differences in portal pressure between sham-operated (controls) ASF or SPF mice. After BDL or CCL4 treatment portal pressure (PP), portosystemic shunts (PSS) and collagen deposition within the liver showed a significant increase in both groups. However, the increase in portal pressure and degree of fibrosis was higher in ASF than SPF mice. Results are as follow: in BDL mice, PP: ASF-Sham 8.34±1.1 cmH2O vs. SPF-Sham 7.18±1.3 cmH2O, p=0.15 and ASF-BDL (11.8± 1.1 cmH2O vs. SPF-BDL 9.75± 1.2 cmH2O, p=0.018). PSS%: ASF-sham (0.29 ±0.06% vs. SPF-sham 0.38 ±0.11%) or ASF-BDL (2.91±1.9% vs SPF-BDL 2.42± 2% p= 0.662). Collagen deposition%: ASF-sham 0.1% vs. SPF-sham 0.3% or ASF-BDL 9.8% vs. SPF-BDL 5.2% p=0.014). In CCL4 treated mice, PP: ASF-Sham 8.46 ± 0.05 cmH2O vs SPF-Sham 7.35 ±1.7 cmH2O, p=0.2 or ASF– CCL4 (12.15 ±1.6 cmH2O vs. SPF-CCL4 10.43 ± 1.2 cmH2O, p=0.04). PSS: ASF-control (0.62 ± 0.2%) vs SPF-control (0.49 ± 0.2%) or ASF-CCL4 (3.13±1.4%, p=0.015 vs. SPF-CCL4, 2.07±0.8%, p=0.015). Collagen deposition%: ASF-Sham 1.1% vs. SPF-Sham 0.8% and ASF-CCL4 (7.6±5% vs. SPF-CCL4 mice 4.3±2%, p= 0.02). Bacterial translocation was significantly higher in ASF-BDL than SPF-BDL mice suggesting that bacterial translocation occurred more frequently in ASF-BDL mice. The increase in the bile infarcts area was significantly higher in ASF mice (ASF-BDL 13.5% vs. SPF-BDL 4.8% P=0.026). No significant bacterial translocation was observed in CCL4 treated mice.

Conclusions: SPF mice presented attenuated fibrosis and portal hypertension compared to ASF mice. Contrary to our hypothesis, these findings suggest that a more complex intestinal bacterial flora may play a hepato-protective role.Our results are in line with studies showing that germ free mice are more susceptible to liver injury and fibrosis suggesting the beneficial role of intestinal microbiota in preventing liver injury.

O31 COMPARISON OF INVASIVE AND NON-INVASIVE TESTS FOR ASSESSMENT OF LIVER FIBROSIS IN THE PATIENTS WITH CHRONIC HEPATITIS B AND C

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Abstract

Background: The liver is one of the largest vital organs which could be affected by different infectious diseases such as chronic hepatitis B and C. Nowadays, different methods are used for determining the severity of chronic viral hepatitis and liver fibrosis.

Objectives: This study was conducted to compare invasive and non-invasive liver fibrosis tests in the patients with chronic hepatitis B and C.

Methods: In a cross-sectional study, we compared the results of the liver biopsy (used Metavir scoring system) with Fibrosis-4(FIB-4) and aspartate aminotransferase to platelet ratio index (APRI) biomarkers in identifying liver fibrosis in the patients with chronic hepatitis B and C. The data including demographic characteristics, type of hepatitis, serum biomarkers and the results of liver needle biopsy were extracted from the patients' medical records. FIB-4 and APRI tests were calculated by the specific formula. The data were analyzed with statistical software SPSS version 16.

Results: From 194 patients (77.32% male) with chronic hepatitis, 63 (32.5%) patients had hepatitis B and 131 (67.53%) of them had hepatitis C. The mean of age in the patients with chronic hepatitis B and C was 36.79± 11.98 (range: 16-61) years and 40.89±11.23 (range: 19-82), respectively. There was statistically significant difference between the mean of platelet counts and prothrombin time (PT) at the different levels of Metavir scoring (P<0.05). In the patients with hepatitis B and C, FIB-4 index in cut-off point of <1.31 and >2 had the highest sensitivity and specificity in the diagnosis of mild (F0-F1) and severe fibrosis (F3), respectively. In both types of hepatitis B and C, APRI index in cut-off point of <1.35 and >1.81 had the highest sensitivity and specificity in the diagnosis of mild (F0-F1) and severe fibrosis (F3), respectively.

Conclusions: According the results, in the patients with chronic hepatitis, the severity of liver fibrosis increases with rising of APRI and FIB-4 indices. Therefore, these non-invasive indices can be used instead of invasive diagnostic tests in certain circumstances.

O32 HEPATITIS C VIRUS GENOTYPE DISTRIBUTION AND RELATIONSHIP WITH SERUM ALANINE AMINOTRANSFERASE AND QUANTITATIVE SERUM HCV RNA VALUES IN PROVINCE OF AFYONKARAHISAR, TURKEY

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Abstract

Background: In this study, it was aimed to determine the genotype distribution of HCV and relationship between serum alanine aminotransferase (ALT) and HCV RNA quantitative values.

Materials/methods: A total of 133 patients were enrolled in to the study. The viral load were studied with COBAS TaqMan 48, (Roche Diagnostics) and genotypes determined with line prob assay method (GEN-C 2.0, NLM) in sera samples. Since treatment period, responses clinical progress were similar, the patients were divided into two groups; namely genotype 1 and 4 patients as group one and genotye 2 and 3 groups as group two. The statistical analysis of these data performed by using SPSS 20.0 program "Independent Samples t test" and Mann-Whitney U test. $p<0.05$ value was considered to be significant.

Results: The viral load values of first group patients (Genotype 1,4) were between 2,100 IU/ml and 47,000,000 IU/ml (average 4665404.06±5961467.40 IU/ml) and viral load for second group patients (Genotype 2,3) varied between 290,000 IU/ml and 17,000,000 IU/ml (average5108000.00±5490860.68 IU/ml). The phenomenon according to genotype HCV RNA distribution has not shown significant relationship ($p>0.05$). ALT values among the first group patients were found to be between 5-339 UI/ml (average 41,66±40.37 IU/ml) and in second group ALT values between 23-100 IU/ml (average 46.30±27.62 UI/ml). The phenomenon according to genotypes ALT values and its distributions did not exhibit significant relationship ($p>0.05$). It has been found that 112 patients (84.2 %) have genotype 1, 66 patients (49.6 %) have genotype 1b, 2 patient (1.5 %) genotype 2, 9 patients (6.8 %) genotype 3 and 10 patients (7.5 %) genotype 4.

Conclusions: In the HCV genotype studies carried out in Turkey, it has been found that majority of HCV infections have mainly type 1b and approximately 90 % genotype 1. Type 2, 3, 4 HCV infections have rarely encountered. As it was found worldwide and in our country, in our study it has also been discovered that; Genotype 1 was the most frequent one. Furthermore in our study it has been found that the different genotypes do not have influence on the serum ALT value and HCV RNA quantitative values.

O35 EXPRESSION PATTERN OF P53 AND KI-67 IN HBV-RELATED HEPATOCELLULAR CARCINOMA: A QUANTITATIVE REAL-TIME PCR AND IMMUNOHISTOCHEMICAL STUDY

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Abstract

Background: HBV-related hepatocellular carcinoma is one of the most common malignancies worldwide with a poor prognosis. In order to make successful treatment, an accurate diagnosis is necessary In this study expression patterns of p53 and Ki-67 and their relationships with early diagnosis of HCC in Iranian patients were investigated.

Methods: The expression of p53 and Ki-67 were determined by immunohistochemistry and quantitative real-time PCR (q-PCR) methods, using 90 cases from patients with HBV, HCC and HBV+HCC and 25 normal tissues as the control tissue samples.

Results: p53 and Ki-67 were expressed in higher levels in HBV-related HCC patients compared to HBV group. The results showed that the labeling index of p53 and Ki-67 are correlated with immunohistochemical and molecular expression of p53 and Ki-67. The sensitivity and specificity for HCC diagnosis were 77.3% and 76.4% for p53, 51.0 and 97.9% for Ki-67, respectively. The sensitivity and specificity of the panels with 2 and 1 positive markers, regardless of whichone, were 34.8%, 97.9%, 96.5% and 86.4%, respectively.

Conclusion: The current study demonstrated the association between p53 and Ki-67 expressions with the Iranian HBV-related HCC cases.p53 and Ki-67 could be useful biomarkers for HCC diagnosis. Also, proper combinations of these 2 markers could improve diagnostic accuracy.

O43 ASSOCIATION OF MICRORNA-146A AND MICRORNA-196A2 GENETIC VARIANTS WITH CONSEQUENCE OF HEPATITIS B VIRUS INFECTION

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Abstract

Background/Objective: Hepatitis B virus infection (HBV) is a serious public health problem affecting approximately 2 billion people worldwide.It has been reported that around 240 million individuals are chronically infected with the HBV virus and nearly 780,000 deaths per year occurs as a consequent of HBV infection. Recent studies have shown the association between single nucleotide polymorphisms

(SNPs) in microRNA-146A and microRNA-196A2 genes and susceptibility to HBV infection. This study aims to examine the effect of microRNA-146A and microRNA-196A2 genetic variations on the consequences of HBV infection in the Malaysian populations.

Methods/ study design: A total of 423 chronically infected HBV patients and 97 resolved HBV individuals together with 623 healthy controls were enrolled in this study. We employed Sequenom MassARRAY® iplex genotyping platform to genotype SNPs in microRNA-146A (rs2910164 C>G) and microRNA-196A2 (rs12304647 A>C and rs11614913 C>T).

Results: A significant difference was observed in allele (p=0.015, OR=0.64, CI=0.44-0.92) and genotype frequencies (p=0.014, OR=0.40, CI=0.19-0.83) of microRNA146A -rs2910164 between HBV patients and resolved HBV individuals. The results also showed a significant association in genotype frequencies (p=0.034, OR=0.53, CI=0.30 - 0.96) of microRNA196A2-rs12304647 between HBV patients and healthy individuals. We found that microRNA146A- rs2910164 confers the ability to clear the virus in HBV infected patients. Moreover, microRNA196A2- rs12304647 has a protective effect in individuals from infection by HBV virus.

Conclusion: Our results suggest that SNP rs2910164 of microRNA146A and rs12304647 of microRNA196A2 are associated with HBV clearance and with protection against HBV virus infection respectively.

O45 EPIDEMIOLOGIC AND DEMOGRAPHIC SURVEY OF AUTOIMMUNE HEPATITIS IN KHUZESTAN PROVINCE

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Abstract

Introduction: Autoimmune hepatitis (AIH) is a chronic progressive inflammatory disorder that characterize with lobular inflammation and elevation of liver transaminases. The Aim of this study is to evaluate demographic and demographic characters of AIH in Khuzestan province.

Method: In this descriptive study, all of the known cases of AIH in Khuzestan during 2009 to 2014 included and their recorded DATA including demographic characters, serologic profile and histologic reports evaluated.

Results: Overall 63 patients that their diagnosis have been confirmed by liver biopsy included. 69.8% of cases were female and average age of participants was 38.04 ± 11.3y. Average levels of AST, ALT and ESR include 173.9 ± 115.1, 208.2 ± 110.2 and 38.8 ± 23.6 respectively. 67.6% of cases were AIH and rest of patients diagnosed as overlap syndrome (22.2% AIH + PBC and 11.1% AIH + PSC). The most common symptoms include jaundice (45.3%) and fatigue (16.2%) and 32 cases (37.2%) were completely asymptomatic and diagnosed just based on disturbance of liver functional tests.

Conclusion: AIH is most common among middle age women and its most common symptom is icterus or disturbed liver function test. Awareness of responsible physician and low threshold for performing liver biopsy and request of serology tests are mandatory for proper diagnosis and management.

O47 HEPATITIS B VIRUS X GENE DELETIONS AND INSERTIONS IN GORGAN CITY PATIENTS: CHRONIC HEPATITIS-B VERSUS CIRRHOSIS

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Abstract

Introduction: Specific mutations in Hepatitis-B Virus (HBV) genome would proceed the development of chronic hepatitis B to more serious consequences like cirrhosis and end-stage liver disease.

Aim: This study was designed to detect deletion and insertion mutational patterns in the X-gene region in a population of chronic HBV and related cirrhosis patients.

Materials and Methods: Sixty eight chronic HBV patients and 34 HBV-related cirrhotics were recruited from the eligible cases (N=50) referred to the academic hospitals of Gorgan city, Northeast of Iran, between Jan 2011 to Dec 2013. The HBx region was amplified by semi-nested PCR using serum samples and analyzed by sequencing.

Results: Our findings showed deletions and insertions in the C-terminal of HBV of the cirrhotic group and 8 bp found in two chronic HBV cases (2.9%). We detected 15 types of deletions in cirrhotic cases such as 1762-1768, 1763-1770, 1769-1773 and T1771/A1775.

Conclusion: We found that the frequencies of deletion and insertion mutations in C-terminal of X-gene were more seen in cirrhotic patients comparing to chronic HBV cases in our area of study.

O54 FREQUENCY OF TRANSFUSION TRANSMITTED INFECTIONS AMONG ARDABIL BLOOD DONORS BASED ON DEMOGRAPHIC CHARACTERISTICS FROM 2012 TO 2016

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Abstract

Background and Objectives: Transfusion transmitted infections (TTIs) such as hepatitis B (HBV), hepatitis C (HCV), human immunodeficiency virus (HIV) and human T-cell lymphotropic virus (HTLV) can be transmitted through blood components. The aim of this study was to evaluate the frequency of HBV, HCV, HIV and HTLV Seromarkers among Ardabil blood donors based on demographic characteristics, during 2012-2016.

Materials and Methods: This study was a descriptive, retrospective analysis of 169928 donors who donated blood at Ardabil Blood Transfusion Center (ABTC). Information including demographic characteristics and serologic test results (HBsAg, Anti-HCV, Anti-HIV and HTLV) of all blood donors during 2012 to 2016 were collected from records. Data was analyzed using descriptive statistics by SPSS software version 20.

Results: Prevalence rates of HBV, HCV, HIV and HTLV were 20, 2.7, 0.23 and 0.52 per 10000, respectively. The infections frequency was very higher in the first-time donors than multi-time and repeated donors 94%, 3.2 and 2.8% respectively. Analysis of trend for the prevalence of HBV and HCV showed a significant decrease from 22.42 and 4.29 to 13.72 and 2.86 per 10000 donors, compared 2012 to 2016 respectively($p<0.05$). While the prevalence of HIV and HTLV was constant. All parameters influenced with donor states, age and educational level.

Conclusions: The results show low levels of infections among repeated donors and decreasing prevalence of TTIs demonstrated that shows the effectiveness of screening methods, and thus the safety of blood products in Iranian Blood Transfusion Organization.

O74 FREQUENCY OF HBC-AB, HBS-AB AND HBV-DNA AMONG HBS-AG NEGATIVE HEALTHY BLOOD DONORS IN YAZD

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Abstract

Introduction: Regardless of all efforts to guarantee safety of blood, hepatitis B residual risk is the highest among transfusion-transmitted diseases. Although Transmission of HBV infection has been documented from HBs-Ag negative, anti-HBc positive blood donors; diagnosis of hepatitis B in most of blood transfusion centers is based on HBs-Ag detection by ELISA method. There are no available data about the frequency of hepatitis B core antibody (HBc-Ab) in Yazd province.

Materials and Methods: 1500 healthy blood donors negative for HBs-Ag, HCV-Ab, HIV-Ag/Ab and RPR enrolled in this cross-sectional study from 24th June until 13th May 2015. We performed HBc-Ab for all and HBs-Ab and real time for HBc-Ab positive samples.

Results: HBc-Ab was positive in 74(4.9%) samples. 11(14.9%) of HBc-Ab positive samples were HBs-Ab negative. 63(85.1%) of HBc-Ab positive samples had HBs-Ab titer over 10 IU/L and 43(58.1%) of them had HBs-Ab titer over 100 IU/L and there was not found any HBV-DNA positive PCR in our donors.

Conclusions: The frequency of HBc-Ab and HBV-DNA positivity was 4.9% and 0 respectively. Totally 58.1% of HBc-Ab positive donors had HBs-Ab titer over 100 IU/L that suggests it is not infective. Totally, the study results suggest that Yazd blood donors are low risk for transmission of occult hepatitis B.

O77 INVESTIGATION OF THE HBS AG MUTATION PATTERNS CORRELATION WITH DISEASE PROGRESSION IN ASYMPTOMATIC CARRIERS AND HEPATOCELLULAR CARCINOMA/CIRRHOTIC HBV INFECTED PATIENTS

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Abstract

Background: The HBsAg variations not only render immune evasion, but also leave a drastic effect on HBV replication and infection outcome. Regarding controversial issues, the role of HBsAg variations in

disease progression needs to be investigated more.

Aim: The aim of this study was to compare the pattern of HBsAg mutations among asymptomatic carriers and HCC/cirrhosis patients.

Methods: In this cross-sectional study 19 HCC/cirrhotic patients and 26 asymptomatic subjects were enrolled. After DNA extraction, HBs gene was amplified by using an in-house nested-PCR. PCR products were introduced into bi-directional sequencing. After alignment with reference sequences, the variation patterns of complete HBs gene were investigated.

Results: Regarding sequence alignment some substitutions and stop codon mutations were detected that were significantly different between groups. Substitutions of Y134N/F/L (6) and P120T/S (5) in B-cell epitope were significantly detected in HCC/Cirrhotic group (P<0.05). In opposite, the substitution of Y206S/F/L/H (7) in CTL epitopes was found more frequently in asymptomatic carriers (P<0.05). Totally, 12 Stop codon mutations such as C69*(6) and W182*(2) which resulted in HBs truncation form were found among HCC/Cirrhotic group (P<0.001). Substitutions of Y134N/F/L and P120T/S were more prevalent in HCC/Cirrhotic cases.

Conclusions: Some novel significant mutations were recognized to be associated with disease progression. From them, B-cell epitope variations, stop codon C69* and specific substitutions such as Y134 or P120 in HBsAg might be associated with HCC/cirrhosis progression while mutation at Y206 correlated to asymptomatic state development.

O80 EFFECT OF EARLY HEPATITIS C VIRUS CLEARANCE ON HEPATOCELLULAR CARCINOMA RISK: BC HEPATITIS TESTERS COHORT

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Abstract

Background: To assess the impact of early hepatitis C virus (HCV) clearance on hepatocellular carcinoma (HCC) prevention, we compared HCC risk among untreated patients who spontaneously cleared HCV (SC), as a unique comparator group, with interferon-based treated patients who achieved sustained virologic response (SVR), treated patients who failed treatment (no-SVR), and untreated patients with active infection.

Method: The BC-HTC includes data on all individuals (~ 1.5 million) tested for HCV between 1990–2013 in British Columbia, linked with medical visits, hospitalizations, cancers, prescription drugs and mortality. Multivariable Cox proportional hazard models were used to assess HCC risk. Population attributable fraction (PAF) was computed to estimate the proportional reduction in HCC that would be achieved by treating people closer to infection acquisition.

Result: Of 46,666 HCV infected individuals 12,527 (26.8%) had spontaneous clearance 24,794 (53.1%) were untreated with active infection 5,355 (11.5%) were treated and achieved SVR while 3,990 (8.5%) failed the treatment. The annual HCC incidence rate per 1,000 person-year (PY) was highest in no-SVR (7.7/1000) and lowest in spontaneously cleared (0.3/1000) groups. Cumulative incidence showed a steeper increase in the no-SVR group, followed by active infection and SVR; the lowest increase was in the SC population (Gray's test P < 0.0001) (Figure). In multivariable model, the no-SVR group had highest HCC risk (hazard ratio 95% confidence interval) (14.52; 9.83-21.47) compared to SC followed by active infection (5.85; 4.07-8.41) Cirrhosis,older age (50+), male sex,genotype 3,diabetes,and problematic alcohol use were associated with increased HCC risk Compared to the SC group, earlier treatment-based viral clearance is expected to decrease the incidence of HCC by 69.4% (57.5%-78.0%), 77.5% (69.4%-83.5%), and 30% (10.8%-45.1%) among untreated, no-SVR,and SVR patients respectively.

Conclusion: As expected, HCC risk for spontaneously cleared patients was low. The No-SVR group had the highest HCC risk, likely reflecting a poorer prognostic profile at treatment initiation. This highlights the limited HCC prevention benefits of treating the disease at the later stage, even if SVR is achieved. The higher PAR among SVR compared to SC group suggest that earlier HCV treatment will be required to achieve the same risk reduction observed for SC patients.

O92 REPRESSION OF HEPATITIS C VIRUS REPLICATION BY AN ENGINEERED PUF PROTEIN

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Abstract

Background: PUF (Pumilio and fem-3 mRNA binding factor) proteins can bind RNA in a sequence-specific manner. The deciphered RNA-recognition code of these proteins has enabled researchers to design engineered PUF proteins capable of binding to any desired target in order to modify its ultimate fate. In this study, a modified Homo sapiens Pumilio-homology domain (HsPUM1-HD) was engineered to bind to the internal ribosome entry site (IRES) of hepatitis C virus (HCV) genome to potentially inhibit viral translation and replication.

Methods: Based on the RNA-recognition code, required modifications were applied to HsPUM1-HD to change its natural recognition sequence to a sequence in stem-loop III of HCV IRES. An RNA-protein pull-down assay was performed to check the sequence-specificity of this modified HsPUM1-HD (mHsPUM1-HD). Translational inhibitory effect of mHsPUM1-HD was evaluated in a dual luciferase reporter assay. Moreover, the effect of mHsPUM1-HD on HCV replication was assessed in Huh7.5 cells infected with HCV JFH-1 strain.

Results: The mHsPUM1-HD was found to bind sequence-specifically to its cognate RNA, as a biotinylated target RNA captured the mHsPUM1-HD through binding to streptavidin magnetic beads. This protein also reduced HCV IRES-dependent Firefly luciferase translation by 40% in HEK293 cells (Fig 1). Moreover, transfection of Huh7.5 cells with mHsPUM1-HD decreased HCV RNA levels more than 98% (Fig 2).

Conclusions: This is the first report of an engineered HsPUM1-HD with the potential anti-HCV activity. These findings suggest that PUM-HDs can be engineered to target desired RNAs of infectious agents in order to specifically interrupt the essential steps of their life cycles.

O102 OCCULT HEPATITIS B VIRUS INFECTION AND ANTI-HBC AMONG BLOOD DONORS

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Abstract

Occult HBV infection (OBI) is defined as the presence of HBV genome (HBV-DNA) in the blood or liver with undetectable HBsAg. Occult HBV is transferable by blood transfusion.The prevalence of OBI among blood donors is variable and depends on the prevalence of HBV in the population and the methods used to detect HBV. At present, HBsAg detection is the only diagnostic screening test for HBV infection in blood transfusion centers in Iran.The anti-HBc test was introduced for blood donors screening to prevent post transfusion hepatitis B (OBI) from HBsAg negative donors. The anti-HBc prevalence rates in blood Donors are found in the United States 0.23%, United Kingdom 0.56%, Denmark 0.70%, Japan 1.1%, Germany1.88%, Italy 4.85%, India 10.82%, South Korea13.5%, Egypt 14.2%, Greece14.9%, Pakistan17.28% and In Iran 2.1%.To detect OBI, the HBV DNA test is very important. In developed countries, whole blood and all source plasma are screening for HIV, HCV and HBV by nucleic acid testing (NAT).Several studies demonstrated, NAT assays and anti-HBc assays are capable to detecting seronegative and window period infectious. Blood donors, anti-HBc and NAT screening tests are able to eliminate HBV transmission from HBsAg negative blood. Nonetheless the risk of HBV transmission from anti-HBc positive donors depends on detection of HBV DNA. However, blood used for transfusion is not always free of transmissible diseases. Even with HBV NAT Screening (pooling systems), there is a risk of false negative results, on the other hand, anti-HBc screening has the potential of excluding the vast majority of healthy donors with false positive HBV results.

O131 AN INVESTIGATION OF OCCULT HEPATITIS B INFECTION AMONG ANTI- HBC ONLY POSITIVE PATIENTS IN THE SOUTHERN KHORASAN PROVINCE: AN IRANIAN COMMUNITY BASED STUDY

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Abstract

Background: The occult HBV infection (OBI) is defined by the presence of HBV genome in the hepatocytes and or serum in the absence of surface antigen that could reactivate and lead to some liver diseases.

Aim: According to extend of the Southern Khorasan province and proximity to the Afghanistan we aimed to determine the prevalence of OBI among anti- core

positive only patients of this province.

Method: This was part of a comprehensive community based screening project including 5235 cases with a cluster- randomized sampling. All have completed a whole questionnaire including all demographic and socio- epidemiological information. Blood and serum samples were collected and subjected to extraction of nucleic acids. To identify OBI two series of nested- PCR were performed for partial amplification of S and X gene. Risk estimation analysis, student t test and Chi square statistical analysis were performed.

Results: In the overall 596 cases just positive for HBc- Ab were included in the study. The mean age of patients was 49.34 ± 1.31 years that ranged between 15- 71 years; 52.9% female and other males. The OBI was detected among 61 cases (10.2%) which were similar between sexes, but among divorced women, illiterate and students were 33.3%, 12.2% and 16.6% respectively. The prevalence of OBI was related to some risk factors such as tattooing (OR: 4.5, CI95%, 1.1- 18.4) and illegal sexual (OR: 9, CI95%:1.24- 65.2). All have been negative for HIV and HDV and there was just one HCV positive.

Conclusion: There was a relatively high prevalence of OBI in this study. According to being negative for all seromarkers in this group, it is important to check high risk peoples for OBI.

O141 THE BRITISH COLUMBIA HEPATITIS TESTERS COHORT (BC-HTC): A UNIQUE EXAMPLE OF LABORATORY AND ADMINISTRATIVE DATA LINKAGE TO MONITOR HEPATITIS C (HCV) INFECTION

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Abstract

Background: In Canada, 230,000-450,000 (0.66%-1.3%) people are infected with HCV. In British Columbia (BC) the HCV prevalence is about 50% higher than the rest of Canada (1.6%), with increasing risk of HCV-related morbidity and mortality. Highly effective and well-tolerated but expensive direct acting antiviral (DAA) agents are expected to curb increasing morbidity and mortality. However, systems are needed to monitor program progress across the cascade of care. In this study we describe the BC Hepatitis Testers Cohort (BC-HTC) construction and data linkage on a system established in BC and provide examples of analyses that can be performed to monitor disease burden and program progress and to evaluate treatment effectiveness to reduce HCV-related morbidity and mortality.

Methods: The BC-HTC includes all individuals (~1.7 million people) tested for HCV or HIV or diagnosed with hepatitis B or active tuberculosis in BC, integrated with data on demographics including socioeconomic status, medical visits, hospitalizations and drug prescriptions, chronic diseases, cancers and mortality. HCV testing in BC is centralized and all prescription drugs are recorded in a central system. The BC-HTC includes data since the early 1990's with plans for annual updates to create a longitudinal medical history.

Results: As of December 31, 2016, 1,699,220 individuals were included in the BC-HTC. Of these 1,362,510 were tested for HCV, 69,285 were positive and 3,001 cases were tested elsewhere, resulting in a total of 72,286 (5.3%) HCV positive individuals. Of 54,831 HCV positive individuals alive at the end of 2016, 4,041 (7.4%) initiated DAAs, 5,667 (10.33%) had decompensated cirrhosis (DC) and 1,377 (2.5%) developed hepatocellular carcinoma (HCC). Among 1,293,225 HCV negative testers, 1,179,424 individuals were alive at the end of 2016, among whom 15,015 (1.3%) had DC and 1,572 (0.13%) developed HCC.

Conclusions: The BC-HTC enables us to assess the risk of HCV-related morbidity (e.g. DC and HCC risks), cascade of care with focus on DAAs, and mortality in a large population setting. It also provides the opportunity to monitor treatment strategies and harm reduction initiatives to prevent infection, re-infection, and progressive HCV-related liver diseases among HCV tested and/or infected patients.

O142 HIGH RATES OF HEPATITIS C (HCV) CO-INFECTION AND ADVANCED LIVER FIBROSIS AMONG HIV COHORTS IN MEDECINS SANS FRONTIERES PROGRAMMES IN MYANMAR

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Abstract

Introduction: Globally, 70 million people suffer from HCV infection, with the majority of cases occurring in low-and middle-income countries. In Myanmar, the HCV prevalence among the general population was estimated at 3% in 2015. In line with

global trends, the epidemic peaks among injection drug users (IDUs) (47%) and people with HIV (20%). Currently, MSF provides HIV care to approximately 32,000 patients in three cohorts in Yangon, Shan and Kachin and has implemented HCV screening in 2013. We aimed to assess the seroprevalence of HCV in all cohorts and to describe the main genotypes and stages of liver fibrosis in the Yangon cohort.

Methods: We conducted a cross-sectional analysis using routinely collected data. To determine the HCV infection we tested HCV antibodies in all cohorts. Further disease evaluation was performed in the Yangon cohort only, including chronicity of disease assessed by viral load testing and liver fibrosis by elastography and APRI test. We performed genotype testing for all patients with confirmed chronic HCV disease.

Results: We found an HCV seroprevalence of 7% in the Yangon cohort, 29% in the Shan cohort and 38% in the Kachin cohort. In Yangon 86% of patients tested for viral load had a positive test result. Of the 361 patients assessed with elastography, 174 (48%) had 9.4kPa, defined as late-stage liver fibrosis (F3/F4). Of the 313 patients tested with APRI, 60 (19%) had APRI Score 1.5 (F3/F4). Out of 381 patients tested, we found 118 patients (31%) with genotype 1,196 (51%) with genotype 3, and 65 (17%) with genotype 6.

Conclusion: The HCV seroprevalence varied across our cohorts according to project location. The high seroprevalence found in Kachin and Shan may be linked to the high presence of IDUs in these cohorts. The majority of HCV patients in the Yangon cohort suffered from chronic HCV disease with late-stage liver fibrosis and was infected with genotype 3, urging for immediate treatment initiation. Our findings advocate that efforts should be aimed at improving access to affordable HCV treatment urgently needed by HIV patients co-infected with HCV.

O147 MISSED OPPORTUNITIES FOR DIAGNOSING VIRAL HEPATITIS C IN POLAND. RESULTS FROM THE ROUTINE HCV TESTING BASED ON RISK FACTORS AT THE EMERGENCY DEPARTMENT (ED) IN THE HOSPITAL OF INFECTIOUS DISEASES IN WARSAW

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Abstract

Backgroud: The undiagnosed hepatitis C virus (HCV) is globaly recognized as a serious problem becaouse it may be spread and lead to morbidity decades after HCV infection. Current statistics indicate that approximately 200.000 (0.6%) of people in Poland suffer from active HCV infection, but only 10% among them is aware of their status.

Objective: This project is based on the concept that screening based on the presence of HCV-related risks (a patient's individual history and behavioral risk factors) is more effective than obligatory testing of all population. This study investigates the prevalence of serological markers for HCV among each risk-groups-defined as: a blood transfusion before 1992, more than three hospitalization in a lifetime, suspicious of liver disease, elevated aminotransferase activity, imprisonment, performed a test for HIV or HCV on his/her own initiative.

Methods and Material: The prospective study concerning 18 years up patients was conducted at the Emergency Department (ED) of Hospital of Infectious Diseases in Warsaw within past 10 months (from 15.IX.2016 to 15.VI.2017).The rapid HCV test was performed to all patients with risk-factors for HCV infection. The rates of serological positivity were calculated and further analysis was performed to examine the association between each risk-groups' characteristics and seroprevalence.

Results: Of 584 patients consulted at ED with risk factors for HCV infection during study period, the HCV test was performed in 571 cases. Among those tested patients there were 291 women and 280 men. New diagnoses were confirmed in 8 cases, HCV seroprevalence was 1.4 %, with median age 57.5. 6/8(75%) linked to HCV care were HCV RNA positive, one patient was previously diagnosed, and 2 patients are waiting for first visit in Out-Patient Clinic.

Conclusions: The study highlights that the implementation of the routine rapid testing is an essential tool for identifying new HCV infections and might have an important role for population's health.

O155 HEPATITIS B INFECTION IN IRANIAN INSTITUTIONALIZED MENTALLY RETARDED PATIENTS

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Abstract

Background: A higher prevalence of hepatitis B virus (HBV) infection has been reported in mentally retarded residents in closed institutions than in the

general population. The objectives of the present study were to determine the prevalence of serological and molecular markers of HBV infection in these patients, and to analyze HBV genomes derived from them.

Methods: Blood samples were derived from 400 mentally retarded patients living in six institutes in Tehran and tested for HBsAg, HBsAb and HBcAb (ELISA kits) and then HBV genome (Nested PCR) to determine HBV mutation. After sequencing of derived HBV genomes, phylogenetic softwares were employed to analyze the sequences.

Results: Twenty eight (7.0%) patients were for positive HBsAg result. From 41 HBcAb positive patients, 26 samples were positive in nested PCR. Among patients with positive PCR results for HBV DNA, 20 patients were HBsAg positive and 6 patients were HBsAg negative. 15 strains were derived from immune patients with titer of HBsAb. All derived strains belonged to subgenotype D1 and subtype ayw2 and ayw3. Immune escape mutants and YMDD mutations were observed in 9 and 6 of derived HBVs.

Conclusions: The observed frequency HBV infection is higher than reported estimation of HBV infection in Iranian general population (7% vs 2.1%). All HBV isolates from mental retarded patients represent homogenous genotype with other reported strains from Mediterranean countries. Because of a high frequency of immune escaped strains, mentally retarded patients and their nurses are at risk for acquiring HBV infection in spite of vaccination.

O159 OXIDATIVE DNA DAMAGE IN ASSOCIATION WITH HBSAG IN CHRONIC HEPATITIS B PATIENTS

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Abstract

Background: Chronic hepatitis B with accumulation of HBsAg in hepatocytes linked to the immune-mediated hepatic inflammation and induction of oxidative stress. 8-hydroxyl-2'-deoxyguanosine (8-OHdG) is a good biomarker for measuring the deleterious effect of exogenous infectious agents in oxidative damage to DNA.

Methods: Thirty chronic hepatitis B (CHB) patients who had undergone liver biopsies for therapeutic purposes with 30 matched controls from a healthy population were randomly selected for assessment of 8-OHdG levels in peripheral blood leukocytes DNA by 32P-postlabeling analyze. Hepatocyte expression of hepatitis B surface antigen (HBsAg) was evaluated immunohistochemically in liver biopsies of CHB patients. The effect of 8-OHdG and 95% confidence interval (CI), adjusted by relevant confounders, were assessed on HBV infection.

Results: Experimental investigation showed increased levels of 8-OHdG adduct compared to healthy individuals (mean (SD) 1456 (1275) vs 402 (271), $p<0.001$). The logistic regression with continuous and dichotomous models revealed the strong impact of 8-OHdG in CHB infection (OR=1.20; 95%CI: 1.01-1.44, P=0.043) and (OR=7.18; 95%CI: 1.32-39.02, P=0.022). HBV DNA and hepatic expression of HBsAg had a borderline association with 8-OHdG DNA adduct ($r=0.35$, $p=0.054$ and $r=0.36$, $p=0.05$).

Conclusion: This study proposes the possible oxidative deleterious effect of HBsAg and systemic DNA damage in CHB patients and supporting the host–viral interaction in immune-mediated inflammatory.

O161 ENHANCED TH17 RESPONSES IN PATIENTS WITH AUTOIMMUNE HEPATITIS

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Abstract

Aim: T cells are major players in chronic inflammatory diseases, such as autoimmune hepatitis. However, it is not clear which subset of T cells participate in the pathophysiology of disease.The aim of the present work was to assess the expression profile of signature transcription factor and cytokines of Th17 cells in patients with autoimmune hepatitis.

Methods: A total of eighteen patients with autoimmune hepatitis and eighteen normal subjects were recruited in the study. Comparison of gene expression patterns between patients and normal subjects was determined by quantitative real-time reverse transcriptase PCR (qRT-PCR).

Results: The results showed that RORC, IL-17A and IL-22 mRNA expression were increased greatly in the patients group as compared to the normal controls group ($P<0.05$).

Conclusion: These results, showing that deregulated production of Th17-related molecules may be associated with the pathogenesis of autoimmune hepatitis.

O162 PROTECTIVE EFFECT OF OPUNTIA EXTRACTS AGAINST MENADIONE-INDUCED OXIDATIVE STRESS AND APOPTOSIS IN CULTURED HEPG2 CELLS

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Abstract

Introduction: It is well known that the liver plays a pivotal role in the metabolism and detoxification of compounds entering the body. Considering the high prevalence of liver diseases globally, the pathogenesis of liver disease is an important public health problem. Cell damage caused by free radicals has been reported to be one of the leading mechanisms of hepatotoxicity.Extensive studies with model systems, and with biological materials in vitro, have clearly shown that reactive free radicals are able to produce chemical modifications of, and damage to, proteins, lipids, carbohydrates and nucleotides. In vitro and in vivo experiments have demonstrated that a number of herbal products protect against oxidative damage by inhibiting or quenching free radicals and reactive oxygen species (ROS).Opuntia spp. fruits are an important source of nutrients and contain high levels of bioactive compounds, including antioxidants.

Aim: The Aim of this study was to test the potential hepatoprotective effects of Opuntiarobusta and Opuntiastreptacantha extracts with high antioxidant capacity, on the response of the antioxidant defense system of a human hepatoma cell line (HepG2) against toxicity induced by the pro-oxidant menadione.

Materials and Methods: HepG2 cell line was used for a menadione-induced apoptosis model.Menadione exerts its apoptotic mechanisms in a concentration and time dependent way through ROS generation. HepG2 cultures were exposed to 50μMmenadione and 8% v/v of Opuntiaspp extracts, apoptosis was assessed by caspase-3 assay and acridine orange staining respectively.

Results: Exposure of HepG2 cells to a sub-toxic dose of menadione increased 9-fold the caspase-3 activity compared to control due to the overproduction of cellular ROS.Opuntia extracts resulted inthe decrease of caspase-3 activity(2.5 fold Or and 3 fold Os compared to the control) and protection of HepG2 cells exposed to menadione. Besides, the results of acridine orang staining assay confirmed the Caspase-3 results.

Conclusion: This study showed that the Opunita extracts protect the HepG2 cells against the apoptotic cell death induced by Menadione.Opuntia extracts could therefore be considered as a (supplemental) therapy for oxidative stress-related liver diseases.

O169 STUDY ON PLASMA LEVELS OF MIRNA-625 IN PATIENTS WITH LIVER CIRRHOSIS IN COMPARISON WITH HEALTHY CONTROLS

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Abstract

Introduction: Cirrhosis is defined as an end stage liver disease caused by chronic and long term liver damage and fibrosis with various etiology including continuous alcohol consumption, chronic viral infections, metabolic or autoimmune disorders. Liver biopsy still remains the gold-standard for staging hepatic fibrosis and diagnosis of cirrhosis but it's an aggressive technique with possible risk of complications. Finding precise biomarkers of liver cirrhosis and replacing liver biopsy with a noninvasive fibrosis assessment method based on those biomarkers is an optimal goal for biomedical and clinical researchers.MicroRNAs (miRNAs) are a group of small noncoding RNAs that control more than 60% of gene expression. They involve in control of many biological processes involving in cellular proliferation, apoptosis, development and differentiation.miRNAs in plasma/serum have been recently considered as a new class of highly specific markers for disease progression.

Method: In this study, we investigated plasma levels of miRNA-625 in two groups included 30 cirrhotic patients and 30 healthy individuals. RNA isolated from plasma and cDNA synthesis was perfomed then qRT-PCR was used to evaluate the expression of miRNA-625.

Result: The result showed a statistically significant difference between patients with liver cirrhosis and the healthy controls, miRNA-625was down-regulated (fold change= 0.037; P<0.000).

Conclusion: The finding suggested that changes in

plasma level of miR-625 can be considered as a promising biomarker of liver cirrhosis.

O174 HIGH BURDEN OF HEPATITIS B VIRUS INFECTION IN THE ESFANDIAR REGION OF SOUTHERN KHORASAN PROVINCE, IRAN: A COMPREHENSIVE COMPARATIVE STUDY

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Abstract

Background & aim: Infection with hepatitis B virus (HBV) is a causative agent of cirrhosis and hepatocellular carcinoma worldwide.We have received reports of high rates of HBV from the Esfandiar region, around the city of Tabas in the Southern Khorasan province of Iran. Therefore, we aimed to evaluate the prevalence of HBV and its risk factors in this village, in comparison to neighboring regions.

Method: This was a comparative comprehensive study included the Esfandiar region in compare to other neighboring villages (Marqoub and Zenogon). The whole Esfandiar and partly of comparing group were recruited and blood sampling was performed along with completing a questionnaire. The positivity rate of HBsAg, anti- HBc and serological markers of HIV, HCV, and HDV were estimated by ELISA assay. Statistical analysis was performed using SPSS 19 with Chi- square and independent T tests.

Result: Totally, 1243 participants were enrolled including 854 cases in Esfandiar and 389 cases for neighboring regions. The mean age of participants was 35.6 ± 19.9 years, ranged from newborns up to 95 years; 45.7% were male, and 63.3% were married. The prevalence of HBsAg and Anti- HBc in the Esfandiar region were 17.8% and 48.7%, respectively. The corresponding results for comparing group were 1.02% and 13.36%, respectively. Distribution rate of risk factors in the Esfandiar was similar to other groups. The seropositivity for HBV in the Esfandiar at ages under and more than 22 years were 1.2% and 23%, respectively. The HBV infection was more prevalent among those with dental treatment history, traditional phlebotomy, endoscopy, inter-familial and war veterans.

Conclusion: Our results have shown that the HBV was endemic in Esfandiar region mainly caused by interfamilial transmissions. Regarding lack of common risk factors of HBV transmissions, more consideration around organizing some socio- cultural behaviors are required. The effective vaccine program has declined the rate of HBV in the last two decades.

O179 THE ROLE OF POLYMORPHISMS NEAR IFNL3 GENE AS PREDICTORS OF RESIDUAL HCV RNA IN BUFFY COAT AFTER SUCCESSFUL ANTIVIRAL THERAPY

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Abstract

Background and Aims: The presence of hepatitis C virus (HCV) in cells of extrahepatic organs like peripheral blood mononuclear cells (PBMCs) have important implications for transmission, disease progression, and effective treatment of HCV-infected patients. The impact of host genetics such as polymorphisms near Interferon lambda 3 (IFNL3) on clearance of HCV RNA from buffy coat (BC) following successful clearance of HCV from plasma using Pegylated-IFN (PegIFN) and Ribavirin (RBV) treatment was evaluated in our study.

Methods: For detection of residual HCV RNA in BC samples, blood samples of 69 patients with sustained virologic response (SVR) after treatment with PegIFN and RBV were evaluated. Polymorphisms near IFNL3 gene including rs12979860 and rs8099917 were assessed using PCR-RFLP method.

Results: The most prevalent rs12979860 and rs8099917 genotypes were CT (49.3%) and TT (62.3%), respectively. Nine (13.04%, 95%CI: 7.01%-22.96%) patients had HCV RNA in their BC samples. The favorable genotypes of the two polymorphisms (rs12979860 CC and rs8099917 TT) were more frequently observed in patients with undetectable HCV RNA in their BC samples than those with HCV RNA in their BC samples (rs12979860 CC, 45% vs. 22.2%, P=0.016 and rs8099917 TT, 66.7% vs. 33.3%, P=0.01).

Conclusion: The polymorphisms of IFNL3 could play a crucial role not only in spontaneous clearance of HCV and SVR rate after PegIFN and RBV therapy,

but also in the clearance of HCV from BC after PegIFN and RBV therapy.

O182 EFFECTIVENESS OF SOBIOVIR® (SOFOSBUVIR) AND DAKLIBIOX® (DACLATASVIR) FOR TREATMENT OF HEPATITIS C IN PATIENT WITH TALASSEMIA

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Abstract

Introduction: Thalassemias are the commonest monogenic disorders in the world and the incidence rate is higher in the Middle East. Regarding to high consanguinity among population, it is estimated that there are 25,000 patients in Iran. Patients with α-thalassemia major are at risk of developing post transfusion hepatitis (PTH). In Iran Among thalassemia caseswere found about (19.3%) patients were HCVAb positive. According to this high prevalence, appropriate treatment of these patients is very important.New Direct Antiviral Agents (DAAs) emerged in 2011. Along with production of new drugs, in 2013, it has aimed to eradicate HCV infection by the end of three following decades. Unfortunately there is not a considerable study about effectiveness of DAAs in treating HCV infection in thalassemia patents, hence we decided to design this study.

Method: In this study , fifty thalassemia major patients with chronic HCV infection who have been treated with interferon based regimens and had not shown appropriate response were treated with ® daklibiox and ® sobiovir. Noncirrhotic patients treated for 3 months and cirrhotic patients treated for six months. SVR 12 was considered as the response criteria.

Result: Patients were 18 to 40 years old with mean age of 30.21±5/9 ,.Fifty six percent were male,88 percent were treated one time,8 percent two times and 4 percent three times. As a virology view, 48 percent of viruses had genotype a1, 28 percent a3, 12 percent 1b, 4percent 2a and 4 percent a3 and a1.According to fibroscan report 48 percent of patients were cirrhotic and 52 percent were noncirrhotic.After treatment only one patient who had genotype b1 virus did not respond to treatment.Liver enzymes significantly decreased in all patients. AST was IU/dl 89/43 ± 13/64 before treatment , decreased to IU/dl 9 /19± 72/37,ALT decreased from 10/56 ± 37/73IU/dl to IU/dl 35/28 ±57/27 (p<0/05). No complications were reported during treatment and after 24 weeks follow up.

Conclusion: Sofosbuvir (sobiovir®)-Daclatasvir (daklibiox ®) is an effective treatment with minimal complications in thalassemia patients who have chronic HCV infection.

O189 APPLICATION OF NON-MIXTURE LONG-TERM MODELS IN SURVIVAL ANALYSIS OF CIRRHOTIC PATIENTS

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Abstract

Background and Objectives: Liver cirrhosis is one of the most common causes of death in digestive disease with more than one million deaths annually across the world. Liver-transplantation is the only treatment of liver cirrhosis and because of lack of available liver donors, it is crucial to prioritize patients who are in waiting list of liver transplantation. In the current study we aimed to estimate the survival rates for patients who were in waiting list of liver transplantation by using non-mixture long-term models.

Material and Methods: Totally, data from 305 patients with liver cirrhosis who were in waiting list of liver transplantation at Imam Khomeini Hospital (Tehran, Iran) during May 2008 to May 2009 was used. Study participants were followed-up for at least 7 years. Because of high rate of censoring, non-mixture long-term models were used. Data were analyzed by using Stata (V.14) and R (V.3.2.1) softwares. P-values <0.05 were considered significant.

Results: The mean age (±SD) was 47.7 (±14.32) years and 59% of patients were male. During the study, 26.9% patients died due to complications of liver cirrhosis and viral hepatitis (34.2%) was the most leading cause of liver cirrhosis, which was hepatitis B (32%) followed by cryptojenic cirrhosis (22.6%), and autoimmune (16.4%)as the other main causes. The one, three and five year survival rates were estimated 85%, 67% and 60%, respectively. We also found associations between age, bilirubin, albumin, and INR and survival of cirrhotic patients.

Conclusion: When the data indicate that the long-lived patients are available, using long-term models for survival analysis advisable. Long-term models can be used in appropriate circumstances to analyze the survival of cirrhotic patients. According to AIC, we found that weibull non-mixture long-term model

was more efficient than others to predict survival of cirrhotic patents.

O200 RISK FACTORS FOR HEPATITIS C IN VOLUNTEERED IRANIAN BLOOD DONORS: A CASE-CONTROL STUDY

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Abstract

Introduction: Reduction of risk of transfusion transmitted infection is one of the main concerns of blood transfusion systems. Evaluation of HCV risk factors in HCV infected blood donors is critical for donor eligibility assessment and providing safe blood transfusion.

Materials and methods: This case-control study was conducted on serologically confirmed HCV blood donors (cases) and serologically negative HCV, HIV and HBV blood donors referred to Iranian Blood Transfusion centers over the country from Nov. 2015 to May 2017. Cases and controls were matched by donation status, donation month and donation center and interviewed for demographic and putative behavioral risks. A backward penalized logistic regression method was performed for data analysis. STATA software version 13 was used for statistical analysis.

Results: In this study, a total of 271 cases and 794 controls were interviewed. Age (AOR (5 year), 1.25; 95% CI, 1.12-1.39), intravenous drug abuse (AOR, 26.07; 95% CI, 10.77- 63.14), non- intravenous drugabuse(AOR, 6.15; 95% CI, 2.50- 15.13), religious self-flagellation (Ghama Zani) (AOR, 5.73; 95% CI,1.69- 19.35), history of blood transfusion before HCV blood donation screening) AOR, 5.50; 95% CI,1.62- 18.70), history of imprisonment)AOR, 4.84; 95% CI, 2.45- 9.56), sharing personal razor (AOR,4.26; 95% CI, 1.35- 13.46), history of tattooing)AOR, 4.36; 95% CI, 2.31-8.24), extramarital sexual activity)AOR, 2.97; 95% CI, 1.47-5.99) were some independent risk factors for prediction of HCV infection.

Discussion: This study emphasizes on the role of high risk behaviors and procedures in HCV transmission among Iranian blood donors in addition to confirmation of risk factors already reported. Increasing donor education about HCV risk factors along with consideration of mentioned risk factors in donor screening process are needed to protect recipients from potential HCV infection risk.

O201 CHARACTERIZATION OF OBI PREVALENCE AMONG VACCINATED CHILDREN FROM ALBORZ GENERAL POPULATION, IRAN; VERTICAL OBI, MYTH OR TRUTH?

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Abstract

Introduction: Occult hepatitis B infection (OBI) has been described in various clinical settings; however, studies on the prevalence of OBI among the immunized general population are scarce. The real position of occult HBV in immunized populations is not well known.

Methods: 558 sera samples obtained from children between 7 and 15 years old selected randomly from different schools located in Alborz Province, Iran, who already had completed doses of HBV vaccine according to the standard schedule. None had received HBIg. All were checked by HBV serology and real time PCR. The parents of OBI-positive subjects were investigated by the same methodology.

Results: Mean age was 8.5 years old. All subjects were negative for HBsAg and anti-HBc. In terms of anti-HBs, 300 (53.7%) and 258 (46.3%) were contained adequate (>10 IU/mL) (group I) and inadequate (<10 IU/mL) (group II) levels. 47 (15.6%) and 7 (2.7%) had OBI in groups I and II, respectively. Upon recalling of parents of OBI-infected children, 30 (64%) and 0 (0%) of either mother or father were positive for OBI related to groups I and II, respectively. None of the parents were positive for HBsAg. 30.4% of OBI-positive parents had anti-HBc.

Conclusion: Anti-HBs raised by HBV vaccine alone is not enough to neutralize the HBV DNA in vertical (or perhaps intrafamilial HBV) transmission. Inadequate anti-HBs induced by vaccination alone could protect against hepatitis B disease and chronic infection but may favor occult infections. A further molecular investigation based on high throughput next generation sequencing is undergoing.

O211 HEPATITIS C AND HEPATITIS B DUAL

INFECTION: CHANGE IN PREVALENCE AND PATTERN OVER A DECADE IN PAKISTAN

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Abstract

Objective: Pakistan is one of the top three countries of the world where prevalence of Hepatitis C virus (HCV) infection is alarmingly high (4.8%). The objective of this study was to document the change in prevalence and patient characteristics of HCV infection as well as HCV & HBV dual infection during last decade (2006-2016) in Pakistan.

Methods: An observational retrospective analysis of data from a routine hepatitis testing laboratory in a large public sector hospital was performed for the calendar year 2006 and 2016. Sera of suspected patients were tested for HCV antibody and HBV surface antigen by ELISA using commercial kits. Only newly referred patients with an unknown status of hepatitis C were included and positive patients were further tested for HBV surface antigen.

Results: During the year 2006, among 1877 subjects (male 989, female 888) tested for presence HCV antibody, 140 (7.5%) were found positive. Male subjects were significantly more infected than female (9.2% versus 5.5%; p=0.01). Among HCV positive patients HBV antigen was detected in 40 (28.6%) patients. The incidence of dual infection was more in female (34.7%) than male (25.2%) patients but the difference was not significant (p=0.50). In the year 2016 among 1090 referred subjects incidence of HCV increased three times (20.9%) but the dual infection was drastically reduced to 5.7%. The pattern of gender base incidence of HCV (male 21.8% versus female 20.3%), as well as dual infection (male 5.1% versus female 6.2%), remained the same despite referred female outnumbered male subjects.

Conclusions: During the last decade in Pakistan incidence of HCV had increased three times but dual infection of HBV in HCV positive patients had dramatically reduced. However, no change in the pattern of high incidence of HCV in male and HBV co-infection in female HCV patients were observed.

O216 EVALUATION OF THE PREVALENCE HBV AND HCV AND RELATED HIGH RISK BEHAVIORS AMONG PRISONERS IN IRAN: RESULT OF NATIONAL BIO-BEHAVIORAL SURVEY, 2015

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Abstract

Introduction: In line with the goal to "Eliminate viral hepatitis by 2030", the aim of this study was to determine a precise estimate of the prevalence of hepatitis B (HBV) and hepatitis C (HCV) and their determinants in prisoners in Iran.

Methods: This cross-sectional study was conducted in the first round of "HBV & HCV bio-behavioral surveillance" in Iran which was carried out from September to December 2015 with a sample size of 6200 prisoners in Iran. The sampling was performed using multi-stage sampling method. The status of HBV and HCV was determined by testing the subjects' blood samples via the ELISA test. The relationships between the consequences of risk factors were assessed by logistic regression.

Results: A total of 5508 patients participated in the study. 96.5% of the respondents were male and 74% had a history of drug abuse. The prevalence of HCV and HBV among the general population of prisoners were 9.48% (95%CI: 8.73-10.27) and 2.48% (95%CI: 2.07-2.89), respectively. The prevalence of HCV among all the prisoners and among those with a history of drug injection were about 20 times and 86 times higher than the prevalence among the general population. Based on the results of the multivariate analysis, the most important risk factor for HBV in prisoners was the history of drug abuse (AOR: 1.85, 95%CI: 1.15, 2.96). HCV risk factors were the history of drug injection (AOR: 10.02, 95%CI: 7.77, 12.9), being over 30 years old (AOR: 1.73, 95%CI: 1.25, 2.4), and not being covered by alternative methadone treatment programs (AOR: 1.4, 95%CI: 1.08, 1.8).

Conclusion: Although HBV is controlled in prisoners via public vaccination, the prevalence of HCV among the general population of Iranian prisoners, especially among people who inject drugs (PWID) is

high and alarming. In order to achieve the goal to "Eliminate viral hepatitis by 2030" in Iran it is necessary to develop a national commitment and take rapid actions for this high-risk group. Given the increasing efficiency of HCV treatment in recent years, prisons can be considered as an opportunity for people with hepatitis to access treatment services.

O219 SCREENING OF HEPATITIS C IN DIFFERENT HIGH RISK AND LOW RISK POPULATION GROUPS IN RAWALPINDI AND ISLAMABAD CITIES OF PAKISTAN

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Abstract

Background: Hepatitis C is a major health problem around the globe. Pakistan has over 7 million people living with HCV. Most of the people living with hepatitis C are unawares of their positive disease condition.

Methods: In this study, we screened 120 beta thalassemia patients, 100 people who inject drugs, 50 pregnant women and 50 blood donors. The study was carried at Rawalpindi and Islamabad, the capital twin cities of Pakistan. All the samples were screened by using SD Bioline rapid HCV detection kit. Our unpublished data shows the sensitivity of SD Bioline rapid test kit is 97.59%.

Results: Out of 120 beta thalassemia patients, 67 (55.83) showed HCV positive status. The prevalence of HCV is found 72% in people who inject drugs. The screening of pregnant women from the slums of Rawalpindi and Islamabad shows the 18% prevalence of HCV while the blood donor group shows the HCV prevalence of 1.5%.

Conclusion: The results of HCV beta thalassemia population are higher than our highly cited systematic review of HCV in Pakistan, which showed the prevalence of 48% in the multi-transfused population. Similarly, the prevalence of HCV in IDUs and pregnant women are also found very high as compared to our systematic review. Although the population size of our study is small the prevalence of HCV is found very high in different population groups except blood donors. There is dire need to screen hepatitis C in different population groups of Pakistan.

E5 APPLICATION OF SCALE MODEL FOR END - STAGE LIVER DISEASE TO PREDICT THE LIFE EXPECTANCY OF PATIENTS WITH HEPATIC CIRRHOSIS AND PORTAL HYPERTENSION, AND HEPATORENAL SYNDROME TYPE II

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Abstract

Purpose: Rate the possibility of using model for end - stage liver disease (MELD) scale to predict the life expectancy of patients with liver cirrhosis (LC) with hepatorenal syndrome (HRS) type II.

Materials and methods: The study involved 29 patients with LC in the department of surgery of the Republic Clinical Hospital (RCH) №1 on the basis of faculty surgery of the Tashkent Medical Academy. The extent of liver damage was determined by 13C-metatsetinovogo breath test (13C-MBT). In order to predict mortality in cirrhotic patients with HRS using MELD scale.

Results: In class B in Child-Pugh included 10 patients, the mass of functioning hepatocytes (MFH) on the results of 13C-MBT for them was 43.7 ± 5.8%, in class C - 19 patients with MFH 17.6 ± 6.2 %. In assessing the state of cirrhotic patients with MELD scale HRS at the majority of patients were in the range of 21-49 points. Average score for the MELD scale was 34.23 ± 1.12. Mortality reached 17% in the first two weeks of stay in the hospital for observation for three months - 14% and 10% for the first year. The two-week life expectancy at 20-29 points on the MELD scale was 64%, with 30-39 points - 33%, and at 40-49 points - 0%. Life expectancy of patients up to 3 months increased as a function of reducing the number of points on the MELD scale. Annuals life expectancy was observed only in patients with LC who are in the range from 10 to 19 points (58%) and in 32% of patients with MELD scores of 20-29 on the scale of the revaluation of the primary indicators.

Conclusion: Cirrhotic patients with type II HRS showed a high mortality rate (10-17%) in the first year of occurrence of hepatorenal syndrome. The MELD score can be used to predict the life expectancy of patients LC with HRS.

E12 FAMILIAL CLUSTERING OF NONALCOHOLIC FATTY LIVER DISEASE AMONG THE FAMILY MEMBERS OF NONALCOHOLIC STEATOHEPATITIS CIRRHOTIC PATIENTS

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Abstract

Background and aims: NAFLD is a multifactorial disorder with a combination of environmental, genetic and metabolic factors that play role in the progression to advanced disease. Family members of NASH cirrhotic patients share some common factors and also probability of genetic predisposition, so chance of familial clustering of NAFLD is more among the family members. This study is aimed to explore the familial clustering of NAFLD among the family members of NASH cirrhotic patients and to see the association of insulin resistance, metabolic syndrome and genetic polymorphism with the familial clustering.

Methods: This was a cross sectional observational study. Total NASH cirrhosis patient was 50 and 1st degree relative was 81. This study was conducted in Department of Hepatology, BSMMU, Dhaka.Included family members were screened for presence or absence of fatty liver by ultrasonogram.They were then divided on two groups by ultrasonographic findings. Insulin resistance, metabolic syndrome, PNPLA3 and staging of liver stiffness by fibroscan were done.

Results: Among 81 family members 47 (58.02%) were found having fatty liver. This proportion is much higher than the general population. PNPLA3 polymorphism was higher (80.85%) in fatty liver group than (55.9%) without fatty liver groups. Sons (57.89%) and daughters (51.6%) were affected by fatty liver equally but frequency of genetic polymorphism was more common in daughters (77.41%). Multivariate logistic regression analysis revealed that a subject with TG>150 mg/dl had 6.159 times increase in odds having NAFLD. A subject with PNPLA3 polymorphism had 3.33 times increase in odds having NAFLD .A subject with HOMA-IR >1.6 had 4.375 times increase in odds having NAFLD.

Conclusion: This study indicates that there is a strong familial clustering of NAFLD among the family members of NASH cirrhosis patients. There is a significant association with insulin resistance, PNPLA3 polymorphism, dyslipidemia with the development of NAFLD in the family members.

E25 CHANGES IN DITRIBUTION OF HCV GENOTYPES IN AHVAZ CITY, SOUTH-WEST OF IRAN

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Abstract

Background: Hepatitis C virus is one of the most important causes of liver diseases. It has been determined that HCV genotypes have a distinct geographical distribution, clinical outcome, transmission route and response to antiviral therapy. However different studies have reported that the most prevalent HCV genotype is 1a in Ahvaz city and the other part of Iran, it seems this pattern is being changed. The aim of this study was to evaluate the pattern of HCV genotype distribution and changes analysis. The main aim of this study was to evaluate the pattern of HCV genotype distribution and changes analysis.

Patient and methods: This cross-sectional study was included 300 chronic hepatitis C patients and performed between 2010 to 2014. HCV genotyping was carried out by genotype specific primer PCR and randomly sequencing technique. Viral load was also measured for all patients using real-time PCR. To evaluate association between HCV genotype, age, gender and viral load statistical analyses were done by SPSS software.

Results: HCV genotyping was successful for 295 patients including 56 (19%) females and 239 (81%) males. Our results showed that genotype 3a was the most prevalent (46.7%) and genotype 1a was the second (45.6%). Also, the results of statistical analyses showed that genotype 1a was associated with sex, age and viral load.

Discussion: The present study revealed that the most prevalent HCV genotype has been gradually changed in Ahvaz city in the recent years. The results investigated that the most prevalent HCV genotype was 3a, while HCV genotype 1a has been considered as the prevalent HCV genotype for Ahvaz city and the other part of Iran in the past years. Higher viral load in the male patient or younger individuals and patient who were infected by genotype 1a can represent host and/or viral factors that needs further studies. We concluded that the pattern of distribution of HCV genotypes is changing specially in Ahvaz city, south-west of Iran. The most important cause of this changing could be changing of HCV transmission route and migration of carrier individuals from neighbor countries.

E28 NUTRITION PREDICTORS OF NAFLD: A COMPARATIVE STUDY IN SHIRAZ, SOUTHERN IRAN

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Abstract

Background: Studies findings about dietary components predisposing to non-alcoholic fatty liver disease (NAFLD) are controversial .This study aimed to compare food items/macro and micronutrients intake amongst Non-lean and lean patients with NAFLD.

Method: Participants older than 18 years old were randomly selected from all 7 municipality districts of Shiraz using proportion weight-based random cluster sampling which was based on home address, and postal codes. Interviewees were divided into four groups: Non lean-NAFLD (participants with NAFLD and BMI > 25 kg/m2), lean-NAFLD (participants with NAFLD, BMI < 25 kg/m2), Non lean-Non NAFLD (BMI > 25 kg/m2 without NAFLD), lean-Non NAFLD (BMI < 25 kg/m2 and without NAFLD). All the analyses were done by SPSS statistical software (v. 19).

Result: From the 478 studied people, 95 (19.9%) were diagnosed with non-alcoholic fatty liver. The mean age was 41.9 ± 13.3 years and 42.5% of participants were male. Of all the participants, 19.7% were overweight and obese, and 201 (42.6%) had BMI less than 25. Total starchy products and potato intake were significantly different between all groups. Amongst those who had body mass index over 25 and had non-alcoholic fatty liver, potato intake was significantly (P=0.028) higher than those without fatty liver and among those who had a body mass index less than 25, total starchy food intake was higher (P=0.025) in those with nonalcoholic fatty liver. Our study revealed that, for each gram of carbohydrate, chance of fatty liver increased by 1.99 times (p = 0.004). And for each gram increase in potato consumption, risk of the disease increased by more than 2.5-fold (OR =2.584; CI 95% (1.281-5.213) p =0.008). Also, there was a relationship between fat intake and NAFLD in our study (P =0.014).

Conclusion: Due to significant correlation between fat and fatty liver in our study, and because of ever increasing processed and high fat food in Iranian diet, it seems fats should be given greater attention than ever before. Carbohydrate, starchy foods, and potato should also be considered in order to prevent ever increasing non-alcoholic fatty liver disease in our population.

E36 COMBINED USE OF HEAT-SHOCK PROTEIN 70, GLYPICAN-3 AND GLUTAMINE SYNTHETASE

IN DIAGNOSIS OF HBV-RELATED HCC

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Abstract

Background: Hepatitis B infection is one of the most common cause of the hepatocellular carcinoma. Pathological analysis sometimes fails to conclude the reliable diagnosis of hepatocellular carcinoma. The aim of this study is to assess the diagnostic accuracy of a panel of markers (HSP70, GPC3, GS) for the diagnosis of HBV-related HCC in an early stages.

Methods: The expression of HSP70, GPC3, GS were determined by immunohistochemistry and quantitative real-time PCR (q-PCR) methods, using 121 cases from patients with HBV, HCC and HBV+HCC and 30 normal tissues as the control tissue samples.

Results: HSP70, GPC3, GS were expressed in higher levels in HBV-related HCC patients compared to HBV group. The results showed that the labeling index of HSP70, GPC3, GS are correlated with immunohistochemical and molecular expression of HSP70, GPC3, GS. The sensitivity and specificity for HCC diagnosis were 43.4% and 89.7% for HSP70, 64.3 and 90.4% for GPC3, 60.7% and 94.3% for GS, respectively. For HCC detection the overall accuracy of marker combination, regardless of whichone, was 59.4% (3 positive markers) and 74.2% (2 positive markers) with 100% specificity.

Conclusion: The current study demonstrated the clinical usefulness of the combined panel in the diagnosis of HBV-related HCC cases and proper combinations of HSP70, GPC3, GS markers could improve diagnostic accuracy.

E56 MUTATIONS AT NUCLEOTIDE 1762, 1764 AND 1766 OF HEPATITIS B VIRUS X GENE IN PATIENTS WITH CHRONIC HEPATITIS B AND HEPATITIS B-RELATED CIRRHOSIS

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Abstract

Background and objective: Hepatitis B virus (HBV) is a DNA virus with hightendency toward hepatic tissue. There are currently about 3 million HBV-infected people and350 to 400 million chronic carriers of this virus in the world. X protein plays a role in the over-expression of oncogenes, carcinogenicity of liver cells and overlaps with the basal corepromoter of the virus. Mutations at specific nucleotides of this region increase viral replication and liver disease progression. The aim of this study was to investigate the frequency of mutations at nucleotides 1762, 1764 and 1766 of HBV X gene in patients with chronic hepatitis B and hepatitis B-related cirrhosis.

Methods: In this study, 102 patients including 68 chronic hepatitis patients and 34patients with hepatitis B-related cirrhosis were enrolled. After DNA extraction, HBV X genewas amplified and sequenced using Semi Nested-PCR. Obtained gene sequences were compared with the standard sequence of HBV virus X gene available in the gene bank (Okamoto AB033559). Then, the mutations in the gene X of HBV were identified.

Results: Comparison of the standard sequence with sequences obtained from patients showed the presence of A1762T / G1764A mutation in 12 chronic (17.64%) and 13 cirrhotic (38.23%) patients. Also, C1766G / G1764T mutations were found in 8.23% of chronic patientsand 17.64% of cirrhotic patients.

Conclusion: A1762T / G1764A mutations in the overlapping region of the basal core promoter with gene X C-terminal may lead to liver disease progression from chronic hepatitis to cirrhosis, by changing the amino acid sequence of the X protein.

E58 THE COMPARISON OF ISG15 GENE EXPRESSION IN PBMCS OF CHRONIC ACTIVE AND INACTIVE CARRIER HEPATITIS B INFECTED PATIENTS WITH HEALTHY INDIVIDUALS

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Abstract

Background: According to the recently report, about 250 million people around the world are chronically infected with the virus that their infection might be progress to cirrhosis and HCC. It has been reported that various genes involved in antiviral defense and natural history of hepatitis B infection. Among these, Interferon-stimulated Gene

15(ISG15) remarkably was considered special attentions. Therefore, the purpose of this study was to evaluate the expression level of ISG15 gene in Peripheral Blood Mononuclear Cells (PBMCs) of patients with chronic active and inactive hepatitis B in comparison with healthy control individuals.

Materials and Methods: A Cross-sectional study was conducted on sample of patients infected with hepatitis B virus (18 chronic active and 27 inactive carriers) as well as healthy control group. The PBMCs of participants were separated on ficoll gradient then their RNAs were extracted. cDNA was synthesized by RT-PCR protocol. Gene expression assay of ISG15 gene was performed by using Real-time PCR method. The relative expression of each gene was analyzed and calculated regarding 2- ΔCt formula.

Results: ISG15 gene expression levels were significantly higher in healthy group in compare to both active and inactive chronic groups (chronic active vs. healthy control, P= 0.0068; inactive carrier vs. healthy control, P< 0.0001). Moreover, when active and inactive chronic groups were compared together no significant difference for their expression levels was detected (P= 0.21)

Conclusion: It seems, that expression of IFN-inducible genes including ISG15was impaired in the PBMCs from HBV infected patients during persistent infection.

E59 THE COMPARISON OF USP18 GENE EXPRESSION IN PBMCS OF CHRONIC ACTIVE AND INACTIVE CARRIER HEPATITIS B INFECTED PATIENTS WITH HEALTHY INDIVIDUALS

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Abstract

Background: Despite presence of an efficient vaccine for hepatitis B virus (HBV), its remains as a public health challenge, worldwide. Around 2% of Iranian people are HBV chronic carriers. The role of immune genes in the chronic hepatitis B disease process is under investigation yet. Regarding studies on the other viruses, probably different immune genes expression such as specific peptidase 18 (USP18) be impressive in the HBV infection progress and outcome. Therefore, the purpose of this study was to evaluate the expression level of USP18 gene in Peripheral Blood Mononuclear Cells (PBMCs) of patients with chronic active and inactive hepatitis B in comparison with healthy control individuals.

Materials and Methods: A Cross-sectional study was conducted on sample of patients infected with hepatitis B virus (18 chronic active and 27 inactive carriers) as well as healthy control group. The PBMCs of participants were separated on ficoll gradient; then their RNAs were extracted. cDNA was synthesized by RT-PCR protocol. Gene expression assay of USP18 gene was performed by using Real-time PCR method. The relative expression of each gene was analyzed and calculated regarding 2- ΔCt formula.

Results: Our study showed that the expression level of USP18 is significant higher in healthy group in comparison to HBV infected patients (chronic active vs. healthy control, P= 0.0228; inactive carrier vs. healthy control, P= 0.0226) Also, active and inactive chronic groups exhibited resemble expression with no significant difference (P= 0.26)

Conclusion: The results of our study showed that the expression level of USP-18 was higher in healthy individuals than those infected with HBV. This difference expression may highlight the role of USP-18 in immune related mechanism of HBV infection.

E64 INTERPRETATION OF SERUM VISFATIN LEVEL IN RELATION TO HEPATIC INJURY IS PROBABLY SEX DEPENDENT IN NONALCOHOLIC FATTY LIVER DISEASE

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Abstract

Background: The studies on the association between visfatin and nonalcoholic fatty liver disease (NAFLD) have contradictory results and the role of this adipokine in NAFLD pathogenesis has remained unclear. In vitro studies indicate that visfatin expression could be regulated by sex hormones. Testosterone down-regulates its expression in pre-adipocytes and estrogen increases its expression in adipocytes.

Objective: So the aim of this study was to explore whether the association between serum visfatin and markers of hepatic injury is the same for both sexes in patients with NAFLD.

Methods: In this cross-sectional study, 62 consecutive patients (32 men and 30 women) with NAFLD

were recruited. Fasting serum visfatin, Caspase-cleaved cytokeratin 18 (cCK18), total soluble cytokeratin 18 (CK18), liver enzymes (AST, ALT), insulin and lipid-glucose profile were measured. Anthropometric measurements, fibroscan and assessment of dietary intake and physical activity level, were performed for each participant. Two independent sample t-test, chi-square test, univariate and multiple linear regression (to adjust for confounding factors) were used to analyze the data.

Results: In men serum visfatin had significant positive associations with serum AST (B=0.47, p=0.009), ALT (B=0.40, p=0.035), CK18 (B=0.50, p=0.008) and cCK18 (B=0.47, p=0.012). In women serum visfatin only had a weak association with CK18 (B=0.37, p=0.045). Instead, higher BMI was significantly associated with increased serum CK18 (B=0.44, p=0.02), cCK18 (B=0.42, p=0.02), CAP(B=0.39, p=0.049) and LSM (B=0.40, p=0.03) in women. Higher waist to hip ratio was also significantly related to serum AST (B=0.37, p=0.04), ALT (B=0.50, p=0.02), CK18 (B=0.41, p=0.03), cCK18 (B=0.37, p=0.04) and CAP (B=0.39, p=0.04) in this group. In this study women were significantly older (47.83±81.10 vs 39.84± 12.10, p=0.008) and had higher BMI (32.31±4.56 vs29.42±4.89, p=0.02) compared to men, so the associations were adjusted for age, BMI and other confounders.

Conclusions: Interpretation of serum visfatin level in relation to hepatic injury is probably sex dependent in NAFLD. While its increased serum level, could be an indicator for more hepatic injury in men, but it's not the case in women. BMI and waist to hip ratio are stronger predictors for hepatic injury in women.

E67 THE ASSOCIATION OF NICOTINAMIDE PHOSPHORIBOSYLTRANSFERASE POLYMORPHISM WITH MARKERS OF HEPATIC INJURY AND DE NOVO LIPOGENESIS IN NONALCOHOLIC FATTY LIVER DISEASE

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Abstract

Background: De novo lipogenesis (DNL) is increased in NAFLD and nicotinamide phosphoribosyltransferase (NAMPT) upregulates two essential enzymes in this pathway. On the other hand, NAMPT function could be affected by the promoter region polymorphism and sex hormones.

Objectives: This study explored the association of 4689 G/T polymorphism in the promoter region of NAMPT gen with markers of hepatic injury and DNL in patients with NAFLD and to see whether or not these associations are the same for both sexes.

Methods: In this cross-sectional study, 62 consecutive patients (32 men and 30 women) with NAFLD were recruited. Polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) was used to identify the 4689 G/T polymorphism. DNL index of erythrocyte membrane was analyzed by gas chromatography as the marker of hepatic DNL. Fasting serum NAMPT, Caspase-cleaved cytokeratin 18 (cCK18), total soluble cytokeratin 18 (CK18), liver enzymes (AST, ALT, ALKP, GGT) and lipid-glucose profile were measured. Anthropometric measurements, Fibroscan, assessment of dietary intake and physical activity were performed. Two independent sample t-test, chi-square test, one-way analysis of variance and multiple linear regression were used to analyze the data.

Results: Serum NAMPT and erythrocyte membrane DNL index were not significantly different among the three genotypes in both sexes. In men, serum AST (p=0.04), ALT (p=0.03) were significantly higher in GT genotype compared to GG genotype. Serum CK18, cCK18 and CAP also had the highest levels in GT genotype although not statistically significant. In women, markers of hepatic injury were not significantly different between GG and GT genotypes. Serum AST (p=0.01), ALT (p=0.01) and cCK18 (p=0.001) levels were significantly higher in TT genotype. Serum GGT, CK18 and CAP also had the highest level in TT genotype, although not statistically significant. These associations remained significant even after adjustment for confounding variables in multiple linear regression.

Conclusions:4689 G/T polymorphism was not associated with hepatic DNL index but T allele in this polymorphism, was associated with increased biomarkers of hepatic inflammation, apoptosis and necrosis in patients with NAFLD especially in men, as one T allele (GT genotype) was enough for increased biomarkers of hepatic injury in men but not in women.

E86 A CLINICAL STUDY ON HEPATOCELLULAR CARCINOMA IN BABYLON IRAQ

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Abstract

Primary liver cancer is the fifth most common cancer in the world and the third most common cause of cancer mortality. Hepatocellular carcinomas (HCCs) are malignant tumors of liver parenchymal cells. We study the clinical presentation of 59 cases of HCC seen at the GIT centre oncology departments of Merjan Teaching Hospital in Babylon and their link to HCV infection and HBV infection , during the year 2008 – 2016 and their age range from 59 years to 88 years (mean 61.5 years) and 24 patients were female and 35 were male. Of the 59 cases, 2 cases are metastatic hepatocellular carcinoma and of unknown primary .The clinical presentation of cases was often non specific & sometimes vague and in most of the cases are advanced at presentation, one patient with primary HCC has polycythemia. The most important aspect of the study is that: Many epidemiological studies have indicated association between Liver cancer and HCV and HBV infection and27% of the studied cases had HBV infection and similar percentage around 25 had chronic HCV infection and from topographical point of view we noticed that most cases of HCC are from the same areas where HCV and HBV are most prevalent It had been shown that Areas of the world with high mortality rates for HCC also have high HBV infection rates. In the present study and another Case control studies in all regions of the world have shown that chronic HBV infection is much more common in HCC cases than controls , OR ranged from 5:1 to 65:1. Also, at least 80% of liver cancers occur in cirrhotic livers. The overall median survival was less than one year even in the cases that received chemotherapy (TACE protocol, Serofenib), even surgical resection and ablation therapy whom they have slightly better survival rate than cases without treatment.

E90 DECREASING TREND OF TRANSFUSION-TRANSMISSIBLE HEPATITIS B VIRUS INFECTION IN SOUTH OF IRAN

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Abstract

Background: Evaluation of trend in the prevalence of HBV infections among blood donors is essential for estimating the effectiveness of the blood safety strategies and gives clue to health policy makers to improve the current blood bank strategies to minimize the potential risk of acquiring these infections through blood transfusion. Therefore, this study was conducted to report the trend of HBV infection among blood donors in south of Iran during an eleven-year period from 2004 to 2014.

Methods: This is a retrospective descriptive study of blood donor data recorded at blood transfusion centers of southern Iran. During the 11-year period from 2004 through 2014, 293454 (77.93%) donors were screened for the presence of hepatitis B surface antigen (HBsAg) using commercially available ELISA kits. The seropositive results were confirmed using HBsAg confirmatory assay. The blood donor data were analyzed with respect to the results of serological screening tests for HBV infection. This study was funded by Bushehr University of Medical Sciences with grant number 5919.

Results: The overall seroprevalence rate of HBV was 0.15% (440 individuals). HBV infection was more prevalent in male, low educated, married and first time donors. In addition, older donors were more prevalent infected by HBV than younger donors. The seroprevalence rate of HBV from 2004 to 2014 showed a significant decreasing trend from 0.460% to 0.060% ($P < 0.001$).

Conclusions: The results of this study demonstrate declining trend in the seroprevalence of HBV infection in blood donations over time. The reasons for this decline are systematic screening of all donated blood for HBV markers, improvement in safety measures and donor screening procedures through application of more sensitive screening kits and application of confidential unit exclusion. An increase in public awareness regarding transmission routes of HBV infection in recent years, initiation of HBV vaccination program for all newborns in Iran in 1993 as well as vaccination of teenagers and high-risk groups since 2006, a decrease in the burden of the HBV infection in the country, and progress in preventive measures might also explain

E93 NO ASSOCIATION OF PD-1.3 G/A AND PD-1.5 C/T HAPLOTYPE WITH OUTCOME OF HEPATITIS C VIRUS INFECTION IN SOUTH-WEST OF IRAN

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Abstract

Background: Primary hepatitis C virus infection might be spontaneously cleared and or become chronic lifelong. Immune regulatory gene polymorphisms might be associated with HCV infection

outcome. Our aim was to investigate the frequency of haplotype (PD-1.3G/A and PD-1.5 C/T) in HCV infected patients in addition to evaluate their association with disease outcome.

Materials and Methods: In this study 167 patients with chronic hepatic C infection and 42 individuals whose infection was spontaneously cleared were included. A healthy control group containing 300 subjects was also included. Chronic or spontaneously cleared infection in participants was verified by serologic and molecular methods. Genomic DNA was extracted using salting out method. PD-1 gene polymorphisms assay were performed using PCR-RFLP.

Results: Male to female ratios in chronic and spontaneous cleared groups were 143/24 and 38/4 respectively, which were not significantly different (P = 0.56). The frequency of four different haplotype including GT, GC, AC and AT has no statistically significant among 3 studies groups.

Conclusion: Our results showed that haplotype of PD-1.3 G/A and PD-1.5 C/T is not influencing in determining hepatitis C infection outcome.

E108 HEPATITIS D VIRUS INFECTION IN KERMANSHAH, WEST OF IRAN: SEROPREVALENCE AND VIREMIC INFECTION IN HBSAG POSITIVE POPULATION

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Abstract

Objectives: Hepatitis delta is one of the most complex viral infections of liver that along with hepatitis B virus could lead to fulminant hepatitis, progressive chronic hepatitis, cirrhosis, and hepatocellular carcinoma. This study aimed to determine the seroprevalence and viremic infection of hepatitis D in HBS Ag positive patients to estimate the disease burden in Kermanshah, west of Iran.

Methods: Patients with positive HBS Ag referred to our center were included in the study and tested for HDV Ab using ELISA. Seropositive patients were subsequently evaluated for HDV RNA by RT-PCR. For all seropositive patients, laboratory evaluations of viremia-related variables and clinical assessment of advanced liver disease were done. Moreover, standard questionnaires including demographic and high risk behavior characteristics were completed for patients.

Results: From 1749 patients included, 30 (1.7%) had positive HDV Ab. Among this number, 16 (53.3%) were male and 14 (46.7%) were female and the mean age was 43.1± 16.5. Fourteen cases (46.7%) had positive HDV PCR. Eight patients (26.7%) had simultaneous replication of hepatitis B and D, six (20%) had only hepatitis D replication, ten (30.3%) had only hepatitis B replication and five had no replication of either viruses. Hepatitis D viremic infection showed a relationship with male sex, high alanine amino transferase levels and cirrhosis.

Conclusion: Hepatitis D prevalence in Kermanshah was lower than other provinces in Iran and also neighbor countries. Viremic hepatitis D infection responsible for the disease complications was also lower in our study compared to Europe and Africa which could be due to genetic variation of the hosts or the differences in genotype or sub-types of hepatitis B and D viruses.

E111 DISTRIBUTION OF HEPATITIS C VIRUS GENOTYPES IN KERMANSHAH, WEST OF IRAN

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Abstract

Background: Hepatitis C is one of the major health issues worldwide which could be followed by critical conditions such as cirrhosis and hepatocellular carcinoma. Hepatitis C virus has six main genotypes and several sub-types that influence the prognosis and treatment response of the disease. The distribution of the hepatitis C genotypes varies in different geographical areas. However, there are limited studies done on small samples in Kermanshah. This study aimed to determine the distribution of hepatitis C virus genotypes in 614 viremic patients.

Methods: Seropositive hepatitis C patients referred to our center between 2004 to 2016 were tested for HCV-RNA using Real-time PCR and viremic cases freely participated in the study. Hepatitis C virus genotyping was performed using RFLP analysis in order to determine genotypes 1a, 1b, 3a, 4 and 2. Other genotypes were reported as Not Typeable. Required demographic data were extracted from patients' files.

Results: 614 viremic hepatitis C patients were included among whom 472 (76.87%) were males and 142 (23.12%) were females. Age mean was 39.4 ± 8.11. Mean viral load was 3745395 IU/mL (minimum: 45 IU/mL,

maximum: 109885000 IU/mL). Regarding the genotype distribution, 338 cases (54.9%) were genotype 3a, 203 (33%) were 1a, 45 (7.3%) were 1b, 18 (2.9%) were Not Typeable, six (0.98%) were 1a+1b, 3 (0.49%) were 1a+3a, one (0.16%) was 2 and one (0.16%) was genotype 4.

Conclusion: More than half of our hepatitis C patients were genotype 3a, and following that, 1a and 1b genotypes were more prevalent, as these three genotypes constituted more than 95% of patients in Kermanshah. Genotypes 2 and 4 had less than 1% prevalence. Although our method of genotyping was not capable of detecting genotypes 5 and 6, less than 3% turned out Not Typable. Since chronic hepatitis C with genotype 3a more rapidly progresses into cirrhosis, early diagnosis in our region is of greater necessity.

E124 EPIDEMIOLOGY OF HEPATITIS B IN GENERAL POPULATION OF IRAN FROM 2000 TO 2016 IN NATIONAL AND PROVINCIAL LEVELS: A META REGRESSION ANALYSIS

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Abstract

Introduction: Hepatitis B infection is the major risk factor for liver cancer in Iran. There is no comprehensive population base study on prevalence of hepatitis B by regional distribution, recently and systematic reviews have lack of knowledge in some regions. We aimed to estimate the prevalence of hepatitis B and temporal trends during 17 years by sex, age and geographical distribution.

Methods: We used the Iranian Blood Donors data, plus systematic review on population base studies in national and provincial levels and statistical methods (A two stages Spatio-temporal model and a cross walk approach), to address the missing points of hepatitis B prevalence in general population. Direct age-standardized approach was applied using Iran national population 2016 as a standard population to facilitate the comparison between the provinces.

Result: In national level, age standardized hepatitis B prevalence in Iran decreases by 1.5 times from 2.22 (95% uncertainty interval; 2.12 to 2.33) percent in 2000 to 1.43 (95% uncertainty interval; 1.36 to 1.5) percent in 2016. Hepatitis B prevalence in Male is more than 1.5 times greater than female. In total with increasing age, prevalence of hepatitis B increases in all provinces. At provincial level, the provinces with highest prevalence have nearly two times greater rate compare to the lowest. In addition, decreasing percent change of prevalence trend varies between -33 percent to -68 percent, over provincial level in 2000 to 2016.

Conclusion: Declining trend in prevalence of hepatitis B infections indicates the effectiveness of vaccination program and preventive measures, but Hepatitis B infection is still the main cause of liver cancer mortality in Iran. It is recommended to re-evaluate preventive measures especially in high risk age group of population.

E132 TLR7 GENE EXPRESSION IN CHRONIC RESPONDER AND NON-RESPONDER HEPATITIS C PATIENTS

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Abstract

Introduction: TLR7 is a sensor of ssRNA. It directs immune system to fight HCV infection. Several studies demonstrated that differences in profile of host gene expressions leads to differences in response to Peg-IFN-α and ribavirin. PBMCs are suggested to be reservoir of HCV. In addition to they are easily to obtain. Investigation of gene expression pattern in PBMCs can help us understand more about the state of innate immune responses. TLR7 molecule is important in the innate immune response especially following HCV infection.

Methods: 22 chronic HCV infected patients were enrolled in this study (12 non-responders and 10 responders). 5ml blood sample was drawn from each participant in Heparin anticoagulant. PBMC were isolated on Ficoll density gradient. RNA was extracted using Trizol. cDNA synthesis was performed. Expression of TLR7 gene was measured by qRT-PCR. Ct of each sample were calculated regarding B-actin reference gene. The unpaired t-test from the GraphPad Prism statistical package was used to determine sig-

nificant differences between responder and non-responder groups.

Result: Data analysis of expression was showed a fine difference between groups. Our data showed that the mean of expression level from non-responder group is upper than responder group (but was not statistically significant).

Conclusion: It may indicate more inflammatory response among the non-responder group as this gene attributed to innate immunity and inflammation. The importance of TLR7 up-regulation in individuals who have progressed to the liver cirrhosis stage and unresponsiveness to IFN has been discussed in several studies.

E144 DIETARY PATTERNS IN RELATION TO NONALCOHOLIC FATTY LIVER DISEASE

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Abstract

Background and Objective: It has been shown that 10% weight loss within six months is associated with improvement of the non-alcoholic fatty liver disease (NAFLD). Thus the only proven treatment strategy for NAFLD is lifestyle modifications. The association of dietary patterns and NAFLD is not yet well known in developing countries. The aim of this hospital-based case-control study was to examine the relationship between dietary patterns and NAFLD.

Methods: In total, 118 incident patients who suffered NAFLD and 227 age-matched controls were interviewed through hospitals of Shahid Beheshti University of Medical Science in Tehran, Iran, from January2014 to November2016. Usual dietary intakes were collected using a semi-quantitative food frequency questionnaire with 168 items. Dietary patterns were derived using factor analysis. Unconditional logistic regression was used to estimate odds ratio (OR) with 95% confidence interval (CI) to assess the association between the factor score and NAFLD. The first tertile served as the reference category for regression analyses.

Results: The mean age of the cases and controls was 56.8 (SD = 7.7) and 57.3 (SD = 7.2) years, respectively. In principal component analysis two dietary patterns emerged: "Prudent pattern" (leafy green vegetables, yellow vegetables, other vegetables, fish and other seafood, fruits and natural fruit juices, legumes, whole grains, poultry, tea and coffee, Low-fat dairy products, and vegetable oils) and "Western pattern" (organ meats, red and processed meats, sugar, soft drinks and confectionery, refined grains, potatoes, french fries and fast foods, high-fat dairy products, hydrogenated fats, Mayonnaise and fatty sauces, and snacks). After adjustment for potential confounders, participants in the highest tertile of the "Prudent pattern" scores, had 57% lower risk of NAFLD compared to those in the lowest one (p-trend:0.003). Being in the highest tertile of the "Western pattern" was positively associated with the NAFLD risk (OR: 2.28, 95%CI: 1.83-3.85).

Conclusion: Adherence to "Western pattern" is potentially an unfavorable indicator of NAFLD while a diet comprising mainly of plant and milk based foods may be associated with a reduced risk. Further studies with well-designed case–control and prospective cohort studies are required to confirm the relationship between dietary patterns and the risk of NAFLD.

E145 HIV/HCV CO-INFECTION IN I.R.IRAN, CHALLENGES, POLICIES AND SOLUTIONS, 2017

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Abstract

All people living with HIV (PLWH) should be screened for HCV infection, especially individuals with history of IV drug using. HIV/HCV co-infected patients usually have higher HCV viral load with more tendency for progression of liver fibrosis, in comparable with HCV mono-infected individuals. So, HCV treatment should be considered in appropriate time and with suitable medication in these patients. Screening of PLWH for viral hepatitis (B and C) is one of the routine services in Voluntary Counseling and Testing (VCT) clinics.Based on national registry system data, out of 12,714 PLWH whose results of HCVAb testing had been registered in the software of VCT clinics, 6,862(54%) had positive results of HCVAb, including 6,608 male (96.3%) and 254 female (3.7%). 6,287 patients from 6,862 PLWH with positive HCVAb had history of drug use (91%), out of them 5,852 had history of IV injecting drug use (85.2%). 98.7% of individuals with IV drug use history were male.Out of 254 female with positive HCVAb results, 96 (37.8%) persons had history of drug use and IV injecting drug use was reported in about 30% of them.Out of 12,166 PLWH whose result of HBsAg testing had been registered in the software, 883 (7.3%) individuals were HBsAg positive, including 808(91.5%) male and 75(8.5%) female. 62.4% of them were co-infected with

HCV too.Preferred first line antiretroviral-medication (ARV) regimen in Iran contains Tenofovir + Emtricitabine or Lamivudine, the same medication for chronic HBV treatment. When HBV/HIV co-infected patients have been treated for HIV, indeed they are treated for chronic HBV too, but need to special cautious about changing the ARV regimen in HIV drug resistant cases.This article reviews challenges of HCV management in HIV/HCV co-infected patients in Iran including inadequate access to HCV diagnostic and management services, medications and drug interactions and focuses on national policies of HIV/HCV co-infection control. We also suggest some solutions including providing HCV screening test in VCT clinics and reference laboratories, implementation and scale up of comprehensive harm reduction program, subsidizing advanced and specialized HCV diagnostic tests, adapting ARV medications compatible with HCV medication and use of multiplex testing.

E154 THE STUDY OF STIGMA RATE IN PATIENTS WITH HEPATITIS B AND THE EFFECT OF COGNITIVE-BEHAVIORAL THERAPY ON ITS REDUCTION IN BIRJAND CITY

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Abstract

Background: Hepatitis has many physical and psychological effects, such as stigma, and one of the psychological therapies that can be used in this regard is cognitive-behavioral therapy.The purpose of this study was to investigate the rate of stigma and the effect of cognitive-behavioral therapy on its reduction in patients with Hepatitis B in Birjand city.

Method: This research is a cross-sectional study using a pretest-posttest model with control group. Among the patients with Hepatitis B referred to the relevant clinic, 60 persons were randomly assigned in the two groups of 30 persons. At first, both groups completed a questionnaire and their stigma rate was examined and then the case group was treated with cognitive-behavioral therapy, but the control group did not receive any mental intervention. Cognitive-behavioral therapy sessions were held in 8 sessions of 45 minutes for the case group. The used instrument was a researcher questionnaire made by Stigma. Data were entered into the software of SPSS16 and were analyzed by covariance analysis and one-way variance analysis test at a significant level (0.05).

Findings: The mean age in the experimental group was 42.8 ± 13.09 and in the control group was 39 ± 11.39. In addition, in the experimental group, 17 persons were male (56.7%) and in the control group 11 persons were male (36.7%).The rate of light stigma was found at 78.3% and moderate stigma at 5% of all patients with Hepatitis B initially. After the intervention, the mean score of stigma in the experimental group decreased from 4.8 to 5.5 (95% CI = 3.011: 6.75). The results of the covariance analysis test showed that the method of cognitive-behavioral therapy had an effect on the mean score of stigma of the experimental group in comparison to the control group in the post-teststep that this effect was 6.2% .In fact, 48% of the individual differences in post-test scores of stigma were related to the intervention.

Conclusion: Our study showed that patients with Hepatitis B suffered from significant degree of stigma and intervention in the group of cognitive-behavioral therapy causes a significant reduction in the rate of stigma.

E166 IN SILICO INVESTIGATION OF THE ATP7B PROTEIN: INSIGHTS FROM THE ROLE OF RCCS MUTATION THAT EFFECT ON PROTEIN STRUCTURE AND FUNCTION

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Abstract

Background: Wilson's disease is a rare autosomal recessive genetic disorder of copper metabolism, which is characterized by hepatic and neurological disease. The gene ATP7B (on chromosome 13) leads to Wilson's disease is highly expressed in the liver, kidney, and placenta and encodes a transmembrane protein ATPase (ATP7B), which functions as a copper-dependent P-type ATPase. Methods: Here, the rare codons of ATP7B gene and their location in the structure of ATP7B protein was studied with Rare codon calculator(RaCC)(http://nihserver.mbi.ucla.edu/RACC/),ATGme(http://atgme.org/),LaTcOm(http://structure.biol.ucy.ac.cy/latcom.html) and Sherlocc program(http://bcb.med.usherbrooke.ca/sherlocc.php). RaCC server identified Arg, Leu, Ile, and Pro codons as rare codons.

Results: Results showed that CYP152A1 gene have 35 single rare codons of Arg. Additionally, RaCC detected two rare codons of Leu, 13 single rare codons of Ile and 28 rare codon of Pro. ATP7B gene analysis in minmax and sliding_window algorithm resulted in identification of 16 and 17 rare codon clusters, which shows the difference features of these algorithms in detection of RCC. Analyzing the 3D model of ATP7B protein show that Arg816 residue constitute hydrogen bonds with Glu810 and Glu816 that with mutation of this residue to Ser816 this hydrogen bonds were disrupted and may interfere in the proper folding of this protein. Moreover, the side chain of Arg1228 don't forms any bond with others residues that with mutation to Thr1228 form new hydrogen bond with the side chain of Arg1228. These addition and deletion of hydrogen bonds effects on the folding mechanism of ATP7B protein and interfere with the proper function of the ATP7B position. His1069 forms the hydrogen bonds with the His880 and it seems that this hydrogen bond close together two region of this protein and it seems that has a critical role in the final folding of ATP7B protein.

Conclusions: Computational study of diseases such as Wilson's disease and involved genes (ATP7B) help us in understanding of disease's physiopathology and finding new approaches for detection and treatment.

E183 THE DISTRIBUTION OF HEPATITIS B VIRUS GENOTYPES IN HAMADAN CITY

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Abstract

Introduction and objective: Hepatitis B virus (HBV) infection is the most important cause of viral hepatitis and leading cause of chronic liver disease. The clinical course and consequences of HBV infection are directly affected by several factors including viral load, mutation, host, environment, and viral genotypes. Different HBV genotypes (10 genotypes) are associated with different mutations in the HBV precore and core promoter gene regions. HBV genotypes are also closely related with optimal treatment strategy for chronic hepatitis B patients and clinical outcomes. The aim of this study was to determine the Hepatitis b genotypes in the Hamadan City.

Material and Methods: In this cross-sectional study of 106 serum samples from people who were positive for HBsAg were analysed by PCR using specific primers for positive samples, virus genotypes were determined.Liver enzymes and viral load in patients were evaluated.using Spearman correlation, coefficient correlation was found among quantitative variables .Results were analyzed using SPSS software version 16.

Results: 74(8.69%) of patients were male.more than 90% of the population (97 patients) in the current study had genotypes D and only 9(5.8%) were genotype BD. The average of viral load in patients with genotype BD was higher than Genotype D.

Conclusion: The results of this study revealed that the predominant genotype of hepatitis b virus in Hamadan is genotype D which also coincides with the pattern elsewhere in Iran. On the other hand, determining the genotype could be helpful for predicting the outcome of antiviral therapy in patients with chronic hepatitis B.

E186 PREVALANCE OF HEPATITIS A, B AND C VIRUS INFECTION AMONG STREET URCHINS

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Abstract

Introduction: Viral hepatitis are the most common cause of serious health problems. In our study, we aimed to determine the seroprevalence of HAV, HBV, and HCV among street urchins who were admitted to outpatient clinics.

Methods: Between April 2014 and April 2016, the data of 187 street urchins aged between 6-18 years included in the study.Serum samples from chidren were asseyed for HAV antibody IgG (anti-HAV IgG), HBV surface antigen (HBsAg), antibodies against HBV surface antigen (anti-HBs), antibodies against HBV core antigen (anti-HBc total), HCV antibody (anti-HCV) using the ELISA (Enzyme-Linked ImmunosorbentAssay) method.

Results: HBsAg, anti-HBs, anti-HBc total data of 156 patients (83.4%); anti-HCV data of 114 patients (60.9%); and HAVIgG data of 86 patients (45.9%) were reached. 53.4% of patients were female, with a mean age of 12.52 years among all patients.The data for the study are summarized in table 1.

Discussion: The socioeconomic and socioculturel levels of street urchins are generally low.Due to inability of these children to access primary health care services and the inability to follow HBV vaccination regularly, HBsAg seroprevalence of street children is thought to be higher than in other children

and anti-HBs positivity is thought to be less.In recent studies, prevalence of HBsAg in a group aged 0-18 years in Turkey was found to be in the range of 3-12%. In our study, on the contrary this rate was observed to be similar than that reported in Turkey.In studies conducted in Turkey, Anti-HCV positivity was 0-1% and Anti-HAV IgG positivity was 34% in the pediatric age group.As a result of our study, anti-HCV seroprevalence in street children was similar to that in Turkey, and anti-HAV IgG positivity was more frequent. HAV seropositivity may be explained by the fact that life in the streets is not a matter of cleaning habits. According to the results, if the street children get into the national HAV and HBV vaccination schedule, hepatitis infections and their complications may be prevented.

E196 INTRAMUSCULAR HEPATITIS B IMMUNOGLOBULIN AND ITS WITHDRAWAL AFTER A YEAR OF LIVER TRANSPLANTATION IN COMBINATION WITH LAMIVUDIN AND/OR TENOFOVIR IN PREVENTING HEPATITIS B REINFECTION AFTER LIVER TRANSPLANTATION

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Abstract

Introduction: We conducted this prospective study to find the safety and effectiveness of intramuscular hepatitis B immunoglobulin for 1 year after liver transplantation in combination with lamivudine and/or tenofovir to prevent hepatitis B reinfection.

Patients & Methods: 518 Patients who underwent deceased donor liver transplantation at Imam Khomeini hospital, Tehran University of Medical Sciences, Tehran, IR Iran, from 2006 until 2016 were enrolled in the study. The prophylactic protocol for patients with hepatitis B related liver failure included administration of intraoperative intramuscular hepatitis B immunoglobulin at 10000 IU, 5000 IU daily for the first six days, weekly for a month, every two weeks for a month after, and monthly for a year after liver transplantation in combination with nucleotide/nucleotide analogues.

Results: 80 (15.4%) recipients with hepatitis B related liver failure were considered as the case group in which seven, sixteen, five and one also had hepatitis D, hepatocellular carcinoma, both hepatitis D and hepatocellular carcinoma, and hepatitis C, respectively. The other 438 recipients were considered as the control group. The mean age of the patients in the case group was significantly higher than the control group (50.6 ± 8.6 vs. 42.1 ± 13.4 years, P< 0.001). Sixty three patients were male (78.8%) in the case group compared with 250 (57%) in the control group (P<0.001). In the case group 63 (78.8%) and 4 (5%) were positive for HBs Ag and HBe Ag at the time of transplantation, respectively. Twenty-one (26.2%) patients were positive for hepatitis B virus DNA at the time of transplantation with the median of 181 IU (range = 6 – 61000). The mean follow-up was 41 ± 27.5 months (range = 6.5-130). Only one (2.3%) patient experienced hepatitis B reinfection at 44.7 months after liver transplantation, who was successfully treated with tenofovir. Three-year survival rates were 86.9% and 79.3% in the case and control groups, respectively (P = .108)

Conclusions: Intramuscular hepatitis B immunoglobulin in combination with nucleotide/nucleotide analogues and eventual withdrawal of immunoglobulin therapy after a year of liver transplantation may be a safe and cost-effective method in preventing hepatitis B reinfection.

E198 HIGH PREVALENCE OF THYROID PATHOLOGY IN INTERFERON-NAIVE HEPATITIS C VIRUS PATIENTS IN PAKISTAN

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Abstract

Objective: HCV primarily causes hepatic complications but chronic HCV infection is also related to a large number of extrahepatic manifestations particularly thyroid disorders (TD). This study was planned to determine biochemical and immunological TD in local HCV patients.Setting: Centre for Nuclear Medicine (CENUM), Mayo Hospital Lahore Pakistan

Patients and Methods: Interferon-naive HCV patients were selected for this study. Thyroid swelling was assessed by palpation. Serum-free thyroxin (FT4) and thyroid stimulating hormone (TSH) were detected by RIA and TPO-Ab titer by ELISA techniques using commercial kits.

Results: Age range of HCV patients (n=257; 194 females, 63 males) was 15–55 years (mean: 35.3 ± 9.1 years). Overall thyroid abnormalities were detected in 107 (41.6%) patients. Abnormal TSH was found in 49 (19.1%) patients with following TD: overt hyperthyroidism 7.0%, overt hypothyroidism 6.2%, subclinical hypothyroidism 3.1% and subclinical hyperthyroidism 2.7%. Among rest of the patients with normal TSH level high titer of TPO-Ab (euthyroid autoimmune thyroiditis; Eu-AIT) was found in 54 (21.0%) patients. Thyroid swelling (goiter) was detected in 9 (3.5%) patients (all female) and only three of them were euthyroid. Overall thyroid pathology was more common

in female than male HCV patients but the difference was not significant (44.0% versus 33.3%; p= 0.310). The same was true for incidence of Eu-AIT in euthyroid female and male HCV patients (27.3% versus 22.2%). However, mean age of HCV patients with thyroid abnormalities was higher than those without and the difference was significant (39.5±10.9 versus 35.1±10.5 year; p=0.0015).

Conclusion: Thyroid pathology was detected in more than 30% of non-interferon treated HCV male and female patients and is associated with advancing age in Lahore Pakistan.

E205 FREQUENCY OF HEPATITIS A VIRUS RNA IN RAW MILK SAMPLES FROM ZANJAN PROVINCE IN IRAN

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Abstract

Dairy products may embower many pathogens of public health concern including enteric viruses, which are the leading cause of food-borne outbreaks. Infection with hepatitis A virus (HAV) is the commonest viral cause of liver disease and presents an important public health problem worldwide. This virus are mostly transmitted via the fecal–oral route, from direct contact between people, or by ingestion of contaminated food and water. In the present study, we evaluated the presence hepatitis A virus (HAV) in raw milk from Zanjan province of Iran by nested reverse transcription PCR (nested-RT-PCR). Raw milk samples were collected from dairy farms during spring-summer. After centrifuge, skim milk was taken. Viruses were recovered from the samples using by ultra-centrifuge. After nucleic acid extraction, samples were analyzed for HAV by reverse-transcriptas polymerase chain reaction. A total of 180 samples were analyzed for the quantification of virus. HAV was found in 24 (13.3%) of the samples, these results show a high prevalence of these viruses in raw milk in Iran. Despite the fact that the current epidemiological situation of hepatitis A in Iran is valuable, the disease still requires monitoring and analysis within the framework of epidemiological surveillance system.

E208 PRE-TRANSPLANT MORTALITY PREDICTION OF PATIENTS WITH END-STAGE LIVER DISEASE: A COMPARATIVE STUDY BETWEEN MACHINE LEARNING METHODS AND THE TRADITIONAL MELD SCORE

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Abstract

Background: Most of the times due to the complex structure of medical datasets, using nonlinear models is unavoidable. This study aims to compare machine learning techniques with MELD (Model for End-stage Liver Disease) score to predict mortality of patients on the waiting list for liver transplantation (LTx).

Methods: In this study, a dataset of 450 patients who were candidates for LTx was assessed, while 25% of the whole dataset was randomly selected and put aside as evaluation set and the rest was used for training the classifier. The features that were used included: AST, Total Bilirubin, ALP, Ascites, Hepatic Encephalopathy, Albumin, Cr, INR, WBC, Hb, and PLT. The Gradient Boosting Machine Classifier (GBM) was used as a nonlinear model. This model, besides robustness and predictive power, can handle mixed data types. Cross validation was used on the training set to tune the classifier for a better prediction. After tuning the parameters of GBM, it was tested on the evaluation set against different thresholds for MELD score and comparison was made by plotting Receiver Operating Characteristics (ROC) curve and computing the Area under Curve (AUC).

Findings: Fifty-four (12%) of the 450 selected patients died due to liver diseases. The AUC score of GBM classifier was 86% and for MELD index, it was 74%, which showed a 12% improvement in prediction by using GBM method. Findings of this study also showed a lower false positive rate and higher recall (sensitivity) by GBM method.

Conclusions: The use of GBM classifier as a nonlinear model can improve prediction of mortality in patients who are on the waiting list of LTx compared to MELD score. However, due to highly unbalanced nature of the data (Lower than 0.14 dead to alive ratio), by training the model with a larger dataset, it is possible to create more accurate predictive models.

E212 THE PRELIMINARY DATA OF THE IRANIAN LIVER CIRRHOSIS REGISTRY

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Abstract

Background: Liver cirrhosis is the advanced late stage of progressive liver fibrosis characterized by destruction of normal hepatic architecture and regenerative nodules in liver parenchyma. Patients with liver cirrhosis are susceptible to several fatal complications and mortality from liver cirrhosis is the eighth leading cause of mortality worldwide. This is the first report of the national liver cirrhosis registry which has been established in the Gastroenterohepatology Research Center and Digestive Disease Research Institute, with collaboration of other universities, under supervision of the Deputy for Research Affairs and Technology, Ministry of Health and Medical Education.

Methods: All patients with diagnosis of liver cirrhosis who referred to the outpatient clinics or admitted in hospitals with various complications of liver cirrhosis has been included. Liver cirrhosis was diagnosed according to the suggestive findings in clinical, laboratory, radiological, pathological, and transient elastography evaluations. Data of patients including age, sex, underlying cause of liver cirrhosis, medications, and complications during follow up, and important laboratory investigations, disease severity and stage were recorded in a software designed for this registry.

Results: Up to now, 1830 patients with confirmed liver cirrhosis were included. 1193 patients (65.2 %) were male and 637 patients (34.8 %) were female. Mean age of patients was 46.50 ± 21.28 years. The most common cause of liver cirrhosis was hepatitis B virus (HBV) induced liver cirrhosis (420 patients, 23 % of patients) followed by autoimmune hepatitis (356 patients, 19.5 % of patients) and cryptogenic liver cirrhosis (274 patients, 15 % of patients). Esophageal varices were diagnosed in 575 (31.4 %) of patients by upper gastrointestinal endoscopy. 247 patients (13.7 %) had bleeding from esophageal varices and 504 patients had at least one episode of hepatic encephalopathy (27.5 %). 456 patients (24.9 %) were passed away during their follow up due to liver cirrhosis and its complications. HCC was diagnosed in 116 (6.3 %) patients.

Conclusion: This report signifies the preliminary results of liver cirrhosis and its related complications in Iran Despite national neonatal vaccination, hepatitis B virus is a major cause of chronic liver disease, and needs special program for diagnosis and treatment in infected cases.

E213 DESIGN OF POLY EPITOPE PROTEIN-BASED VACCINE FOR HCV CORE PROTEIN, HBSAG AND POLIO VP AND ANALYSIS OF ITS IMMUNOREACTIVITY IN DENDRITIC CELLS

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Abstract

Objective: Hepatitis C virus (HCV) infects more than 170 million people worldwide and is the main cause of chronic hepatitis, liver cirrhosis and hepatocellular carcinoma. Since polytope vaccines have the ability to stimulate the cellular immunity, in this study we designed and evaluated a recombinant polyvalent protein-based vaccine expressing three viral antigen.

Materials and methods: A polyvalent sequence encoding the HCV core protein, HBsAg and Polio Vp Immunodominant epitopes was designed, chemically synthesized, in pET-28a. After confirmation by restriction and sequencing analyses, its expression was investigated in BL21 (DE3) and NOVABLUE using 12% gel sodium dodecyl sulfate-polyacrylamide gel electrophoresis. Then, the identity of expressed polyvalent protein was confirmed by Western blotting using anti-His monoclonal antibody and affinity chromatography was applied to purify the expressed protein. Finally, we generated pre-immature DC (piDC), immature DC (iDC), and mature DC(mDC) from human peripheral blood monocytes and confront with designed construct and different controls.Then autologous T cells were co-cultured.

Results: The ability of monocyte-derived mDCs to present antigen, activation and proliferation of T cell was measured by Flow Cytometry and Elisa.

Conclusion: The results indicated that designed polytope construct of this study have the efficiency and required initial potency for further challenge and immunogenicity analysis in mice as a polyvalent vaccine.

P3 RELATIONSHIP BETWEEN SERUMAL LEVELS OF ALT, AST, FBS, ANTI FASCIOLA HEPATICA IGG AND NON-ALCOHOLIC FATTY LIVER DISEASE

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Abstract

Introduction: Fatty liver diseases are common in more than 10% of world population. Non-alcoholic fatty liver disease (NAFLD) is one of important hepatic disorders that is increasing because of change in lifestyle, in ways such as having fatty diet, less body activity, obesity and type 2 diabetes. The objects of this study were to determine serumal levels of hepatic enzymes; ALT (Alanine Aminotransferase) and AST (Aspartat Aminotransferase), and FBS (Fasting Blood Sugar) and anti-Fasciola hepatica IgG among NAFLD patients.

Materials and Methods: 30 NAFLD patients and 30 healthy individuals were selected for the study. Serumal levels of ALT (SGPT), AST (SGOT), and FBS were measured by Autoanalyzer (Hitachi 912) and Fasciola hepatica contamination was detected using Indirect Immunofluorescence Assay (IFA). Sampling and assays were performed at Farabi laboratory in Ardabil (northwest of Iran) between April 2016 and October 2016.

Results: There was a significant relationship between the grade of fatty liver and ALT& AST levels ($p<0.05$). We also found a significant association between FBS level and tendency to progress type 2 diabetes and fatty liver grade ($p<0.05$).

Conclusion: From the results of this study we concluded that the proportional level of AST/ALT enzymes was the best biomarker for fatty liver diagnosis.

P6 COMPARISON OF DIAGNOSTIC VALUES OF THE FOURTH GENERATION ANTI HCV TESTS (INNOTEST HCV AB IV, DIASOURCE ANTI HCV ELISA V 4.0) WITH THIRD GENERATION ANTI HCV TESTS

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Abstract

Background: In this study it was aimed to compare diagnostic performances of enzyme immunoassay based two different fourth generation anti HCV tests.

Material/methods: One hundred and eighty six sera samples obtained from the low risk grouped and treatment naive patients were enrolled in to the study. Between 20 May 2015 and 20 April 2016. Four different anti HCV tests which two of them were third generation (Architect, Advia Centaur), and the other two ones were fourth generation (Innotest HCV Ab IV, Diasorin anti HCV V 4.0). HCV SIA test (recomLine HCV IgG), Architect HCV Ag (Abbott) and HCV RNA test (VERSANT kPCR) were also studied. HCV RNA test was evaluated as the gold standart confirmative test, Architect HCV Ag test as pre-confirmative test, and HCV SIA as the supplemental test.

Results: Analytical performances of the fourth generation anti HCV test were founded as higher from the third generation anti HCV tests. Of all the studied four different anti HCV tests the fourth generation Innotest HCV Ab IV test were determined that had the highest analytical performance, the other tests; the fourth generation Diasorin anti HCV V 4.0, the third generation Advia Centaur anti HCV, and the third generaiton Architect anti HCV tests was fallowed respectively. While Architect HCV Ag test was determined that the highest correlation with HCV RNA ($r=0.921$, $p<0.0.1$) görülürken the other tests; Innotest HCV Ab IV, ($r=0.814$, $p<0.01$), Diasource anti HCV V 4.0 ($r=0.656$, $p<0.01$), Advia Centaur anti HCV ($r=0.651$, $p<0.01$), and Architect anti HCV ($r=0.558$, $p<0.01$) was fallowed respectively.

Conclusions: Theese were concluded that, of all the studied tests Architect HCV Ag showed the highest correlation with HCV RNA, and of all the studied four different anti HCV tests the fourth generation Innotest HCV Ab IV test showed the highest and excellent analytical performance.

P14 THE EFFECT OF AEROBIC EXERCISE ON TNF-ALPHA AND ADIPONECTIN IN MILITARY MEN WITH NON-ALCOHOLIC FATTY LIVER

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Abstract

Background: non-alcoholic fatty liver disease

(NAFLD) is associated with physical inactivity and sedentary lifestyle. Exercise training is first-line recommendations for the treatment of NAFLD. In this study, we evaluated the effect of aerobic training (ET) on TNF-alpha and adiponectin in military men with non-alcoholic fatty liver.

Material and Methods: Twenty patients with NAFLD were included in this study. Patients were randomly allocated either to ET, three times weekly, for 8 weeks and a control group consisting of routine physical activity. Aerobic exercise training program consisted of 45 minutes of running on treadmill with 60% - 75% maximum heart rate intensity. TNF-alpha and adiponectin were evaluated Pre and post intervention.

Results: The mean age in the ET group was 39.7±6.3 and in the control group was 43.8±7.3. There was significant decrease in TNF-alpha after aerobic training by p= 0.004 and significant increase of serum adiponectin by p= 0.001 in response to aerobic training in comparison with the control group. But there was no significant change in weight in aerobic group (p=0.15).

Conclusion: Our findings showed that moderate aerobics improved serum of adiponectin in patients with NAFLD. Also, our findings support the aerobics exercise is associated with decrease in serum concentration of TNF-alpha in NAFLD. This study demonstrated that aerobics exercise improves markers of liver function in patients with NAFLD independent of significant change in body weight.

P23 HCV IN CHILDREN

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Abstract

Infection with hepatitis C virus (HCV) is a worldwide health problem, with more than 170 million individuals infected. In industrialized countries, HCV is the most common cause of chronic liver disease in children. Since 1992, HCV vertical transmission (HCV-VT) from an infected mother to her newborn infant has constituted the predominant acquisition mode of HCV infection and, despite better understanding of the risk factors involved in the perinatal transmission of HCV, to date little is known about the underlying transmission mechanisms and timing.1, 2 The natural history of HCV infection in children is not yet well defined; most children are asymptomatic despite common ongoing viremia and alanine transaminase (ALT) levels that are variable but could reach levels compatible with acute hepatitis1 and remain so for decades.3 Risk factors for mother-to-child transmission of HCV have been shown to include the presence of a high concentration of HCV RNA in maternal blood and human immunodeficiency virus (HIV) coinfection.4 Vertical transmission is almost always restricted to women with HCV-RNA detectable in peripheral blood by polymerase chain reaction (PCR). Nevertheless, all children born to women with anti-HCV antibodies should be tested for HCV. The relationship between HCV-VT and maternal HCV genotype remains unclear because few studies have investigated the role of HCV genotype as a risk factor for HCV-VT. It has been reported that high ALT levels during the first year of life and genotype 3 infections are associated with a higher chance of sustained clearance of HCV-RNA and biochemical remission.5, 6.However, other authors have indicated that there is no relationship between HCV-VT and maternal HCV genotype.7 Moreover, the importance of birth mode (vaginal or cesarean) and type of feeding (breast feeding or replacement) has been investigated, in view of their possible influence on transmission, but the results achieved are conflicting and more data are required to clarify the role of these factors in HCV-VT.8, 9.

P24 OPIUM CONSUMPTION AND RISK OF LIVER FIBROSIS IN CHRONIC HEPATITIS B AND C

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Abstract

Background: In patients with hepatitis B and C, environmental factors such as smoking and alcohol can cause liver fibrosis progression. But opium effects on liver fibrosis progression are not clear. This study was designed to assess the relationship of opium user and liver fibrosis progression.

Methods: In this case-control study, 100 patients in hepatitis B group and 100 patients in hepatitis C group underwent liver biopsy due to hepatitis treatment and the severity of injury based on HAI (histopathological activity index) was evaluated. In the control group, patients were smoker but in the case group patients were smoker and opium user. In this study, correlation between amount and time of consumption of opium with HAI was determined.

Findings: There was significant relationship between HAI and opium using in both hepatitis B and C. In Hepatitis B, significant relationship was seen between amount of consumption of opium and grade of liver but no significant relationship was between amount of consumption of opium and stage of liver. Also, there was not significant relationship between time of consumption of opium with stage and grade of liver. In hepatitis C, significant relationship was determined between stage with amount and time

of consumption of opium and no relationship was noted between grade with amount and time of consumption of opium.

Conclusion: Correlation of opium and liver fibrosis progression, particularly in hepatitis C, was determined.

P26 PAIN OR SUFFER IN HEPATITIS: A BIOPSYCHOSOCIAL MODEL OF PAIN SEVERITY

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Abstract

Introduction: Patients with Hepatitis C Virus (HCV) tolerate disproportionately high rates of pain-related diagnoses. About 50–70% of patients with HCV clinically experience co-occurring musculoskeletal pain. In addition, to HCV is associated with peripheral neuropathy, arthritis, and fibromyalgia. The main purpose of study was biopsychosocial factors determine pain intensity in patients with HCV.

Method: In this study, 120 patients with HVC Participated.They were recruited from Institute of gastroenterology and hepatology in Shariati Hospital. Inclusion criteria for this study were a diagnosis of HCV, defined as a positive HCV antibody result confirmed with detectable HCV RNA level on polymerase chain reaction test, age 18 years or older (no more than 70). In addition, to the overall study's inclusion/exclusion criteria, to be included in these analyses, participants must have reported current pain of at least moderate to severe intensity of the Multidimensional Pain Inventory (MPI).

Results: In multivariate models, biopsychosocial factors accounted for 47% of the variance in pain severity and 61% of the variance in pain interference. In adjusted models, factors associated with pain severity include: bio factors: diabetes, liver fibrosis, fatigue, insomnia.psycho factors: depression, catastrophizing, substance use, and social factors: social support and perceived stigma predict pain related HCV. Associated with pain interference were age, prescription opioid use and self-efficacy (all p-values<0.05).

Conclusion: Results from this study extend findings from a preliminary study examining biopsychosocial factors associated with pain in patients with HCV. It was found that general and pain-specific psychosocial factors were most strongly associated with pain severity and pain interference in patients with HCV. Based on study findings, psychological intervention (by biopsychosocial approach) is necessary for relive pain in patients with HCV.

P29 SURVIVAL ANALYSIS OF LIVER TRANSPLANT PATIENTS WITH PORTAL VENOUS THROMBOSIS: A REPORT FROM SHIRAZ, IRAN

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Abstract

Background: Among determinants of outcome in Liver transplant patients (LTPs) is Portal Vein Thrombosis (PVT). In this study, we aimed to compare the prevalence and detect the modifiable predictors of death in PVT patients.

Method: In this study, 95 LTPs that their PVT was detected at operation room were studied. A control group with the same number of age sex matched patients who received LTx but did nit had PVT were chosen. These patients were followed in a median period of 1.5 year. Data were analyzed in SPSS.

Findings: Mean age of studied patients was 42.6±15.1 and 43.7±14.6 years in PVT and non-PVT patients respectively and male to female ratio was 1.9 in both groups Thrombocytopenia (OR=3.4), cryptogenic cirrhosis (OR=2.3), high AST to ALT ratio (OR=2.2) and low serum protein (OR=1.4) were the determinants of intraoperative detected PVT. The median time of survival for dead PVTs was 0.2 month and for dead non-PVTs was 9.9 months. Survival rates (SR) at 1, 1.5, 2 and 2.4 years were 98%, 88%, 72% and 64% in PVTs compared to 100%, 96%, 92% and 85% in the non-PVTs groups respectively. Moreover, PVT patients had a Hazard rate (HR) of mortality 2.3 compared to non-PVTs.The main correlates of death in PVTs were Diabetes mellitus (DM) (HR=14.6), male gender (HR=9.5), high AST to ALT ratio (HR=3.3) and need to more blood transfusion during LTx (HR=1.5).

Conclusion: PVT patients were more than two times in danger of death compared to non-PVT patients during the first two years after LTx, while their SR is also decreased by one-third during this period. Moreover, in dead PVTs the median time of survival was 1 week (or one-fifth of dead non-PVTs). DM, high level of AST to ALT ratio and more bags of blood transfusion during LTx were the main modifiable.

P33 INVESTIGATION OF DIAGNOSTIC VALUES OF DIFFERENT ANTI HCV REACTIVES BASED ON IMMUNOASSAY METHOD USED IN THE LABORATORY DIAGNOSIS OF HEPATITIS C INFECTION IN TURKEY

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Abstract

Background: In this study, it was aimed to investigate diagnostic values of the five different anti-HCV tests and HCV core antigen test used in the routine laboratories for the diagnosis of HCV infection in Turkey.

Material/methods: Of all the 179 sera samples were tested by Vitros anti-HCV (Ortho), Advia Centaur anti-HCV (Siemens), Elecsys anti-HCV II (Roche), Architect anti-HCV (Abbott), Liaison anti-HCV (DiaSorin), Architect HCV Ag (Abbott), recomLine HCV IgG (Mikrogen), COBAS® AmpliPrep/COBAS® TaqMan® HCV Quantitative Test, version 2.0 (Roche) and Innotest HCV Ab IV (Fujirebio) only for discrepant results.

Results: The overall concordance rate of five different anti-HCV tests was found 83.8% (150/179). The best S/Co correlation value was obtained between Architect and Liaison (r=0.842) anti-HCV tests. The lowest correlation was observed between Advia Centaur and Elecsys II (r=0.251) anti-HCV tests. There was no correlation between Elecsys anti-HCV II and the other tests. In the calculations that HCV RNA was accepted as the gold standart, sensitivity and NPV of all anti-HCV tests was determined to be 100%. All the studied anti-HCV tests evaluated for the analytical performances and Advia Centaur was found to be the highest, the other anti-HCV tests: Liaison, Architect, Elecsys and Vitros graded respectively. The critical values for Vitros anti-HCV, Advia Centaur anti-HCV, Elecsys anti-HCV II, Architect anti-HCV and Liaison anti-HCV tests were determined as 6.6 S/Co, 5.28 S/Co, 14.88 COI, 3.6 S/Co and 4.3 S/Co respectively. It was not determined any correlation between anti-HCV tests (S/Co or COI) and HCV RNA (IU/mL) values. It was determined a good correlation between HCV core antigen and HCV RNA concentrations by Spearman correlation test ($r=0.943$, $p<0.001$, $n=90$).

Conclusions: HCV core antigen tests can be used as an alternative test in order to show the presence of infection when HCV RNA test can not be studied. Problems in diagnostic algorithm approaches still continues. This problems may be solved properly only by the way that improving new generation anti-HCV reactives that embedded pure structural antigens obtained from HCV cell cultures into the new generation anti-HCV reactives.

P34 DETECTION OF SEROPOSITIVITY RATES OF BLOOD-BORNE VIRUSES AMONG DENTISTS IN PROVINCE OF AFYONKARAHISAR

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Abstract

Background: Hepatitis B viruse (HBV), Hepatitis C viruse (HCV) and human immunodeficiency virus (HIV) are among the most dangerous blood-borne pathogens. Healthcare workers are at risk of transmission due to frequent contact with body fluids. It is important to protect dental care workers from nosocomial, blood-transmissible infections of the HBV, HCV and HIV. In this study, it was aimed to determine prevalence of HCV, HBV and HIV infections in dentists in province of Afyonkarahisar, Turkey.

Material/methods: The blood samples were obtained from the dentists who works at Afyon Kocatepe University, Faculty of Dentistry, Ministy of Health Oral and Dental Health Hospital, Private Dental Clinics. The values of HBsAg (Abbott, Illinois, USA), anti HBs (Abbott, Illinois, USA), anti HBc IgG (Abbott, Illinois, USA), anti HBc IgM (Abbott, Illinois, USA) anti HCV (Abbott, Illinois, USA) and anti HIV (Abbott, Illinois, USA) were analyzed by using chemiluminescence assay method. (CLIA) (Abbott Architect i2000SR, Illinois, USA).

Results: A total of 81 blood samples were enrolled in to the study. All the samples that processed were found as HBsAg, anti HBc IgM and anti-HIV negative. Eight (9.87%) samples were anti-HBc IgG positive. Only one (1.23%) sample was found as anti-HCV positive. Seventy one (87.65%) participants had received at least 1 dose of HBV vaccine. Five (6.17%) of the vaccinated participants were not immune to hepatitis B virus. Comperative results of anti HBc IgG and questionnaire were given in Table 1.

Conclusions: According to our study, prevalance of blood-borne virus among dentists was found less than in the general population of Turkey. In conclucion, routine usage of gloves and vaccination may be effective for protection from blood-borne virus infections.

P37 IMPACT OF HOST GENE POLYMORPHISMS ON SUSCEPTIBILITY TO CHRONIC HEPATITIS B VIRUS INFECTION

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Abstract

Hepatitis B virus (HBV) infection can result in a number of different clinical conditions, including asymptomatic HBV carriers to chronic hepatitis and primary hepatocellular carcinoma. Variations in cytokine genes have been discussed to affect the natural history of HBV infection. These cytokines may involve in the viral binding to the cells, modulating the host immune response to infection and pathological changes in the liver, and affecting the antiviral therapies. Various studies reveal that SNPs play an important role in pathogenesis of HBV. On the other hand, various outcomes of infection cannot be completely shown by genetic factors because these studies have inconsistent results with regard to the possible impacts of host genetic polymorphisms on susceptibility to infection. Therefore, to identify the real effects of host genetic factors in HBV susceptibility and natural history of the disease, studies with large sample size will be needed. In addition, due to the complex interactions of genetic it is better to identify synergies of several SNPs. Such studies can provide better insights into the novel methods of diagnosis and treatment. Current review will discuss significant genetic variations in cytokine genes that may affect the susceptibility to the chronic HBV infection.

P38 CCR5, MCP-1 AND VDR GENE POLYMORPHISMS ARE ASSOCIATED WITH THE SUSCEPTIBILITY TO HBV INFECTION

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Abstract

Background and aim: Genetic variants of chemokine and regulatory cytokines play functional roles in chronic HBV infection. The objective of the study, was to evaluate the association between the CCR5D32, CCR5-2459A/G, MCP-1-2518A/G, VDR-APa1A/C, VDR-Taq1T/C SNPs and HBV susceptibility, in a sample of Iranian.

Methods: The CCR5D32, CCR5-2459A/G, MCP1-2518A/G, VDR-APa1A/C, VDR-Taq1T/C polymorphisms were analyzed by polymerase chain reaction and PCR-RFLP using 100 chronic HBV infected (HBV) patients, 40 spontaneously recovered HBV (SR) subjects and 100 healthy controls (C). Also, serum levels of protein were monitored.

Results: The study showed that the existence of CCR5-2459A, MCP1-2518G and VDR-CC alleles significantly increased risk of chronic HBV infection. In addition, WtAGCC haplotype had a higher frequency in HBV patients than C and SR groups and might relate to the natural history of the infection.Statistical analysis indicated positive correlations between CCR5-2459A/G, MCPl-2518A/G, VDR-APa1A/C, VDR-Taq1T/C genotypes and serum levels of the CCR5, MCP-1 and VDR in HBV patients.

Conclusions: according to the statistical analysis, significant associations with susceptibility to chronic HBV infection was observed with CCR5-2459A/G, MCP1-2518A/G, VDR-APa1A/C, VDR-Taq1T/C polymorphisms. In addition, no association of the CCR5D32 SNP with the disease was found.

P39 THE RELATIONSHIP BETWEEN LAMC1 GENE POLYMORPHISM AND SUSCEPTIBILITY TO THE CHRONIC HEPATITIS B VIRUS INFECTION IN AN IRANIAN POPULATION

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Abstract

Background: Genetic variants of laminin play functional roles in chronic HBV infection. The objective of this study was to evaluate the association between the LAMC1 gene polymorphisms and HBV susceptibility, in a sample of Iranians.

Methods: The rs20558, rs20563, rs10911193, rs10911251, rs1413390 polymorphisms were analyzed by polymerase chain reaction and PCR-RFLP and ARMS-PCR using 100 chronic HBV infected (HBV) patients, 40 spontaneously recovered HBV (SR) subjects and 100 healthy controls (C). Also, serum levels of laminin were monitored.

Results: The study showed that the existence of rs20558C, rs20563G, rs10911193T alleles significantly increased risk of chronic HBV infection. In addition, CGTAT haplotype had a higher frequency in HBV patients compared to C and SR groups and might be related to the natural history of the infection.Statistical analysis indicated positive correlations between rs20558, rs20563, rs10911193 genotypes and serum levels of the laminin in HBV patients.

Conclusions: According to the statistical analysis, a significant association with susceptibility to chronic HBV infection was observed with rs20558, rs20563 and rs10911193 polymorphisms. In addition, no association of the rs10911251, rs1413390 SNPs with the disease was found.

P40 POLYMORPHISMS OF SURVIVIN GENE AND ITS PROTEIN EXPRESSION ARE ASSOCIATED WITH CHRONIC HBV INFECTION IN IRANIAN POPULATION

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Abstract

Purpose: Survivin can affect the progression of infection and is considered as a marker of various malignancies. The aim of the study was to investigate the possible association of gene polymorphisms of survivin (1547A/G, 644C/T, 625 C/G, 241C/T, 31G/C, 141G/C) and chronic hepatitis B infection in Iranian patients.

Methods: The genotypes of survivin SNPs were investigated by polymerase chain reaction restriction fragment length polymorphism (PCR-RFLP) method using 120 chronic HBV infected patients (HBV), 80 spontaneously recovered HBV subjects (SR) and 120 healthy controls (C). Serum level of survivin was determined using ELISA method.

Results: The 1547G, 625C, 241T and 31C alleles were associated with increased susceptibility to chronic hepatitis B infection (P = 0.000, P = 0.000, P = 0.000 and P = 0.000 respectively). Chronic HBV patients with 625CC, 241TT and 31CC genotypes had higher levels of survvin. Moreover, the differences remained significant following applying a Bonferroni correction in the population (PBC<0.05).

Conclusions: Survivin 1547A/G, 625 C/G, 241C/T and 31G/C gene polymorphisms may be associated with chronic HBV susceptibility in Iranian HBV patients.

P41 ASSOCIATION OF TNF-A GENE POLYMORPHISMS WITH THE OUTCOMES OF CHRONIC HEPATITIS B INFECTION IN IRANIAN POPULATION: LOOKING AT THE PROTEIN LEVEL

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Abstract

Background and aim: The host genetic background regulates the natural history of chronic HBV infection. The aim of this study was to investigate the association between TNF-a gene polymorphism in the promoter region with susceptibility to chronic hepatitis B virus infection.

Methods: Four polymorphisms of TNF-a gene, -238 A/G, -308 A/G, -857C/T and -863 A/C were analyzed by RT-PCR using 100 chronic HBV infected patients, 40 spontaneously recovered HBVsubjects and 100 healthy controls. All participants were unrelated Iranians.

Results: The study showed that the existence of -308 G, -857C and -863 A alleles significantly increased risk of chronic HBV infection. In addition, GGCA haplotype had a higher frequency in HBV patients than C and SR groups and might relate to the natural history of the infection.Chronic HBV patients with -308GG, -857CC and -863AA genotypes had lower levels of TNF-a compared to the other genotypes.

Conclusions: The results indicate that there is a positive association between susceptibility to chronic HBV infection and TNF-a polymorphism.

P42 INTERFERON GAMMA GENE POLYMORPHISMS AND CHRONIC HEPATITIS B INFECTIONS IN AN IRANIAN POPULATION

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Abstract

Background and Aims: Chronic HBV infection is a worldwide health problem. IFN-γ is a pro-inflammatory Th1 cytokines, which can exert antiproliferative and antitumor activity. Some single nucleotide polymorphisms in regulatory regions of IFN- γ, IFN- γ R1 genes may influence the susceptibility to HBV. Here, we evaluated the impact of IFN- γ 874+ T/A, IFN- γ R1 -611A/G, +189G/C and +95C/T polymorphisms in susceptibility to chronic HBV infection in a sample of the Iranian population.

Methods: IFN- γ 874+ T/A and IFN- γ R1 (-611A/G, +189T/G and +95C/T) genotypes were determined in 221 chronic HBV patients and 200 healthy controls using ARMS-PCR and PCR- RFLP method.

Results: In this study, we showed a significant relationship between IFN- γ (+874T/A) polymorphism and susceptibility to chronic hepatitis B virus infection. Our findings suggest that IFN- γ -874A allele increases the risk of chronic HBV infection and carriers of the T allele have reduced susceptibility to infection. In addition, we did not find any significant

association between the -611A/G, +189G/C and +95C/T regions of IFN- γ R1 and HBV.

Conclusions: Our observations implicate a significant relationship between the IFN- γ (+874 T/A) polymorphism and the risk of HBV infection in Iranian population.

P44 FREQUENCY OF HEPATITIS D VIRUS INFECTION IN CHRONIC HEPATITIS B PATIENTS IN ARAK

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Abstract

Background: Hepatitis D virus (HDV) is a defective RNA virus that depends on the hepatitis B surface antigen (HBsAg) for its replication. Infection with hepatitis D virus in hepatitis B virus chronic carriers causes accelerated progression to chronic active hepatitis, cirrhosis and hepatic carcinoma. In studies conducted in Iran and different countries, different prevalence of HDV had been reported. The aim of this study was to determine the frequency of hepatitis D virus infection in chronic hepatitis B patients in Arak city.

Patients and Methods: This cross-sectional study was conducted on 95 chronic hepatitis B patients in Arak city. Demographic characteristics and risk factors for HDV transmission were recorded. Hepatitis D antibody (Anti-HDV) was determined by ELISA in the serums of patients.

Results: In this study, 95 chronic hepatitis B patients were enrolled. 61% of cases were male and39% were female. Anti-HDV was detected in 2 (2.1%) of chronic hepatitis B patients. There was no significant association between HBV/HDV co-infection and sex, age, education level, occupation (P values: 0.74, 0.52, 0.95 and 0.65 respectively). There was no history of injection drug use, unprotected sexual contacts, tattooing and history of familial contact in hepatitis D infected patients.

Conclusion: Our results showed that Arak is an area of low HDV infection in Iran.

P46 VITAMIN D LEVELS IN DIFFERENT STAGES OF CHRONIC HEPATITIS B

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Abstract

Background: During recent years, the relationship between vitamin D levels and chronic hepatitis B (CHB) infectionhas attracted researchers' attention.

Methods: Eighty-four patients with CHB were assessed and divided into three groups: inactive carriers (n = 28), treated (n = 34) and new (treatment-naïve) cases (n = 22). Thirty-two healthy controls (HCs) were included to enable comparison with the CHB groups. The levels of vitamin D3 were measured and statistically compared among the various groups.

Results: The HBV DNA levels were not associated with vitamin D3 levels in the inactive carriers (p =0.171), the treated groups (p = 0.192), and the new cases (p = 0.369). Moreover, the alanine and aspartate transaminase levels were not associated with vitamin D3 levels.

Conclusions: There is a possible correlation between clinically CHB patients and vitamin D3 level.

P49 HEPATITIS B VACCINATION COVERAGE AND HEPATITIS B SURFACE ANTIBODY IN IRANIAN PREGNANT WOMEN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Abstract

Background: Prenatal transmission is one of the most frequent routes of HBV transmission. This study aimed to hepatitis B vaccination coverage and hepatitis B surface antibody (HBsAb) among Iranian pregnant women.

Methods: We used the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) checklist. Two reviewers independently searched

Iranian and international databases include Iranmedex, Magiran, SID, IranDoc, Medlab, Scopus, PubMed, Science Direct, Cochrane, Web of Science and Google Scholar to identify potentially relevant articles or abstracts. There was no time limit until May 2107. Our search included English and Persian MeSH keywords "Epidemiology", "Prevalence", "Hepatitis", "Pregnant women", "Pregnant", "Pregnancy", " Gestational", "HBsAb", "Vaccination" and "Vaccine". Inclusion criteria in this study were investigation of epidemiological study of HBV among Iranian pregnant women published in both Persian and English Language. Exclusion criteria were: non-random sampling method, irrelevant study, studies on animals, editorial, case reports, intervention, reviews. Two independent researchers screened the identified studies according to STROBE checklist. Data were analyzed through meta-analysis using random effects model by comprehensive meta-analysis software version 2.

Results: Six studies involving 3,433 pregnant women were meta-analyzed. HBV vaccination coverage (received at least a single dose) was estimated 9.8% (CI 95%:5.3-17.5). HBsAb positive in Iranian pregnant women was 43.3% (CI 95%:33.3-53.9).

Conclusion: HBV vaccination coverage was low among Iranian pregnant women. Therefore, Health policy makers are recommended to enforce immunization program for HBV vaccine among high risk pregnant women.

P51 HOW TO HEAL PATIENTS WITH B HEPATITIS THROUGH HOMEOPATHY

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Abstract

Introduction: According to the WHO website, hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease. The virus is transmitted through contact with the blood or other body fluids of an infected person. An estimated 257 million people are living with hepatitis B virus infection (defined as hepatitis B surface antigen positive). In 2015, hepatitis B resulted in 887 000 deaths, mostly from complications (including cirrhosis and hepatocellular carcinoma HCC is now the third leading cause of cancer deaths worldwide, with over 500,000 people affected) Hepatitis B is an important occupational hazard for health workers. However, it can be prevented by currently available safe and effective vaccine. The condition may be cured completely with certain homeopathic remedies including Nux-vomica.Homeopathic remedies in patients with Hepatitis B Regarding the literature there are 4 types of remedies used in the healing of these patients; those in acute phase are cured with remedies like Aconitum napellus. However patients, whose acute conditions are not cured leading to chronic condition, may be cured with other remedies that are mainly selected regarding the patients, personal emotional, mental and physical characteristics and family history, being called as constitutional remedies.There is another group of remedies that are organ specific or specialized for certain organ or organs, like Ptelea that is a special remedy for digestive system specially liver .Hepatitis B Nosode is the other specific remedy.In hepatitis we can choose one of these remedies for a short term therapy in acute cases and for a long term therapy in chronic conditions, even cirrhosis and hepatocellular carcinoma.

Conclusions: Homeopathic remedies may cure patients with acute and chronic hepatitis due to HBV, regarding the literature. Randomized clinical trials are suggested to show the efficacy of the remedies, to heal afflicted patients worldwide to be benefited and to be survived with the curative homeopathic remedies.

P53 ASSESSMENT OF RISK FACTORS IN PATIENTS WITH CHRONIC HEPATITIS B REFERRED TO DR.LABBAFI NEJAD'S HOSPITAL HEPATITIS CLINIC 2012-2014

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Abstract

Introduction: With the growing trend of unhealthy behaviors in the community, the likelihood of transmission of hepatitis B virus from infected people to society is increasing. So early detection for preventing disease progression in patients and preventing the spread to the community has an important role. The aim of this study is assessment of risk factors in patients with chronic hepatitis B referred to Labbafi nejad's Hospital hepatitis Clinic during 1391-1393.

Methods and Materials: This cross-sectional study is done on 329 hepatitis B confirmed patients that were admitted to Labbafi nejad's Hospital hepatitis Clinic 1391-1393. Information were collected by interviewing patients by researcher-made questionnaire. Variables, all risk factors for hepatitis B, respectively. Statistical analysis was performed by SPSS version 21. Average and frequency was used to description and chi-square test was used for analysis.

Results: A total of 329 persons (59% males, 41%females) with a mean age of 44-83 years and 86.3% were married. 33.7% of these individuals have been identified through routine screening. 51.1% had Persian ethnicity and 41% were under diploma. The fre-

quency of exposure to risk factors in this study are as follows: there were no cases of hepatitis B in history of cosmetics and splice joint, common use of blades and razors, HCV disease in patients at the same time, Family history of HIV positive in patients and HIV disease in patients at the same time. Some groups, such as history of dentist visit (62.3%), major surgery (45.5%) and hospitalization (54.7%) had higher prevalence than other groups.

Discussion: It seems to be of great importance to pay more attention to certain jobs, life styles and cultural matters in Iran that predispose people to a number of risk factors so as to implement measures to control HBV spread. Now most effective ways to prevent new cases of HBV are vaccination, screening blood products and raising awareness in order to avoid unhealthy behaviors such as cupping on illegal centers and not doing beauty such as manicure, pedicure, piercing ear, tattoo in unsanitary centers and no license. Also, given the high levels of hepatitis B infection among housewifes (in this study), it seems that increased awareness and social-health education in order to avoid unprotected sexual contact with an infected partner can be highly effective. Despite existence of a long list of risk factors, different epidemiological studies with alternative methodologies accompanied by meta-analysis of risk factors in each separate area seems to be helpful in providing information about transmission.

P55 THE RELATIONSHIP BETWEEN REPRODUCTION TECHNIQUES AND LIVER DYSFUNCTION, CASE SERIES AND LITERATURE REVIEW

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Abstract

Background: Some authors have reported cases of liver dysfunction induced by artificial reproduction techniques (ART).This article highlights the potential effect of ART on the pregnancy-related liver abnormality.

Methods: A prospective case study using a check list to evaluate some clinical factors, laboratory and imaging data of patients following ART in a clinic of liver diseases in Yas hospital in 2017 year.

Results: 56 patients who had become pregnant by ART were visited in the clinic with a mean age of 33.9 years (range: 28-41 years). All of them were referred after 24 weeks of gestation. 21 (37.5%) patients were already hospitalized for other reasons beside of liver dysfunction. Nobody reported previous history of liver diseases and previous pregnancy with complications. Pruritus, abdominal pain and peripheral edema were common symptoms. 24 (42.9%) had twine pregnancy (P <0.0001; 95% CI: 29.75-56.83) .15 (26.8%) had gestational hypertension (P <0.0001; 95% CI: 15.84-40.32). 13 (23.2%) had BMI > 30 kg/m2 (P <0.0001; 95% CI: 12.97-36.40). The mean values of alanine aminotransferase (ALT) enzyme in cases was 86.8±43U/L and 9 (16.1%) had ALT >100 IU/L. 11 (19.6 %) had pre-eclampsia toxemia. 23 (41.1%) had probably intrahepatic cholestasis of pregnancy. We couldn't determine a specific diagnosis in other cases (n=22, 39.3 %) and maybe due to an idiopathic cause. Liver ultrasonography didn't show any significant pathology in all pregnant women.

Conclusions: ART is a major risk factor for liver test dysfunction and more prevalent in third trimester of pregnancy. Recent studies showed a significant correlation between in vitro fertilization and pre-eclampsia risk. Significant liver test abnormality is associated with increased rate of fetal complications. Twine pregnancy, gestational hypertension and BMI > 30 kg/m2 were related risk factors for liver dysfunction in ART basis on our study. More studies are needed to understand the relationship between ART and pregnancy-related liver abnormality.

P57 A META-ANALYSIS FOR TUMOR NECROSIS FACTOR-A POLYMORPHISMS AND RISK OF HEPATOCELLULAR CARCINOMA

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Abstract

Context: Hepatocellular carcinoma (HCC) is a common disorder throughout the world that can develop due to various factors, including genetics. Tumor necrosis factor (TNF) is the most frequently studied cytokine related to the risk of developing HCC and an association between the 308 position of the TNFpromoter (TNF-308) and HCC risk has been confirmed in various reports.

Evidence Acquisition: The PubMed, Scopus, and Google Scholar databases were searched through July 12, 2015, for studies on associations between TNF-308 and the risk of HCC. To determine this association, odds ratios (ORs) and 95%confidence intervals (95%CIs) were calculated.

Results: A total of 23 case-control studies were investigated, involving 3,389 cases and 4,235 controls. The overall conclusion was that the A allele was more frequent in case groups compared to control groups (13.4% vs. 8.4%). Thus, the A allele was significantly associated with increased HCC risk (OR = 1.77; 95% CI = [1.26-2.50]; P value < 0.002). In addition to the allelic model, the dominant model "AA + AG vs. GG". was

significantly associated with HCC risk (OR = 1.80; CI = [1.29-2.51]; P value< 0.001). In the sensitivity analysis for co-dominant (AA vs. GG) and recessive models (AA vs. AG + GG), no trust worthy associations with the risk of HCC development were observed.

Conclusions: This meta-analysis indicated that the TNF-308 G/A polymorphism is significantly associated with increased susceptibility to HCC. However, to confirm this finding, more studies are needed on TNF-308 G/A polymorphisms associated with HCC.

P60 EFFECTS OF CURCUMIN ON NF-KB SIGNALING PATHWAY IN HEPATITIS B VIRUS INFECTION

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Abstract

Curcumin is a yellow-orange powder derived from the Curcuma longa plant. Curcumin has been used extensively in Traditional medicine for centuries. Curcumin is nontoxic and shown different therapeutic properties including anti-inflammatory, anti-cancer, anti-viral, anti-bacterial, anti-fungal, anti-parasites, anti-oxidant, analgesic and antiseptic activities. Hepatitis B virus (HBV) is a small DNA member of the genus Ortho hepadnavirus (Hepadnaviridae family) which is a highly contagious blood borne viral pathogen. HBV infection is a major public health problem with 2 billion people infected throughout the world and 350 million suffering from chronic HBV infection. In this review, we focus on recent studies highlighting the role of curcumin in Hepatitis B virus infection and their potential clinical applications in NF-KB signaling as a target for prevention and therapy.

P61 MICRORNAS AND HEPATITIS C VIRUS: BIOMARKERS, FUNCTIONS AND THERAPY

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Abstract

Hepatitis C virus (HCV) is a major cause of liver disease which leads to liver cirrhosis and hepatocellular carcinoma. Available treatments for HCV infection can achieve a sustained viral response (SVR) in about half of the patients, even with the addition of direct acting antiviral the SVR rate does not exceed 75%. Recent studies have shown that microRNAs play major roles in pathogenesis of various diseases including hepatitis C. MicroRNAs alter pathways associated with immune response, virus entry into cells, proliferation and apoptosis of cells. These microRNAs have the potential to be used as biomarkers in diagnosis and evaluating the disease outcome. Furthermore, they can be utilized to treat patients suffering from Hepatitis C. The critical effects of microRNAs on human physiology and pathogenesis of diseases is becoming apparent as more researches are done on this matter. Hepatitis C virus uses several microRNAs to its advantage, mainly resulting in confusion of the body immune system. Despite the efforts done on revealing the association between microRNAs and HCV pathogenesis, this field of research is still in preliminary stages. The ultimate goal of these researches is better understanding of HCV behavior and pathogenesis, therefore coming up with novel and more efficient treatments to reduce the burden of Hepatitis C virus. In addition to developing new drugs, designing vaccines for HCV using microRNAs is becoming a hot field of research, and promising results have been acquired as well.

P62 NEW OPTIONS FOR CHRONIC HEPATITIS B VIRUS INFECTION TREATMENT: MANIPULATION OF REGULATORY CELLS' RESPONSES

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Abstract

Background: Identification of effective treatments in hepatitis B virus (HBV) infection remains a controversial topic. Although the currently approved drugs for HBV control the disease's progression and also limit associated outcomes, these drugs may not fully eradicate HBV infection. In addition to better managing patients with chronic hepatitis B (CHB) infection, the induction of seroclearance and probably cure by these drugs has been a commonly discussed topic in recent years.Objectives: In this study, we focused on treating CHB infection via the manipulation of T cells'responses to identify possible approaches to cure CHB.

Materials and Methods: All studies relevant to the role of cellular and humoral responses in HBV

infection (especially regulatory cells) were investigated via a systematic search of different databases, including PubMed, Scopus, and Google Scholar. Considering extracted data and also our unpublished data regarding the association between regulatory cytokines and CHB, we introduced a novel approach for the induction of seroclearance.

Results: Considering the increased levels of regulatory cytokines and also regulatory T cells (Tregs) during CHB, it seems that these cells are deeply involved in CHB infection. The inhibition of regulatory T cells may reverse the dysfunction of effector T cells in patients with CHB infection. In order to inhibit Tregs' responses, different types of approaches could be employed to restore the impaired function of effector T cells. The blockade of IL-10, IL-35, CTLA-4, PD-1, and TIM-3 were discussed throughout this study. Regardless of the efficacy of these methods, CHB patients may experience serious liver injuries due to the cytotoxic action of CD8+ Tcells. Antiviral therapy and a decrease in HBV DNA to undetectable levels could also significantly reduce the risk of the hepatitis B flare.

Conclusions: The inhibition of Tregs is a novel therapeutic approach to cure chronically HBV infected patients. However, further studies are needed to investigate the safety and efficacy of this approach.

P65 EVALUATION OF THE FREQUENCY OF PRECORE/CORE MUTATION IN PATIENTS WITH CHRONIC HEPATITIS B, KERMAN, SOUTHEAST OF IRAN

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Abstract

Objective: To evaluate the frequency of precore/core mutation in patients with chronic hepatitis B using PCR-restricted fragment length polymorphisms method.

Methods: Sera were obtained from 69 patients with chronic hepatitis B including 30 women (43.5%) and 39 men (56.5%). All patients were tested for the serum alanine aminotransferase, aspartate aminotransferase, the presence of hepatitis Be antigen and hepatitis B surface antigen by electrochemiluminescence and hepatitis B virus DNA load. Precore/core mutation was examined for the presence of a characteristic point mutation at nucleotides A1896G in precore, A1762T and G1764A in core region using nested PCR and restricted fragment length polymorphisms methods.

Results: From total 69 cases with chronic hepatitis B infection, 12 (17.3%) patients had precore mutation and 10 (14.4%) patients had core mutation. From 69 patients, 53 (76.8%) were negative for hepatitis Be antigen and 61 (88.4%) were positive for hepatitis B surface antigen by electrochemiluminescence method. All samples were positive for hepatitis B virus DNA by RT-PCR.

Conclusions: This study suggests that extra molecular methods should be apply for diagnosis and monitoring of mutation in chronic hepatitis B patients synchronic or serological method.

P66 EVALUATION OF HBV RESISTANCE TO TENOFOVIR IN PATIENTS WITH CHRONIC HEPATITIS B USING ZNA PROBE ASSAY IN KERMAN, SOUTHEAST OF IRAN

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Abstract

Objective: To evaluate the mutation rate of polymerase gene and it's correlation with tenofovir resistance in patients with chronic hepatitis B.

Methods: A total of 64 serum samples (36 men and 28 women) were collected from patients with chronic hepatitis B. All of these samples were tested for hepatitis B virus (HBV) DNA level, alanin amino transferase/aspartic amino transferase enzymes and serological markers such as hepatitis B surface antigen (HBsAg)/hepatitis Be antigen (HBeAg) (Electro-chemiluminescence).

Results: In this study, out of those 64 patients, 13 cases had mutations in the polymerase region (A194T). All mutant cases were HBsAg positive and 5 (38.5%) of them were males and 8 (61.5%) were females, while 6 (46.2%) of the mutants were HBeAg positive and 7 (53.8%) were HBeAg negative and most of the mutants have more than 109 HBV DNA level. Statistical analyses on the 64 samples showed that there was no significant relation between age and HBsAg level but there was a significant relationship between HBV DNA load (P = 0.001) and A194T mutation.

Conclusions: HBeAg had a correlation with A194T mutation (P = 0.02) and tenofovir resistance was seen in 13 patients. Real-time PCR with zip nucleic acid probes is a rapid method to detect mutations in the polymerase region of HBV with high sensitivity and specifity. This method could be used for mutation detection in nt-194 position of polymerase gene for tenofovir resistance and other mutations in drug resistance researches.

P68 HEPATITIS E VIRUS AND SERUM LEVEL AMINOTRANSFERASES IN BLOOD DONORS

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Abstract

Background: Hepatitis E virus (HEV) infection is a self-limiting viral infection that can lead to severe complications and death. In different regions the epidemiology of this infection varies. In this study we evaluated the seroepidemiology of hepatitis E infection in Jahrom, a city in southern Iran.

Methods: This was a cross-sectional descriptive study of serum samples from 477 subjects, including 30 females and 447 males. HEV immunoglobulin G (IgG) and immunoglobulin M (IgM) were measured by enzyme-linked immunosorbent assays (ELISA). Alanine transaminase (ALT) and aspartate transaminase (AST) levels were also determined. Four hundred forty-seven subjects were male and 30 were female. Subjects were classified by age and sex.

Results: One woman (3.3%) and 25 men (5.5%) were positive for HEV antibodies (IgG and/or IgM). There was found an association between serum level of aminotransferases and seropositivity for HEV.

Conclusion: The result of this study indicates that HEV is an etiological factor for hepatitis in this area of Iran. The cost benefit of active immunization in endemic regions should be evaluated because an outbreak could have tragic consequences.

P69 TT VIRUS INFECTION IN SOUTH IRANIAN VOLUNTEER BLOOD DONORS

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Abstract

Exposure to blood transfusion was associated with increase in the risk of transfusion transmitted (TT) viral infection and this led to the hypothesis that TT virus may be related to undefined post-transfusion hepatitis. Therefore in this study the prevalence of TT virus DNA in volunteer blood donors in relation to Alanine transaminase (ALT) and aspartate aminotransferase (AST) levels were evaluated. In a cross sectional study the blood samples were randomly collected from 499 volunteer blood donors. The genome of TT virus infection was evaluated in studied populations by an in-house semi-nested polymerase chain reaction (PCR) protocol. Some possible risk factors of TT virus infection including: age, gender, and AST and ALT levels were collected from volunteer blood donors. TT viral DNA was detected in the serum of 66 of 499 (13.4%) volunteer blood donors. The AST and ALT had significantly higher levels in volunteer blood donors with TT viremia in comparing with uninfected population. The adolescence (p=0.219) and gender (p=0.874) were not significantly correlated with increasing the prevalence of TT viremia. The moderate prevalence of TT viremia was diagnosed in volunteer blood donors in this part of Iran for the first time. Also define a significant association between TT virus infection and elevation of liver enzymes emphasize on the importance of this viral infection in undefined hepatic disorders that should be confirmed in completed studies.

P71 HEPATITIS B PREGNANT WOMEN AND HEALTH NEEDS

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Abstract

Introduction: Today viral hepatitis has a heavy burden on health systems. The virus antigen screening during pregnancy is mandatory in some parts of the world and is recommended in others. So that, most women are aware of and understand the disease if they have it when they are pregnant. The specific status of pregnancy and also shocking because of being infected creates some health needs for the affected women. Knowing and consideration of these needs have huge effects on the use and satisfaction of health care.

Methods: We conducted multiple interviews with 78 patients and 43 health care providers to examine the real health needs of pregnant women with hepatitis B infection. We used qualitative methods in collecting and analyzing the data.

Results: After data extraction two main types of needs were the specific health care need and information need. These two needs had some details. That was as follow Information need: patient, family and health care information need Health care need: supportive need, DE stigmatization need, disease management need

Conclusion: The firs step in planning for the high quality health cares is need assessment. This survey evaluates the health care needs of hepatitis B affected pregnant women as a perspective of patients and health care providers.

P72 PREVALENCE OF HEPATITIS C VIRUS IN IRANIAN DRUG ABUSERS

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Abstract

Introduction: drug abuse is a worldwide problem with side effects as hepatitis C. Hepatitis C virus (HCV) is considered to be a worldwide health problem which has severe complications like cirrhosis and hepatocellular carcinoma, is a tragedy for communities. It seems that the prevalence of the infection in the normal population is very low. In this study, we investigated the prevalence of Hepatitis C infection among drug abusers.

Method: This review study was carried out with investigation of scientific and research sites such as (Google scholar, SID) without time limit.

Results: According to the studies that was reviewed, Prevalence of Hepatitis C virus in Iranian drug abusers was variable between %7.2 in Rafsanjan drug abusers and %66 in Tehran Intravenous drug abusers.

Conclusion: This review study show that Prevalence of Hepatitis C virus in drug abusers is much and in Intravenous drug abusers is very much that it require to education and prevention in community and especially in Tehran city.

P73 CORRELATION BETWEEN HUMAN DEVELOPMENT INDEX AND HBV/HCV RATE IN THE EU IN 2012

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Abstract

Background and Aim: The prevalence of hepatitis infections is one of the most important problems in worldwide.Therefore, this study intended to investigate the relationship between HDI and the rates of hepatitisB virus (HBV), as well as hepatitis C virus (HCV) infections in the Europe (high income region) in2012.

Methods: This was an ecologic study to investigate between the incidence rate of the HBV/HCV, HDI and its components. Data was obtained from incidence rates presented by World Health Organization in 2012. Data on HDI and its components were extracted from the global bank site. Data was analyzed using correlation tests and regression with SPSS software (version 23).

Results: In 2012, 17291 and 30483 cases of HBV and HCV infection were reported by 28 EU member states, respectively. Among the 28 countries of Europe, the highest HBV incidence rate (16.10) was observed in the Sweden, and the highest HCV incidence rate was 62.60 for Latvia. There was a weak and no significant correlation between the incidence rate and HDI ($p>0.05$). Pearson correlation test showed that there was a no significant correlation between HBV/HCV incidence rate and components of the HDI (life expectancy at birth, mean years of schooling, and GNP. On the other, a weak and non-significant relationship was observed between HBV/HCV incidence rate and HDI components ($p>0.05$).

Conclusion: This study did not find any significant association between HBV/HCV incidence rate and HDI in Europe. Further epidemiological and comparative study by regions of the world is required to better understand the impact of HDI.

P78 THE DOMINANT PREVALENCE OF HBV GENOTYPE D AMONG INFECTED PATIENTS FROM SOUTHERN OF IRAN

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Abstract

Background: The dominant presence of HBV genotype D among Iranian infected patients has been demonstrated in a couple of studies. However, few reports indicating the presence of other genotype is also published, recently. Our aim was to investigate

this controversy in our area, southern Iran.

Methods: In this cross-sectional study, 19 HCC/cirrhotic patients and 26 asymptomatic subjects were enrolled. After DNA extraction, HBs gene was amplified by using an in house nested-PCR. PCR products were introduced into bi-directional sequencing. For phylogenetic analysis, reference sequences of all HBV genotypes were entered into MEGA7 software and multiply aligned with new amplified sequences. The analysis was performed following a maximum-likelihood method of tree construction. For sure, bootstrap resampling analysis using 200 replicates was also performed and presented on tree nodes. For subtyping, the relevant subtypes were determined regarding the available algorithm.

Results: The phylogenetic analysis showed that all the analyzed sequences belonged to genotype D. The survey of serotype was also revealed that majority of samples (43 out of 45) are ayw1 serotype while the rest including one and two samples determined as ayw3 and ayw2, respectively.

Conclusions: Irrespective to few reports acclaimed the presence of HBV Non-D genotype among Iranian patients; our analysis emphasized the sole dominance of genotype D in our area. Albeit, a huge study with more samples is demanding.

P82 IMMUNITY TO HBV IN TABRIZ, HIV POSITIVE PATIENTS

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Abstract

Background and aim: The immunogenicity of hepatitis B vaccination in HIV infected adults is 18%–72% and is lower than in HIV seronegative healthy adults (>90%). Compared with HIV seronegative healthy adults, HIV seropositive(+HIV) patients also have lower mean antibody titers and have faster declines of protective antibody over time.Factors associated with lower seroconversion rates include the presence of detectable HIV RNA, low cd4 count, co infection with HCV, occult hepatitis B infection, age more than 40

Methods: HIV positive patients diagnosed up to22 Jun 2017 at HIV care center of Tabriz and had vaccinated against HBV were enrolled. We analyzed them for sex, transmission route, HBSAg, age and AIDS status at time of vaccination, HCV coinfection, antibody titers after vaccination or revaccination in non responders.

Results: Totally 238 patients tested for HBSAg that %10.5 were positive (5.8% female, 11.2% male) .Antibody titer (HBS Ab) was measured serially, and who had less than 10 IU/Ml re vaccinated. HBS Ab1 was more than 10 IU/ml in 62.5% of women and %41 of men. . All of anti-HBs negative patients that had age 40 or more were men .Seventeen percent of seronegative patients had AIDS at vaccination time. HCV coinfection's prevalence was 71% (9% in women, 85% in men).

Conclusion: HBV chronic infection prevalence and rate of hepatitis B vaccine immunogenicity in our +HIV patients was similar to published in text books. Immunity duration in our study was shorter compared with %42 mentioned in reference books .There was not significant correlation between HCV co infection and anti-HBs titer (p=0.7). There was not significant correlation between anti-HBs titer and having AIDS stage at vaccination time (/57).Due to low response to vaccine and faster decrease in protective antibody revaccination should be considered in HIV-infected persons.

P83 IMMUNE RESPONSE TO HEPATITIS B VACCINE AMONG NORTH IRANIAN HEALTHCARE WORKERS AND ITS RELATED FACTORS

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Abstract

Introduction: Hepatitis B virus (HBV) is an important occupational risk among healthcare workers (HCWs). Vaccination is the most cost-effective method of preventing and controlling HBV infection. Several factors have been suggested to effect response to the vaccine. The present study aimed to evaluate vaccine response among north Iranian HCWs and to determine the factors influencing vaccine response.

Methodology: Response to the standard three-dose vaccination regimen was evaluated in term of anti-hepatitis B surface antigen level among 1,010 HCWs using an enzyme-linked immunosorbent assay (ELISA) method. Logistic regression was applied to predict antibody response, with related factors including:sex, age, years of working experience, marital status, history of transfusion, smoking, history of needle stick injury, rheumatic disease, steroid use and elapsed time from vaccination measurement.

Results: Of the 1,010 HCWs, 898 (88.9%) acquired protective levels of antibody (>10 IU/mL). Compared with those < 30 years of age, HCWs older than 50 years and between 40 and 50 years of age were more likely to have non-protective anti-HBs levels (odds ratio = 4.48; P = 0.001 and odds ratio = 1.85; P = 0.03, respectively).

Conclusions: HBV vaccine efficacy and immune response were satisfactory among north Iranian HCWs. Since it is predicted that anti-HBs levels decrease with aging, testing for anti-HBs titer is desirable for HCWs older than 50 years of age.

P84 NEEDLE STICK INJURIES AMONG HEALTH CARE WORKERS; WHY NOT TO REPORT?

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Abstract

Background: Needle Stick Injuries (NSIs) among healthcare workers (HCWs) pose an important health challenge and there are several pieces of evidence declare that in many cases HCWs do not report the injury.

Objectives: Here we assessed the factors related to NSIs incidences and the reason of why they do not report.

Methods: In this descriptive cross-sectional study, 1010 nurses of all hospitals of Rasht (the capital of Guilan province, located in the north of Iran) included during 2015. A3-sections self-administered questionnaire used and filled by each participation: Section A with Demographic features, Section B with NSI related questions and Section C with questions on the knowledge of HBV and HCV infections. All data analyzed using SPSS version 20 (Released 2011, SPSS Inc., Chicago, IL, USA) for windows 8.

Results: Of 1010 total participants, 580 (57.42%) cases showed a positive history of NSI, and, because some participation had several times of NSIs, the total incidence of NSI was 914. The major item causing NSI was the syringe with needle (34.5%), and the second frequent device was winged butterfly needles (30.9%). NSIs occurred most frequently during recapping and injection (389 and 147 respectively). When NSI happened, most of the nurses wash the injured site with water and soap (197/580) and press it to promote bleeding (193/580). Only 92 (10.1%) of all NSI positive participations had referred to infection control units of their hospitals. The others mostly answered to the question of "why they did not report" with being too busy at work at the time of injury (25.6%). In NSI positive cases, the knowledge of HBV and HCV were more than mean in 42.9% and48.6% respectively.

Conclusions: It seems that, HCWs do not take the reporting system serious and training them needs to be an ongoing activity in all hospitals.

P87 EXPLANATION OF LOCAL COMMUNITIES' VIEWS ON HEPATITIS IN ILAM CITY: A QUALITATIVE STUDY

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Abstract

Background: The level of knowledge and attitudes about a disease can affect its process and development. Given the prevalence of hepatitis, this study was conducted with the aim of explaining the local communities' views on hepatitis in Ilam City.

Methods: In this qualitative study, 18 semi-structured interviews were conducted with local community residents in villages around Ilam city. Sampling was done using an objective-based method with a general question, and interviews continued until data saturation. After each interview, data analysis was conducted by researchers through thematic analysis.

Results: According to findings of this study, themes extracted from the local communities' views included the role of divine destiny in disease emergence, non-preventable disease, the role of luck in disease emergence, and non-preventable and treatable hepatitis.

Conclusions: As indicated by the research results, people in the local communities near Ilam City hold quite traditional views on hepatitis and do not have sufficient knowledge or informed attitudes about this field; hence, it is essential to carry out necessary nursing interventions to improve patients' knowledge levels and attitudes.

P88 COMPARING THE EFFECTS OF PENDER\'S HEALTH BELIEF MODEL AND NURSING CARE AT HOME ON THE HEALTH OF PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE: A RANDOMIZED CLINICAL TRIAL

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Abstract

Background: Non-alcoholic fatty liver disease is spreading worldwide and is recognized as the most

common chronic liver disease. One way of improving patients' health is using nursing care models. This study aims to compare the effects of Pender's health belief model and providing nursing care at home on the health of patients with a non-alcoholic fatty liver in disease.

Methods: A randomized clinical trial was conducted on patients with a non-alcoholic fatty liver in disease in Ilam, in 2016. In total, 120 patients were randomly assigned to three groups: test A (Pender's health belief model), test B (nursing care at home) and control group C (routine care). For the test A group, five training sessions were conducted based on Pender's health belief model. For group B, 5 sessions on nursing care at home were conducted; and for control group C, routine care was provided. To collect information, questionnaires on quality of life, public health, and a checklist of laboratory parameters affecting non-alcoholic fatty liver were used. Data analysis and an analysis of variance of repeated measure were performed using SPSS 16.

Results: Results of this study show that after intervention, the test group B compared to test group A had higher quality of life, higher public health, and better laboratory variables ($P < 0.05$). The results also show that no significant difference was observed between the quality of life, public health, and laboratory parameters of the control group before and after the intervention ($P > 0.05$).

Conclusions: Owing to the effectiveness of providing nursing care at home in promoting health of patients with a non-alcoholic fatty liver in disease, it is recommended this type of nursing care be implemented for such patients.

P89 PREVALENCE OF HEPATITIS C VIRUS INFECTION AMONG BLOOD DONORS IN BUSHEHR PROVINCE

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Abstract

Background: Transmission of hepatitis C virus (HCV) through transfusion of infected blood is a potential source of HCV spread in the society. However, currently mandatory screening of blood donations for HCV infection prior to transfusion resulted in a remarkable decrease in the prevalence of HCV infection in the society. Monitoring the prevalence of HCV infection in the donor population at regular intervals is a valuable index for evaluating effectiveness of donor selection strategies. Therefore, this study was performed to find out the prevalence and trends of HCV infection in all blood donations from 2004 to 2014.

Methods: All donated blood was screened for the presence of anti hepatitis C virus antibodies (anti-HCV Ab) using commercially available ELISA kits. All initially positive samples were retested. The repeatedly reactive samples were labeled seropositive. These seropositive results were confirmed using HCV recombinant immunoblot assay (RIBA). This study was approved by the Ethical Committee of Bushehr University of Medical Sciences with reference number IR.BPUMS.Rec.1394.108.

Results: Overall, 293454 donors were screened for HCV markers. Most of the donors were male, married, aged between 20–40 years, educated, and regular donors. The overall seroprevalence of HCV among blood donors in south of Iran has been reported to be 0.1% (295 individuals), but it ranges from 0.329% in 2004 to 0.045% in 2014. HCV infection was more prevalent in male, young, low educated single and first time donors. The highest HCV seroprevalence was observed among donors aged 20 to 40 years. HCV is efficiently transmitted by injecting drug use, which is more common among youths in Iran.

Conclusions: The seoprevalence rate of HCV infection has been reduced to very low level in blood donations over time. This declining trend is a reflection of a decrease in the prevalence of HCV in the society, an increase in public awareness, the effectiveness of the blood safety strategies and progresses in the HCV management paradigms.

P91 HAPLOTYPE ANALYSIS OF THE INTERLEUKIN-1 GENE CLUSTER POLYMORPHISM IN THE CHRONIC HEPATITIS B VIRUS INFECTION.

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Abstract

Hepatitis B virus (HBV) infection is well known as an important cause of the chronic liver disease. In Iran, 1.5 to 2.5 million people are living with HBV infection, who 15% to 40% of them are at the risk of developing cirrhosis and/or hepatocellular carcinoma without intervention. The screening of the genotype of certain cytokines might be helpful to predict the outcome of an HBV infection. The role of the IL-1 family cytokines in chronic liver disorders is shown in previous studies. Objective: The present study investigates the relationship between the polymorphism and haplotypes of the IL-1 gene family with chronic HBV infection. Materials and Methods: 297 chronic HBV and 333 healthy matched on sex and age control individuals were genotyped using the standard

sequence-specific-polymerase chain reaction primer (SSP-PCR) method, to determine the genotype of IL-1 family gene cluster. Four different haplotype analysis software were applied. Results: The genotyping showed excess A2/A2 at 1RA VNTR, C/T genotype at IL-1 -889, and C/C genotype at IL-1 -511 in healthy controls while C/C at IL-1 -31, C/T genotype at IL-1 +3953, and A1/A1 at IL-1RA VNTR in chronic HBV infection cases. 148 haplotypes were observed overall (96 in the case group and 89 in the control group). Conclusions: The combination of genotype A1/A1 at IL1-RN along with a C/T genotype for the IL-1B polymorphic positions and either C/T or T/T at the IL-1A -899 position, may increase the probability of the chronic outcome for the HBV infection.

P98 SPECIFIC IMMUNOTHERAPY IN HEPATOCELLULAR CANCER: A SYSTEMATIC REVIEW

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Abstract

Background and Aim: In recent years, several novel immunotherapeutic approaches were developed and investigated in patients with hepatocellular carcinoma (HCC). We designed this systematic review, to evaluate clinical efficacy of specific immunotherapy in patients with HCC, according to the guidelines of Border of Immune Tolerance Education and Research Network (BITERN) and Cochrane collaboration.

Methods: We searched Medline, Scopus, Central, Trip, Dart, OpenGrey, and ProQuest through the 9th of December 2015. One author reviewed and retrieved citations from these seven databases for irrelevant and duplicate studies, and two other authors independently extracted data from the studies and rated their quality. We collated study findings and calculated a weighted treatment effect across studies using Review Manager.

Results: We found 12144 references in seven databases of which 21 controlled studies with 1885 HCC patients in different stages were included in this systematic review after the primary and secondary screenings.Overall, patients undergoing specific immunotherapy had significantly higher overall survival than those in control group (HR=0.59; 95% CI=0.47–0.76, P<0.0001). There was a significant difference in recurrence-free survival between patients undergoing specific immunotherapy and patients in control groups and patients in immunotherapy groups overall had less recurrence than control group (HR=0.54; 95% CI=0.46–0.63, P<0.00001).

Conclusions: Results of this systematic review based on the available literature suggest that overall specific immunotherapeutic approaches could be beneficiary for the treatment of patients with HCC. This further supports the current and ongoing evaluations of specific immunotherapies in the field.

P100 THE PREVALENCE OF HEPATITIS B SURFACE ANTIGEN AND HEPATITIS C VIRUS IN REFERRING TO IMAM REZA HOSPITAL, SIRJAN FROM APRIL TO NOVEMBER 2016

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Abstract

Background and Aim: Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections accounts for substantial proportions of the world wide liver disease. The two hepatotropic virus share common modes of transmission and their co-infection are common. Patients with dual HBV and HCV infection have more severe liver disease are high risk of progression to hepatocellular carcinoma. The aim of this study was to determine the frequency of HBV and HCV infections markers as epidemiological data in Sirjan city.

Methods: This retrospective cross sectional study was conducted on serum samples of individuals who were referred to Imam Reza Hospital from April to November 2016. HBsAg and Anti-HCV were measured using ELISA method in the serum samples. Data were analyzed using SPSS version 19 statistical package.

Results: In this study, the medical records of 996 referring were studied. The prevalence of positive HBsAg was 0.8% in the study population while seropositive for HCV was 1.5%.

Conclusion: Although the prevalence of positive HBsAg and HCV were relatively low among referred to Imam Reza Hospital Sirjan city, their screening were highly recommended.

P101 IMPACT OF HIV INFECTION IN PATIENTS INFECTED WITH CHRONIC HCV

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Abstract

Background and aim: Human immunodeficiency virus (HIV)/hepatitis C virus (HCV) coinfection is common in hepatitis patients. The influence of HIV coinfection on plasma HCV RNA load has not been reliably evaluated.

Methods: In this study, 100 HCV/HIV coinfected patients and 396 HCV monoinfected controls were examined and compared for plasma HCV RNA.

Results: The HCV RNA load mean was significantly higher in HCV/HIV coinfected patients than in HCV-monoinfected patients. The HCV RNA levels were significantly higher in HIV/HCV genotype 3a coinfected patients than in genotype 3a monoinfected patients. HIV RNA levels were lower in genotype 1a infected patients than in genotype 3a infected patients, but this difference was not significant statistically.

Conclusion: HIV/HCV coinfection leads to a significant increase in plasma HCV RNA. Further evaluations of the effects of ART and HIV infection on the course of HCV infection and the response to treatment against HCV infection in other and different genotypes are also needed. Moreover, HIV-infected patients should be screened regularly for HCV coinfection, particularly if they are in high-risk groups such as IDUs and recipients of blood transfusions.

P105 ABSENT OF HBV PROTECTIVE CCR5-DELTA32 MUTATION IN THE SOUTHERN KHORASAN POPULATION (EAST OF IRAN)

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Abstract

Background: Hepatitis B virus (HBV) is the main principle agents that prompt to liver disease and may lead to an acute or chronic HBV infection. Evidence from studies recommended that the host hereditary foundation play an important role in determining the Immunization, clinical course and recovery from HBV infection. One of the genes that can be effective is chemokine receptor 5(CCR5) gene. In this study, we assessed the protective impact of CCR5-32 genotype in individuals who developed chronic HBV infection and recovered from it in Birjand, Iran.

Methods: The study members were composed of 60 patients with chronic HBV infection (patient group) and 120 patients recovered from hepatitis B infection (control group). Whole blood DNA extracted by salting out method and afterward samples CCR5-32 genotype is determined by PCR technique.

Results: We found just one heterozygous CCR5 delta32 mutation in the control group and we didn't find any homozygous CCR5 delta32 mutation in patient and control groups.There is no significant correlation between carrying the mutation and the likelihood of recovery from HBV infection in city of Birjand.

Conclusions: Base on our results and recent study we could conclude that Birjand city population similar to another part of Iran and Asian countries have more hereditary foundation susceptibility to chronic HBV infection compare to European.

P106 PREVALENCE OF HEPATITIS C VIRUS INFECTION AND ASSOCIATED RISK FACTORS AMONG PEOPLE WHO INJECT DRUGS IN KERMANSHAH, IRAN

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Abstract

Introduction: Infection with hepatitis C virus (HCV) is increasingly recognized as major global health problem. It is estimated that there are nearly 13.2 million PWIDs worldwide about 50% of whom are estimated to have been exposed to HCV infection. The purpose of this study was to measure the prevalence of HCV and document the risk factors associated with HCV among PWIDs in Kermanshah province.

Method: In this cross-sectional research, the sample were recruited from two drop in centers (DICs) and related community outreach sites affiliated to

Kermanshah University of medical sciences, using snowball sampling. Data were collected by trained interviewers through the completion of a bio-behavioral questionnaire during face-to-face interviews after providing informed consent. Testing for HCV infection was performed on serum samples collected from subjects using Hepatitis C virus rapid test device

Results: A total of 606 male PWIDs were recruited to the study. Participants ranged in age from 18 to 65 years, with a mean (SD) of 36.7(8.5) years. The mean (SD) years of education was 8.04 (3.8) years and 270 (44.6%) attended the needle/syringe programs (NSPs) at least once weekly during the past four weeks (regularly attended group). HCV antibody testing of 606 participants showed 54.8% (CI 50.8–58.7%) positive result for HCV infection. Our findings indicate that HCV infection is associated with history of imprisonment, history of tattooing, sharing equipment within past month, and frequency of injections per day.

Conclusions: This study showed high prevalence of HCV in PWIDs in Kermanshah.

P107 THE PREVALENCE OF HEPATITIS B IN MARRIAGE APPLICANTS IN ZABOL IN 2011-2012

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Abstract

Introduction: Hepatitis B virus is one of the most serious forms of hepatitis. It is estimated that virus carriers are the main source of infection in the community. The major health problem with this disease is that most of the infected people are at an early stage in the asymptomatic disease and are therefore easily transmitted to their immediate vicinity. According to statistics, more than 2 million people in our country are carriers of hepatitis B of which about one hundred thousand people are infected each year due to the virus, and about 5,400 people die.

Method: Premarital tests are one of the most important steps that couples need to take. One of the married couples' tests is hepatitis B. The data obtained from the results of marriage applicants' tests were analyzed by SPSS software.

Results: In the years 90-91, 9005 couples were studied. A total of 1.9% of them were diagnosed as positive for hepatitis B virus. This was 1.7% in the city and 2.2% in the village, 2.7% in men and 1.1% in women. The prevalence is higher in rural men (3% vs. 2.4%) and in rural women (1.3% vs. 1%). The prevalence in 2011 increased by 33% in urban men and decreased by 20% in women compared to the 2010.

Conclusion and discussion: Hepatitis B is not a barrier to marriage, and couples can also bear a child (vaccination with baby and husband/wife can prevent the transmission of the virus), but it seems that due to the lack of knowledge, the transmission of disease has been more in rural populations, and is increasing in urban men. So, it requires action and planning to increase community awareness.

P109 HEPATITIS B, HEPATITIS C, AND HUMAN IMMUNODEFICIENCY VIRUS INFECTION IN MULTI-TRANSFUSED THALASSEMIC PATIENTS, KERMANSHAH, IRAN, 2015

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Abstract

Background: Repeated blood transfusions in Thalassemic patients predispose them to blood-borne infections including Hepatitis B, Hepatitis C and human immunodeficiency virus. These infections cause cirrhosis, portal hypertension and acquired immunodeficiency syndrome.

Objectives: The current study aimed at determining the prevalence of these infections in Thalassemic patients of Kermanshah province, Iran.

Methods: Thalassemic patients registered at Mohammad Kermanshahi university hospital were included. Demographic data, history of blood transfusions, Hepatitis B surface antigen, Hepatitis B core antibody, Hepatitis B surface antibody, Hepatitis C antibody, and Human immunodeficiency virus antibody were extracted. Serologic tests were done using the third-generation enzyme linked immunosorbent assay (ELISA) and positive Hepatitis C virus (HCV) Ab and human immunodeficiency virus (HIV) Ab results had been confirmed by Western Blotting.

Results: A total number of 232 patients were enrolled (111 females and 121 males), among whom HBs Ag and HIV Ab were both negative. Positive HBS Ab was reported in 222 subjects (95.7%) and 19 cases (8.2%) had positive HBC Ab. Immunity to hepatitis B

was the result of vaccination in 87.5% of cases. Hepatitis C antibody was positive in 14 cases (6%). Finally, a significant relationship was found between HCV infection and blood transfusion done before 1996.

Conclusions: High rate of hepatitis C was found to be due to the lack of screening for HCV Ab among blood donors before 1996. The negative HBS Ag can be justified by regular hepatitis B vaccination program in patients with thalassemia. The lack of HIV infection was concluded to be attributed to the low prevalence of this virus in the general population and blood donors as well as proper screening methods.

P110 HBV/HCV COINFECTION: A CHALLENGE IN TREATMENT OF CHRONIC HEPATITIS C WITH DIRECTLY ACTING ANTIVIRALS

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Abstract

Background: Hepatitis C virus is a major cause of chronic hepatitis, cirrhosis and hepatocellular carcinoma worldwide. Nowadays, Directly Acting Antivirals (DAAs) with more than 90% effectiveness has turned chronic hepatitis C into a curable disease. However, in HBV/HCV coinfected patients, these drugs can seldom lead to hepatitis B exacerbation in inactive carriers, patients with Occult Hepatitis B Infection (OBI) or even in resolved hepatitis B individuals. This retrospective study aimed to investigate HBV coinfection in hepatitis C patients in order to reach a reasonable estimation of this problem.

Methods: Clinical files of patients with positive HCVAb (ELISA & Western Blot) registered to our center between 2004 and 2016 containing available HBsAg, HBcAb and HBsAb test results were included. For isolated HBCAb positive patients, HBV viral load was done using Real-time PCR to determine the possibility of OBI. Required demographic data were extracted from patients' files. Results: Among 654 hepatitis C patients referred to our center between 2004 to 2016, 626 (547 males and 79 females) individuals with the mean age of 39±11.8 were included in the study. Of these, 11 cases (1.8%) had positive HBsAg, 76 (12.14%) had negative HBsAg, but positive HBcAb and HBsAb (disease-acquired immunity). Forty-four patients (7%) had positive HBcAb, but negative HBsAg and HBsAb (Isolated HBcAb positive). HBV viral load was negative in these 44 patients. Moreover, 100 patients (15.97%) had positive HBsAg but negative HBsAb and HBcAb and history of hepatitis B vaccination (vaccine-acquired immunity). Altogether, a total of 131 (20.92%) patients showed serologic evidence of hepatitis B virus infection.

Conclusion: Although only 1.8% of patients had positive HBsAg, 20.92% showed serologic evidence of hepatitis B virus infection. Since hepatitis C treatment with DAAs can lead to hepatitis B exacerbation, even in resolved hepatitis B cases, around 20% of hepatitis C patients in our region are at risk of this rare issue. Not detecting OBI in our study does not necessarily mean the absence of OBI and molecular assessments of higher sensitivity are recommended, preferentially in all patients with negative HBsAg.

P112 IDENTIFYING AND ASSESSING THE IMPROVEMENT SCALE OF INFECTION- CONTROL CRITERION FOR HEPATITIS B VIRUS IN REGARD TO THE KNOWLEDGE, ATTITUDES AND PREVENTIVE HEALTH BEHAVIORS

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Abstract

Introduction: When a new scale is designed, it is expected that by following the development processes, extensive information can be obtained regarding the scale assessment. The main aim of this study was to design a valid and reliable scale proportionate to the culture of the employees surveyed, in order to identify and measure the improvements of infection-control criterion for Hepatitis B virus.

Methods: In this cross-sectional study, data collection instruments involved designing and assessing the reliability and validity. The study sample was of cluster type involving the health care workers of 10 health centers. For Questionnaire designing, first, a list of 50 questions was prepared. Moreover, to assess the validity, the internal consistency and reproducibility, the methods content validity ratio (CVR), content validity index (CVI), test-retest reliability and alpha Cronbach coefficient were utilized respectively.

Results: 5 items were rejected due to poor content validity. Content validity index was higher than 0.80. The alpha Cronbach coefficient for the total scale was 83% and for subcategories, it was between 0.81 to 0.86. The factor weight extracted from exploratory factor analysis of the questionnaire, was 74% shared variance. As a result, the final questionnaire is reliable and repeatable (ICC= 0.896 and P <0.001).

Conclusion: According to the study findings, the improvement Questionnaire of infection-control criterion for Hepatitis B virus is proper and usable in

the research activities.

P113 REPORT OF OCCUPATIONAL EXPOSURE AND COVERAGE OF HEPATITIS B VACCINE IN HEALTH CARE WORKERS

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Abstract

Introduction: Prevalence of exposure to blood and body fluids in different countries is between 100,000 - 600,000 exposures annually have been reported. Hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV) are the most significant pathogens which transmit via occupational exposure. Infection by these viruses can lead Health-care workers (HCWs) to serious and even fatal illnesses due to their occupational exposure. Hepatitis B vaccination is the best protective method to reduce this problem. The most important problem with regard to occupational exposure is that about 30 percent of the victims do not report their exposures. This may be because of insufficient attention to this problem. The current study aimed to evaluate the coverage of vaccination and reporting behavior among health care workers (HCWs) at risk for occupational exposure in Urmia pediatric and maternal university hospital.

Methods: This retrospective cross-sectional study was carried out in Urmia, Iran, among 86 Healthcare workers (specialist physicians, residents, nurses, midwifes, laboratory personnel, cleaners and others) who experienced an occupational exposure by means of a self-reporting(15 question) survey from March 2015 to March 2016. The age, job category, number and type of exposure, personal protection against Hepatitis B and the reporting of such exposures in HCWs suffering from the injury were determined.

Results: Eighty six (12.81%) of the 671 HCWs had at least one episode of blood or body fluid exposure in their professional life. Most of HCWs who reported the injury were nurses (29%) and operating room technicians (26.74%) and the filed which injury happened were operating and delivery room. Among 86 HCWs who were exposed to sharps injuries or splashes, 82 (95.34%) received complete series of hepatitis B vaccine; anti-HBs level was adequate in (73.25%) of vaccinated HCWs. The rate of non-responders after revaccination was (4.65%).

Conclusions: Underreporting of occupational exposures is common among HCWs. Change the report system and periodic education will lead to increasing personal sensitivity in injuries reporting and can affect the accuracy of occupational exposure rate. Regard to vulnerability of HCWs to the high prevalence of contamination, hepatitis B vaccination will reduce the risk of illnesses.

P114 HEPATITIS B IN EXPOSED HEALTH-CARE WORKERS: PREVALENCE, HBS ANTIBODY AND REASON OF INJURY

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Abstract

Introduction: Occupational exposure can result from needle stick or other sharps injury or splash of blood or other body fluids into the eyes, nose or mouth. High prevalence of health care workers (HCWs) occupational exposure in different studies emphasizes the importance of promoting preventive strategies and also reporting of occupational exposures. HCWs whose duties involve handling blood-contaminated items are always at risk. It is therefore deemed necessary to prevent blood-borne infections by complete vaccination and on time intervention at exposures.The goal of this study was to determine the prevalence of occupational exposures to blood-borne pathogens in Urmia pediatric and maternal university hospital, and status of HCWs HBV antibody, and reason of injury.

Methods: This retrospective cross-sectional study was conducted in Urmia, Iran. All of 917 Health-care workers who had experience of occupational exposure were participated in study. We used a self-reporting questionnaire for data gathering from March 2016 to March 2017. The age, job category, number, type and time of exposure, personal protection against Hepatitis B and the reporting of such exposures in HCWs suffering from the injury were determined.

Results: The prevalence of occupational exposure among HCWs was 99 (10.79%) of 917. Among the HCW who were vaccinated, (73.73%) were immunized. Also (1.01%) of sources were HBS Ag positive. The most prevalent procedures associated with injuries were IV access (39.39%) surgical procedure and suturing (25.25%) respectively. The majority of occupational exposures were reported by nurses (32.3%). Needle stick injury was the most common type of exposure

(93 %). Exposed HCWs believed that the most important and basic reason for needle stick injuries was heavyworkload (31.7%).

Conclusions: It is the responsibility of Health care institutions to ensure the safety of the HCWs by mandatory HBV vaccination prior to exposure and sufficient training in work safety. Also written instructions should be easily accessible to all HCWs to manage and report of all occupational exposures.

P115 EFFECT OF PROBIOTICS AND PREBIOTIC ON ANTROPOMETRIC INDEX AND SERUM LIPID PROFILE IN ACUTE NON ALCOHOLIC FATTY LIVER FATTY LIVER DISEASES: A DOUBLE BLIND RANDOMIZED CLINICAL TRIAL

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Abstract

Objective: Non alcoholic fatty liver disease (NAFLD) is a chronic disease linked to fatty acid synthesis. NAFLD plays an important role in the lipid metabolism disorders. Supplementation of prebiotics and prebiotics is a complementary therapy in obesity-related diseases and dyslipidemia. In the recent research we aimed to evaluate the influence of supplementation with probiotic and prebiotic on antropometric index and serum lipid profile in patients with NAFLD.

Materials and Methods: Seventy-five NAFLD patients with serum ALT (alanine aminotransferase) and AST (aspartate aminotransferase) higher the normal range were divided to four groups. The first group received probiotics capsules (B.L and L.A: $2*10^7$CFU/day), the second group received prebiotic (inulin HP: 10gr/day), the third group received probiotics + prebiotic and the fourth group received placebo, for 3 months. Anthropometric characteristics and lipid profile were measured in all patients before and after the intervention. The primary outcome of the study was the HDL level. Values of the remaining variables (i.e. TC TG LDL weight and BMI changes) were considered represent secondary outcomes.

Results: The results showed that consumption of the probiotic is able to decrease weight, Body Mass Index (BMI) and Hip Circumference (HC) in all intervention groups compared to placebo group. The serum levels of HDL and LDL changed significantly in probiotic and pro and prebiotic groups compared to placebo group. In addition, there were not a significant reduction in TC in the intervention groups in comparison with placebo group. We found significant differences in HDL ($p=0.005$) and LDL (0.028) serum levels between the groups at the end of the study by ANCOVA test ($P<0.05$).

Conclusion: Probiotic and prebiotic supplementation could be effective for changing of some serum lipid profile and insulin resistance markers in patients with NAFLD.

P116 THE SUSTAINED VIROLOGIC RESPONSE AND COMPLICATIONS OF PEG INTERFERON ALFA AND RIBAVIRIN IN IRANIAN PATIENTS WITH CHRONIC HEPATITIS C

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Abstract

Introduction: Hepatitis C infection is a world health problem. It is known as the main cause of cirrhosis as well as Hepatocellular Cell Carcinoma (HCC). Thus, antiviral therapy must be implemented in order to prevent and treat severe hepatitis related morbidities.

Method and Material: This study is a cross sectional conducted among 98 HCV infected patients who were admitted to Labbafinezhad Hospital for treatment from April 2014 to September 2016. Patients were medicated with Peg Interferon Alfa (INFα and Ribavirin (RBV).Lab tests were monitored through the study. Finally, data was gathered and statistical analysis was conducted.

Results: Eighty-eight percent of patients were male and 11.2% were female. Mean age was 43.44 years. Patients were mostly male, single, with nongovernmental business and low level of education. Risk factors were known to be addiction with non-injectable substances and phlebotomy. Myalgia, fatigue and malaises were the most common complications and suicide intention was the least one. SVR was estimated 76.7%. AST and ALT were significantly reduced in treatment period.

Conclusion: Peg INFα and RBV are effective in treating HCV infection in Iranian patients and complications are low.

P117 ASSOCIATION OF IL-28B RS12979860 C/T AND RS8099917 T/G HAPLOTYPE WITH HEPATITIS C INFECTION OUTCOME I

IRAN: SPONTANEOUS CLEARANCE VERSUS CHRONIC INFECTION

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Abstract

Background: Following HCV infection, spontaneous clearance occurs in 10-45% of individuals, generally within the initial 6 months. It has been reported that some polymorphisms in IL-28B gene might be influenced the outcome of HCV infection. The present study aimed at investigating haplotype frequency of IL-28B SNPs (rs12979860C/T and rs8099917T/G) in HCV infected patients in addition to determining their association with disease outcome.

Methods: A total of 302 patients with chronic hepatic C infection and 36 individuals whose infection was spontaneously cleared were included in this case-control study. ELISA quantitative and qualitative RT-PCR techniques were used to revel the outcome of HCV infection. Genomic DNA was extracted using salting out method. IL-28B gene polymorphisms at rs12979860 and rs8099917 loci were carried out using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP).

Results: Out of 338 participants 296 (87.5%) were male and 42 (12.5%) were female. The male to female ratios in chronic and spontaneous cleared groups were 263/39 and 33/3, respectively, which were not significantly different (P = 0.59). The mean ages of chronic and clearance groups were 39.3 and 36.5 years, respectively, that was not significant (P > 0.05). The results of haplotype analysis showed the association of CT (P = 0.012) and TT (P = 0.013) haplotype with spontaneous clearance and chronic infection, respectively.

Conclusions: The findings imply that individuals with CT haplotype might be cleared HCV infection spontaneously but those with TT haplotype are susceptible to chronic infection after infection with HCV.

P118 THE EXPERIENCES OF THE HEPATITIS B CARRIERS IN ADAPTATION WITH THE DISEASE: A QUALITATIVE STUDY

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Abstract

Aim: Hepatitis B is the most prevalent type of viral hepatitis which causes restrictions in the lives of many patients due to its chronic nature and as a result necessitates the use of adaptation strategies to improve the quality of life. The purpose of this study was to demonstrate the experiences of hepatitis B carriers in adaptation with the disease.

Methods: Using qualitative content analysis approach, a number of 18 chronic carriers of hepatitis B who referred to healthcare and counseling centers of cities of Babol, Amol and Tabriz were selected purposefully and were interviewed form 2014 to 2016 using unstructured and in-depth questions. All of the interviews were recorded, transcribed word by word and then were qualitatively analyzed.

Results: By analyzing the data, the main theme, attempt for the active expansion of interactions, and its three sub-themes including: denial of the disease, protecting oneself/others and coping with the disease were acquired.

Conclusion: The results of the present study indicate Hepatitis B patients use different strategies to adaptation with this disease. For the patients' to properly adaptation with the disease and live with minimum challenges and limitations, they need to be properly understood and supported. Therefore, consideration of education and consultation programs regarding the different aspects of this disease is urgent.

P119 A COMPARISON BETWEEN THE STANDARD PEGYLATED INTERFERON AND RIBAVIRIN REGIMEN WITH AND WITHOUT VITAMIN B12 SUPPLEMENTATION ON SUSTAINED VIROLOGIC RESPONSE RATE IN CHRONIC HCV HEPATITIS IN IRAN,A RANDOMIZED CLINICAL TRIAL

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Abstract

Background: Vitamin B12 (vit B12) was defined as a natural HCV replication inhibitor, in vitro. This study describes the effect of adding vit B12 to standard pe-

gylated (PEG-) interferon and ribavirin regimen on sustained virologic response rate in naiive chronic HCV hepatitis.

Materials and Methods: Seventy-four naiive chronic HCV hepatitis were randomly assigned to receive standard pegylated interferon plus ribavirin with and without vitamin B12 (group A 36 and group B 38 patients, respectively). Virologic response was recorded as undetectable serum HCV-RNA, at 4 weeks after starting treatment (rapid viral response), 12 weeks after starting treatment (complete early viral response) and 24 or 48 weeks after starting treatment (end-of treatment viral response) and 24 weeks after completing treatment (sustained viral response (SVR)). Genotyping for HCV and the interleukin (IL)-28B polymorphism was performed.demographic, clinical and fibroscan data of patients, and drug adverse effects were recorded.The data was analyzed by Spss version 22, and p-value less than 0.05 was significant.

Results: Overall, 30 and 28 patients in group A and B, respectively was completed the study. Rapid viral response did not differ between the two groups (p=0.097), whereas the rates of complete early viral response (88% vs 68%, p=0.033) end-of-treatment viral response (81 % vs 66%, p=0.001) and SVR (80%, 24/30 vs 68%, 19/28, p=0.0001) were significantly higher in group A than B. In group A, the SVR rate was also significantly higher in genotype 1a (p= 0.0001) and in patients with a high baseline viral load (>600,000 iu/ml) (p=0.001). Distribution of genotype IL-28B did not differ between the two groups. Drug adverse effect was significantly decreased in group A (20/36, 55% vs 24/38, 63%, p=0.0001). No significant difference was seen in demographic and clinical and fibroscan datas between two groups.

Conclusion: Adding of vit B12 to PEG-interferon and ribavirin can improve SVR rates and adherence to the treatment in HCV-infected patients to antiviral therapy.

P120 FREQUENCY AND RISK FACTORS FOR DRUG-INDUCED HEPATITIS IN TUBERCULOSIS AT TWO HOSPITALS IN TEHRAN DURING 2009-2015

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Abstract

Introduction: Despite improvement in treatment of patients with tuberculosis (TB) and availability of effective drugs, side effects of treatment, especially drug-induced hepatitis (DIH) still remains as a major concern. Many studies estimated this event between 5-11% in the treatment course of TB. The aim of this study was to evaluate the frequency and risk factors of DIH in patients admitted for TB in two hospitals.

Methods: This study was a cross-sectional study performed at two University Hospitals, Khanevadeh and Imam Reza, in Tehran during 2009-2015. In this study, all of the medical records of patients admitted for TB were collected by a questionnaire consisted of demographic characteristics, Tuberculosis type, history of chronic hepatitis B or C, non-alcoholic steato-hepatitis (NASH), and alcohol consumption. DIH was diagnosed with elevated alanine amino-transferase by 3-fold with symptoms/signs or 5-fold without any symptoms/signs of hepatitis (abdominal pain, nausea and jaundice). We analyzed the data by SPSS-22 software using Chi-square, Fisher exact, and U Mann-Whitney for univariate and logistic regression test for multivariate analysis.

Results: We evaluated a total 148 registries of the patients with TB, which included 89 males (60.1%) and 59 females (39.9%). This number included 122 cases of pulmonary (82.4%), 15 cases of lymphadenitis (10.1%), four cases of spondylitis (2.7%), four cases of central nervous system (2.7%), and three cases of Miliary TB (2%). 74 patients were assessed for chronic viral hepatitis B and C which one cases found hepatitis B positive. Liver ultrasound for NASH and history of alcohol consumption existed in 100 and 103 patients who were positive in 21 and 14 patients, respectively.10 patients of a total 148 cases (6.8%) developed DIH during the treatment course. Mean age of patients with TB was 47.2±17.18, and for patients with DIH was 55.6±22.03 years. However, there was not any difference between the two means by U Mann-Whitney test. Conversely, DIH was more frequent among patients over 60 compared to other age groups by Fisher exact test (P=0.038), as well as in CNS-TB compared with other types of TB, by Fisher exact test (P<0.001). Other factors revealed no relationship with DIH in univariate and multivariate analysis.

Conclusion: However, in multivariate regression analyzes there's not any association between DIH with risk factors, we suggest that patients with CNS-TB and patients over 60 years, monitor closely for DIH.

P121 PREVALENCE AND RISK FACTORS OF HEPATITIS B IN A LARGE MILITARY POPULATION

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Introduction: Prevalence of hepatitis B virus (HBV) is approximately 2% in Iran. Some previous studies reported higher prevalence of HBV in military staff, especially disabled veterans. We proposed to assess the prevalence of HBV in a large military population and related factors.

Methods: We introduced all the military staff from the army ground force (NEZAJA) who contributed to the military health program survey, during 2012-2015. HBV was diagnosed by a fourth-generation ELISA kit in five C.C serum sample. Other related data, such as demographic characterizations, family history of HBV, HBe Ag, viral load, alanine transaminase level (ALT), liver biopsy, tattooing, and transfusion history were collected by a questionnaire. Finally, data were presented with descriptive and analytic statistics using SPSS software version 22.

Results: Prevalence of HBV infection was 109 patients out of 25167 subjects (0.4%), which consisted of 108 males (99.1%) and one female (0.9%). Mean age of the patients was 33.7±7.5 years. HBe Ag and elevated ALT found in 17 (20%) and 32 (37.6%) out of 85 subjects with complete registry. 20 of 76 patients (26.3%) had a viral load more than 105 copies per ml. Family history of HBV found in 26 of 109 patients (23.9%). None of the patients had a history of transfusion or tattooing. The most endemic provinces for HBV infection were Sistan-O-Baluchistan, Khuzestan, and Kermanshah, respectively. There was a positive relationship between viral load and ALT level by Fischer exact test (P=0.001) and with HBe Ag by Chi-square test (P<0.001). However, no association found between ALT level and HBe Ag (P=0.074). Nine patients received anti-viral drugs for hepatitis, and eight patients had cirrhotic changes in biopsy.

Conclusion: Prevalence of HBV in our subjects was considerably lower than other studies throughout the country. Additionally, unlike previous reports, military profession was not associated with increased risk of hepatitis B in our study.

P122 APTAMERS AGAINST HEPATITIS C VIRUS: A REVIEW ARTICLE

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Abstract

Background and Objective: Hepatitis C virus (HCV) is the main causative agent of chronic viral hepatitis in almost 2% of the world's population. The aim of this study is to assess the use of Aptamers which is the single-stranded DNA or RNA bind to pre-selected targets in the diagnosis and treatment of Hepatitis C infection.

Search Method: This study performed by using collected articles in English were available on the main topic since 2007 to 2017 in Google Scholar, PubMed and Scopus databases. In total, 24 articles were collected of all 137 papers and keywords such as Chronic-Hepatitis-C, HCV, Vaccine, Aptamer, Treatment, and Diagnosis were used by two researchers independently to search in databases. Inclusion criteria were studies that have assessed the use of aptamers against Hepatitis C Virus and also CASP checklist used to both inclusion and exclusion of articles.

Findings: Studies show that Aptamers can be used in diagnostic systems for detecting viral proteins in the blood products or involved cells and also to treat viral infections. In terms of HCV, the diagnosis of the infection is based on the detection of anti-HCV antibodies or viral nucleic acid in the serum that some biosensors which based on aptamers can be a hopeful diagnostic platform for detection of the HCV in early stages. In addition, for treating HCV, designed DNA and RNA Aptamers in different studies can prevent the infection by targeting some nonstructural proteins (NS) such as NS2, NS3, NS5A, NS5B, followed by structural proteins such as E1 and E2 and also Core by various strategies.

Conclusion: According to the studies, although, selected aptamers can be effective for inhibition of viral proteins actions, because of some restrictions such as destruction, bio-distribution, immune-response or cellular internalization, none of them did use in clinical trials. Hence, it is essential to perform clinical trials using aptamers for overcoming the limitation. Also, considering that current diagnostic systems and therapeutics are expensive, time-consuming and having side effects, Aptamers by rapid diagnosis, lower side effects, saving time and cost, can be used as a very effective alternative or complementary agent for prevention of the HCV which cause Cirrhosis and Hepatocellular Carcinoma.

P123 COMBINED EVALUATION OF AFP, CA15-3, CA125 AND CA19-9 TUMOR MARKER IN PATIENTS WITH HEPATITIS B AND C

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Abstract

Background: Hepatitis B is considered as a cause for serum hepatitis which may lead to liver cells cancer. Hepatitis C is major cause of chronic hepatitis in developed countries. Information about tumor markers in patients with HBV and HCV in Iran population is limited. Therefore, this study aimed to determine the role of tumor marker AFP, CA15-3, CA125 and CA19-9 in patients with hepatitis B and C.

Methods: This descriptive cross-sectional study was performed from Oct 2012 to Oct 2014. Serum samples of 129 patients with hepatitis B and C referred to Guilan Liver and Digestive Disease Research Center in Rasht, Iran were collected and checked for the existence of the listed tumor markers by ELISA.

Results: No increase in serum levels of tumor marker CA19-9 and CA15-3 were seen in patients with hepatitis (P>0.05). In patients with hepatitis B, increase in CA125 were observed (P=0.03). In hepatitis C patients, there was an increase in AFP levels (P=0.03).

Conclusion: The levels of AFP and CA125 markers were high in hepatitis C and hepatitis B, respectively. However, the increased levels were not seen is malignancy. Due to the small sample size, further study is necessary to find the reasons of the increase.

P125 ANTI-CANCER EFFECTS OF ADMINISTRATION OF TILORONE DIHYDROCHLORIDE ON THE HEPA1-6, MOUSE HEPATOMA CELL LINE

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Abstract

Liver cancer has become a worldwide concern and the third highest cause of universal cancer-related deaths. According to some references, hepatoma is the fifth most current ever-present deadliest global cancer with bad prognosis and poor diagnosis. However, within other research, hepatoma is one of the prevalent global malignancies. Because of rapid tumor progression, recurrence, and drug-resistance of hepatocellular carcinoma, despite the common clinically treatment, the mortality of it still remains high. Development of exquisite, strategies and targeting therapeutic for hepatoma is high supremacy. Tilorone Dihydrochloride is a fluorenone-based compound that activates as an anti-viral and the anti-cancer agent with the deferent mechanisms that may be achieved via their property on DNA strand intercalation by its amine group. The other mechanisms of its anti-cancer effects are chromatin structure regulating and involvement in gene expression.The aim of this study is the determination of apoptotic and cytotoxic effects as anti-tumor efficacy and inhibitory abilities of tilorone on mouse hepatoma cell line. For this purpose after cell line culture, cells were divided into different groups such as negative control and treatment with tilorone (1.10. 50 and 100 g/ml doses of it), for 48h. All groups were studied with Pathological tests, biochemical study, and MTT assay and, absolute real-time PCR was done to assess Bax and Bcl-2 genes expression. MTT assay results revealed that the Tilorone TCIC50 on Hepa1-6 cell line was 50μg/ml. The Highest dose of tilorone increased the severity of pathological changes. Biochemical analysis was evinced that tilorone caused a significant increasing and decreasing effect in medium culture LDH level and MDA levels, respectively. Likewise, Real Time-PCR analysis manifested that treatment with tilorone dihydrochloride induced up-regulation and down-regulation the expression of Bax and Bcl-2, respectively. These results were in a dose-dependent manner and statistically significant compared to the control group.Based on these results, it appeared that this agent-induced cancerous cell death. Simultaneous, anti-oxidant effects have even seen, in a way that prevents necrosis, compared to the control group. So it could be a good candidate for further evaluation as an effective chemotherapy acting through induction of apoptosis in hepatoma.

P126 LIVER CANCER MORTALITY AT NATIONAL AND PROVINCIAL LEVELS IN IRAN BETWEEN1990 AND 2015: A META REGRESSION ANALYSIS

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Abstract

Background: liver cancer is a highly lethal cancer with a fatality rate of about one. There is no compre-

hensive population base study on liver cancer mortality by cause in Iran. We aimed to estimate the liver cancer mortality rates and temporal trends during 26 years by sex, age, geographical distribution, and cause.

Methods: We used the Iranian Death Registration System, plus demographic (Complete and Summary Birth History, Maternal Age Cohort and Period methods) and statistical methods (spatio-temporal and Gaussian process regression models), to address the incompleteness and misclassification and uncertainty of death registration system to estimate annual liver cancer mortality rate .Direct age-standardized approach was applied using Iran national population 2015 as a standard population to facilitate the comparison between the provinces.

Result: Liver cancer age-standardized mortality rate in Iran increased by more than four times times from 1.18 (95% uncertainty interval; 0.86 to 1.61) deaths per 100,000 in 1990 to 5.66 (95% uncertainty interval; 4.20 to 7.63) deaths per 100,000 in 2015. Male to female age adjusted mortality ratio changed from 0.87 to 1.82 during the 26 years of the study. With increasing age, liver cancer mortality rate increased in both sex and all provinces. At provincial level, the provinces with highest mortality rate have three times greater rate compare to the lowest. Generally, about 71% of mortality at national level is due to hepatitis B and C infection.

Interpretation: In order to reduce liver cancer mortality rate, it is recommended to control main risk factors including chronic hepatitis infections. Because of the growing rate of mortality from liver cancer, augmenting life expectancy, and increasing number of the elderly in Iran, policy makers are more expected to adopt measures including hepatitis B vaccination or hepatitis C treatment.

P128 PREVALENCE OF HEPATITIS D VIRUS INFECTION IN INDIVIDUALS WITH HEPATITIS B SURFACE ANTIGENEMIA IN MASHHAD, NORTHEAST OF IRAN

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Abstract

Background: Hepatitis delta virus (HDV) infection is dependent on the hepatitis B virus (HBV) for transmission and propagation and considered to cause more severe hepatitis than HBV alone. In Iran, data about epidemiology and clinical and virological characteristics of HDV are rare. This study aimed to evaluate HDV infection prevalence among individuals with hepatitis B surface antigen (HBsAg) seropositivity in Mashhad, Northeastern Iran.

Patients and Methods: In a cross-sectional study, 606 sera of HBsAg-positive persons who referred to Central Diagnostic Lab of Academic Center for Education, Culture and Research (ACECR), Razavi Khorasan Branch, in Mashhad city were evaluated for the presence of anti-HDV antibodies using commercially available enzyme-linked immunoabsorbent assay kits. Chi-square test was used to determine the relationship between independent variables and HDV seropositivity.

Results: Of 606 cases, 335 were male (55.3%) and 271 were female (44.7%). The mean age was 43.6 +/- 14.8 years (range, 12-96 years). Anti-HDV antibodies were detected in 35 subjects (5.8%), with a male predominance (6.9% vs 4.4%, p=0.19). Anti-HDV sero-positivity was more common in older people (p=0.008) and those with elevated SGPT (p=0.034) and elevated SGOT (p= 0.021). Furthermore, the mean HBV viral load was lower in HBV-HDV co-infected patients than HBV-infected patients alone (2.06 log10 copies/mL vs 3.32 log10 copies/mL). However, prevalence of HDV antibody detection were not associated according to HBeAg and Anti-HBe seroreactivity (p=0.21 and p= 0.93, respectively).

Conclusions: The prevalence of HDV infection is high in HBsAg positive cases in northeast of Iran. It is recommended to survey HDV antibodies in HBV carriers especially those with higher serum level of liver enzymes.

P130 RELATION BETWEEN IFN-Y POLYMORPHISM AND THE OUTCOME OF HEPATITIS B INFECTION IN AN IRANIAN POPULATION

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Abstract

Background: The chronic HBV infection is considered as a multifactorial issue, which can prompt to a vast variety of clinical outcomes. The host's immune system is the most crucial factor in viral persistence. IFN-γ is one of the immune factors that produces helpful substances essential for the protection against viral infections.

Objectives: The current study aimed to investigate the relation between a SNPs (rs2430561) of the IFN- γ first intron and the outcome of hepatitis B infection in an Iranian population.

Methods: Genomic DNA from blood samples of 60 chronically HBV infected patients and 60 healthy subjects with history of HBV infection, as controls, were collected and genomic DNA was extracted by salting-out method and DNA analysis genotype identification was performed by ARMs-PCR.

Result: The results indicated that the SNP frequency had a significant difference between the patient and control groups. As the frequency of allele A was 67.1% and 43.2% in patients and controls, respectively.

Conclusion: This study demonstrated a significant relationship between the IFN- γ (+874T/A, rs2430561) polymorphism and chronic HBV infection susceptibility in a sample of Iranian population. The result of current study suggests that carriers of mutant allele A at position +874 are more susceptible to chronic HBV infection and carriers of wild-type allele T at position +874 are predisposed to recover from HBV infection.

P133 EVALUATION OF HEMOGLOBIN OVERSATURATION IN CIRRHOTIC PATIENTS

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Abstract

Background: Cirrhosis, as end stage of a variety of chronic liver diseases, can affect oxygenation in the patients and make them hypoxic through hepatopulmonary syndrome. However, there isn't any report of cirrhotic patients with hemoglobin oversaturation.This study was designed to investigate presence and associations of hemoglobin oversaturation in cirrhotic patients who are candidate for liver transplantation.

Method: In a cross-sectional study, the cirrhotic patients who referred to Shiraz Organ Transplantation Center from 2013 to 2015, were included. The exclusion criteria were other disorders which may affect O2 saturation and other causes of liver transplantation except cirrhosis. As well, we excluded all the patients with chest x-ray abnormality from this study. Hemoglobin saturation was measured by Arterial blood gas analysis. The patients were divided to two groups; the oversaturated patients (Hb sat O2>98%) as case group and the patients with (Hb sat O2<98%) as control group. Causes of cirrhosis, sex, smoking state, age, spirometry, model for end-stage liver disease (MELD) score, and place of residence's altitude were compared between case and control groups. After univariate analysis, logistic regression models were used for multivariate analysis and were adjusted for significant and near to significant (p-value<0.2) covariates.

Result: of 495 patients, 18.6% were oversaturated. 64.5% of control group were male versus 58.7% of case group. Mean age of control group (40.6±14.7) was significantly higher than case group (36.8±15.7) in univariate analysis (Pvalue=0.02). Hemoglobin oversaturation in patients with auto immune hepatitis (AIH) were significantly higher than other causes of cirrhosis (p-value=0.001). There was not any significant difference between case and control groups in other causes of cirrhosis or other compared factors. In multivariate analysis, just AIH remained statistically significant in the models (odds ratio=2.03; 95% confidence intervals=1.13-3.65; p-value=0.01) After finding an association between AIH and oversaturation, taking the drugs routinely used for treatment of AIH, was compared between case and control groups. No significant difference was found between them in using prednisone, azathioprine, and cyclosporine (p-values=0.5, 0.6, 0.6)

Conclusion: Based on our research, there is an association between oversaturation in cirrhotic patients and AIH.The association is not related to the drugs used for treatment of AIH.

P135 COGNITIVE FUNCTION IN IRANIAN PATIENTS WITH HEPATITIS C

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Abstract

Introduction: Hepatitis C virus (HCV) infection is one of the most common blood-borne viral infections in the world, with a high risk of mortality and morbidity .Cognitive dysfunction is common among patients with hepatitis C, and it is estimated that at least one domain of cognition is impaired in one-third these patients. They are also at higher risk of neurodegenerative disorders including dementia and Parkinson's disease.

Objective: The main aim of present study is to evaluate cognitive function of HCV+ individuals in a clinic-based sample. To the best of our knowledge, this is the first study of cognitive performance in Iranian patients with hepatitis C.

Method: Cognitive function of HCV-infected patients was assessed by a battery of neuropsychological tests including Montreal cognitive assessment(MoCA) as a screening tool for mild cognitive impairment, Auditory verbal learning test (AVLT) for assessment of verbal memory, Category fluency test for assessment of verbal fluency performance, Digits Span forward and backward tests for assessment of attention and working memory, Digit symbol substitution test (DSST) for assessment of memory, visual scanning and psychomotor speed. We also used the short form health survey (SF-36) and Multidimensional fatigue inventory (MFI) for assessment of general health and fatigue.

Results: So far, we have included 10 newly diagnosed male patients with the mean age of 38.7±7.7 years. MoCA test result was abnormal in 50% of patients. Mean MFI score was 71±16.1 which is significantly higher than the normative value from healthy Iranian population (p=0.036). Digit span forward test scores were significantly correlated with SF-36 scores (r=0.845, P=0.034). No correlation was found between SF-36 scores and other neuropsychological tests results.

Conclusion: These preliminary results point to the existence of a mild cognitive impairment among Iranian patients with HCV infection. Patients' general health status may contribute to their cognitive performance.

P136 PREVALENCE OF HEPATITIS E VIRUS INFECTION AMONG PREGNANT WOMEN IN BUSHEHR PROVINCE, SOUTH OF IRAN

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Abstract

Background: Iran is known as an endemic country for hepatitis E virus (HEV) infection; however, the prevalence of this infection among pregnant women, the most vulnerable group, has not been declared in most parts of the country. Knowledge regarding the prevalence of HEV can be an indicator of the public health and hygiene and gives clue to health care providers regarding the appropriate management of HEV infection. Therefore, this study aimed to investigate the prevalence of HEV among pregnant women in Bushehr province, South of Iran.

Methods: From October 2016 to May 2017, blood samples were obtained from 617 pregnant women, ages ranging from 15 to 45 years (27.87 ± 5.89), who referred to Health Centers in Bushehr province. Demographic data and informed consent were obtained at the time of sampling. Detection of anti-HEV antibodies was carried out by HEV Ab ELISA kit and HEV IgM ELISA kit (DIA.PRO, Italy). Seropositive samples were tested for the presence of HEV RNA by nested RT-PCR using specific primers. This cross-sectional study was funded by Bushehr University of Medical Sciences with grant number 3253.

Results: Of the 617 participants, 54 (8.8%) were positive for total anti-HEV antibodies, while HEV-specific-IgM antibodies was detected in 9 (1.5%) of the samples. There were significant differences in HEV seroprevalence rate between the participants grouped according to age ($P < 0.05$). The seroprevalence increased with age from 6.98% in subjects aged <20 years to 17.35% in persons over 34 years old. The seroprevalence was significantly higher among Afghan (73.53%) and uneducated women (51.72%), $P < 0.001$. While, HEV seroprevalence was not statistically associated with time of sampling, smoking habits, history of abortion, trimester of pregnancies. All seropositive samples were found to be negative for the presence of HEV RNA.

Conclusion: HEV seroprevalence of 8.8% was observed among pregnant women living in Bushehr province. Given the devastating consequences of HEV during pregnancy, determination of HEV prevalence in different regions is an appropriate way to identify the probable risk of HEV among pregnant women and manage to provide efficient way to control this endemic disease through timely diagnosis and treatment.

P137 COMPARISON STUDY OF CAROTID INTIMA MEDIA THICKNESS IN NONALCOHOLIC FATTY LIVER AND CONTROL GROUP

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Abstract

Background: A lot of studies is done about various components of the metabolic syndrome in association with fatty liver by increasing the carotid intima media thickness as a risk factor for cardiovascular disease. But few studies are done on the role of fatty liver as an independent risk factor for carotid intima media thickening. The purpose of this study is to determine the relationship between the average thickness of carotid intima with risk factors for cardiovascular disease and fatty liver and the effect of fatty liver disease on the thickness of the carotid ar-

tery as a factor affecting the cardiovascular disease.

Methods: In the present study, the mean of the carotid intima media thickness will be examined in 105 patients Divided in three groups, two groups included patients with mild to severe fatty liver without or with cardiovascular risk factors (Diabet, Hypertentoin, and Dyslipidemia) and control group. Data on possible cooperation relations with ANOVA tests and Tukey's test were analyzed at the alpha level equal to 0.05

Results: Kruskal-Wallis test results showed that the mean of the carotid intima media thickness at least two of the three groups has significant difference ($p<0.001$). results of the Mann-Whitney U test showed that mean thickness of the carotid intima media left and right respectively in the fatty liver group with other risk factors was 0.75 ± 0.22 and 0.8 ± 0.18 and without other risk factors group for fatty liver was 0.8 ± 0.26 and 0.82 ± 0.26 and in the control group was 0.5 ± 0.09 and 0.52 0.13.Mann-Whitney U test result showed that the mean of the carotid intima media thickness in control group was significantly less than other groups. ($p<0.001$). Also the liver enzymes, body mass index and LDL in two fatty liver groups were significantly higher than in the control group

Conclusion: Our study showed fatty liver disease regardless of that grade alone as other risk factors for heart disease is associated with increased intima-media thickness of the carotid artery on the right and left as a measure of cardiovascular riskn here.

P138 PREVALENCE OF HEPATITIS B VIRUS INFECTION IN A REPRESENTATIVE SAMPLE OF DIABETIC PATIENTS RESIDENT IN BUSHEHR PROVINCE, SOUTH OF IRAN

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Abstract

Background: The possible role of hepatitis B virus (HBV) in the development of diabetes mellitus lead several researchers to evaluate its prevalence in diabetic patients, though, to date no data have been provided for this group of patients in Bushehr province, where has one of the highest numbers of diabetic patients in the country. Therefore, this study was designed to determine the prevalence of HBV infection among diabetic patients in Bushehr province.

Methods: This descriptive cross-sectional study was funded by Bushehr University of Medical Sciences with grant number 3254. From 2015 to 2016, serum samples were obtained from 733 consecutive patients with confirmed type 2 diabetes mellitus (256 males and 477 females), ages ranging from 26 to 92 years. Clinical data and informed consent at the time of sampling were obtained. All samples were used for the detection of HBsAg and HBcAb by ELISA. In addition, ALT, AST, FBS, total cholesterol and triglyceride levels were investigated in the sera of all participants.

Results: HBsAg and HBcAb were detected in 28 (3.8%) and 94 (12.8%) of samples, respectively. There were significant differences in HBsAg and HBcAb seroprevalence rates between the participants grouped according to age ($P < 0.05$). The seroprevalence of HBsAg and HBcAb increased with age from 0.0% and 6.2% in subjects aged 26-30 years to 7.9% and 30.3% in persons over 71 years old, respectively. The highest seroprevalence was found among female patients and those above 60 years of age. HBsAg seropositive patients had higher ALT and AST levels compared to HBsAg seronegative patients. However, these differences were not statistically significant.

Conclusion: The outcomes revealed that the seroprevalence of HBV infection among diabetic population of Bushehr is considerably high. This seroprevalence is higher than seroprevalence of HBV infection among blood donors of Bushehr province (0.15%). While, diabetic patients are not screened for HBV infection. Therefore, the presence of HBV remains undiagnosed in most cases. Detection of HBV should be included as a common approach in the screening of patients with diabetes mellitus to improve clinical management of HBV-infected diabetic patients.

P139 VIRAL LOAD IS ASSOCIATED WITH SERUM ADENOSINE DEAMINASE AND ORNITHINE DECARBOXYLASE LEVEL IN PATIENTS WITH GENOTYPE 3A HEPATITIS C INFECTION

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Abstract

Background: Hepatitis C virus (HCV) has been attracting increasing attention because of long-term complications due to hepatocellular carcinoma development risk. HCV has been classified into six genotypes and a number of subtypes. HCV genotypes epidemiology varies in different populations and geographical regions. The most common genotypes in Iran are subtype 1a and 3a, respectively. Viral load assessment and genotype identification are clinically important for designing the therapeutic strategies. Ornithine decarboxylase (ODC) and Adenosine deaminase (ADA) are two important enzymes in biosynthesis of polyamines, and purine metabolism, respectively. Serum ADA and ODC levels have been found to be involved in liver diseases. The aim of the present study was to determine whether the HCV genotype is associated with HCV-RNA titer and serum ADA and ODC levels in patients with chronic hepatitis C.

Methods: HCV RNA quantitation and genotyping was performed using real time PCR assay. ADA and ODC1 levels were measured using human-specific ELISA kits. 48 HCV RNA positive patients including 24 patients with 1a genotype, and 24 patients with 3a genotype were enrolled in this study. Viral infection was classified into three categories based on viral load levels into low (<10e5 copies/mL), intermediate (10e5- 10e7copies/mL) and high (>10e7copies/mL).

Result: Significant association was observed between viral load and genotype. Patients with genotype 3a had significantly higher viral load than patients with genotype 1a (P<0.05).No association was found between studied genotypes and serum adenosine deaminase, and ornithine decarboxylase levels. However, ADA and ODC levels of patients showing high viral loads of 3a HCV were significantly higher than those with low viral loads.

Conclusion: These results demonstrated an association between viral load and serum ADA and ODC levels in genotype 3a patients. The evaluation of ADA and ODC activity might be a useful tool for monitoring their clinical status.

P140 ASSOCIATION OF INTERLEUKIN 18 GENE SINGLE NUCLEOTIDE POLYMORPHISM (RS360719) WITH CHRONIC HEPATITIS B VIRUS INFECTION

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Abstract

Background and Aim: The outcome of hepatitis B virus (HBV) infection can be affected by host immune factors and variations in host genetic background such as single nucleotide polymorphisms (SNPs). Recent studies have shown that cytokine gene polymorphisms are associated with the development of HBV chronic infection and progression of the disease.Interleukin-18 (IL-18) which is predominantly secreted by activated monocytes/macrophages, is a proinflammatory cytokine that plays an important role in both innate and adaptive immune responses against viruses and intracellular pathogens. IL-18 was identified as an IFN-γ -inducing factor that can stimulate Th1 cells.In this study, we aimed to explore whether interleukin-18 (IL-18) genesingle nucleotide polymorphism (rs360719) is associated with the outcome of hepatitis B virus (HBV) chronic infection.

Methods: In this case-control study, blood samples were collected from 100 patients with chronic HBV and 100 healthy controls. After genomic DNA extraction, the SNP was genotyped by thePolymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLP) method.

Results: The results showed rs360719 genotype frequencies of AA=56%, GA=42% and GG=2% in chronic patients and AA=42%, GA=41% and GG=17% in the control group. Results revealed that there is a significant difference among genotype and allele frequencies between two groups (P=0.001)

Conclusion: These findings indicate that IL-18 rs360719 A/G might be associated with HBV chronic infection. As such it is difficult to clearly determine the role of this SNP as a prognostic factor of susceptibility to HBV infection; further studies are required to investigate the relevance of the present findings.

P143 INTRAFAMILIAL SEROPOSITIVITY OF HEPATITIS IN PATIENTS WITH HEPATITIS B AND C VIRUS IN HEPATITIS CLINIC IN HAMADAN, IRAN.

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Abstract

Objective: To determine intrafamilial seropositivity of HBV and HCV and to compare them in families of infected persons with HBV and HCV in Hamadan clinic of hepatitis.

Material And Methods: In this analytic cross-sectional study, 651 family members of 200 HBV and HCV infection index cases were entered into the study and after signing an informed consent, they were referred to Blood Transfusion Center. With completion of laboratory tests, interviewers filled the questionnaires.

Results: One hundred and eighteen (20.5%) and 107 (18.6%) family members were HBs Ag and HBc Ab positive respectively. 21 (3.6%) were isolated HBcAb positive. Only one person (1.3%) was HCV Ab positive. The general rate of infection in family members of HBV infected people (at least one case) (49.4%) was significantly higher than that of HCV infected people (3.3%), $p < 0.001$. Interspouses transmission was evaluated and prevalence of interspouses HBV and HCV infection were 32.3 and 8%, respectively.

Conclusion: Intrafamilial and interspousal seropositivity of HBV is obviously more than those of HCV. More attention should be paid to screening and risk lowering activities particularly about HBV infected people and their families.

P150 CHRONIC HEPATITIS B INFECTION AND PREGNANCY

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Abstract

Background: Infection with hepatitis B virus (HBV) in pregnant women may be a threat for both mothers and fetuses. This study was performed to explore the impact of maternal HBV carrier status on pregnancy outcomes

Materials and Methods: A systematic review was performed within articles published at PubMed, Elsevire,science direct,Sid, Ovid, Google Scholar and orginal text books to reach the aim.Finding: Hepatitis B virus (HBV) infection is one of the most common health problems worldwide. It is estimated that 350 to 400 million individuals worldwide are chronically infected with hepatitis B virus (HBV), most of study Compared with women who were not infected with hepatitis B virus, women who were HBsAg positive and HBeAg negative manifested an 18% higher risk of early preterm birth women who were HBsAg positive and HBeAg negative had a 26% higher risk of preterm birth and women who were both HBsAg and HBeAg positive had a 20% higher risk of preterm birth and women who were both HBsAg and HBeAg positive had a 34% higher risk of early preterm birth The results showed no significant association between inactive HB and Preterm rupture of membranous (PROM), stillbirth, preeclampsia, eclampsia, gestational hypertension and antepartum hemorrhage Available evidences detected No significant differences in growth development and disease prevalence were found among children born to HBsAg-positive women and women without HBV infection. Meta-analysis found no evidence of significant associations between CHB infectio increased risk of placental abruption as well as placenta previa. But the proportion of miscarriage was significantly higher among the HBV carriers than the controls. Conclusion: Women who are hepatitis B virus (HBV) carriers can be managed as any other low-risk pregnancies if they do not have other antenatal complications or associated risk factors such as additional diseases in pregnancy.

P151 THE ASSOCIATION BETWEEN HEPATITIS INFECTION AND ORAL LICHEN PLANUS: REVIEW STUDY

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Abstract

Backgroud: Oral lichen planus is a chronic autoimmune (T cell-mediated) disease. Exact etiopathogenesis of disease is unknown. It has established that the basis of the disease is immune-mediated and there is some trigger factor for OLP that include: psychogenic disorders, genetic factors, allergic reactions to drugs and infections, especially hepatitis C (HCV) infection. The aim of this study is an investigation of the association between OLP and HCV infection.A search of database MEDLINE, Google scholar, Scopus (2013 -2017) was performed. The type of studies was case –control studies about serum levels of HCV antibodies in OLP patients that were performed in different countries, and etiopathogenesis of OLP.

Results: In one study in central Germany, 143 patients with OLP were screened for the prevalence of anti-HCV antibodies, no association between OLP and chronic HCV infection in central Germany was found. The same results were found in studies in Iraqi, Brazilian, and Chinese patients. (R). But in a study in Iran prevalence of HCV was higher among OLP patients compared to control group and in Ja-

pan, there is a close relationship between HCV infection and oral lichen planus.

Conclusion: Based on our study the association between HCV and OLP depends on the geographic factors. Some studies suggest that the relationship between these two diseases may be the result of genetic, environmental, geographic and other factors. Higher incidence of HCV in Japanese OLP patients may be result of high prevalence of HCV infection in the Japanese population.

P152 HBSAG, ANTI-HBS, ANTI-HAV IGG AND ANTI-HCV SEROPREVALENCE OF THE PATIENTS WHO HAS APPLIED TO AFYON KOCATEPE UNIVERSITY ANS APPLICATION AND RESEARCH HOSPITAL FOR THE LAST FIVE YEAR

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Abstract

Objective: In this study, it was aimed to evaluate the information about seroprevalance rates of our province by determining the distributions of HBsAg, Anti-HBs, Anti-HCV, Anti-HAV IgG seropositivies according to gender, age and risk factors (dialysis, the preoperative tests, blood donors, outpatients) in the who has applied to Afyon Kocatepe University ANS Application and Research Hospital between May 2011 and May 2017.

Material and Methods: Blood samples from the patients were analysed in using electrochemiluminescence immunoassay method.Sera samples derived from patient's blood are analysed in Abbot Architect I 2000 (Abbott Laboratories, llinois, USA). In total, 49,813 patients were tested for HBsAg, 38,820 for Anti-HBs, 41,712 for Anti-HCV tests and 3,953 for Anti-HAV IgG.

Results: For HBsAg, 49,813 samples were analyzed and 2,046 (4.1 %) of these samples were positive. For Anti-HBs, 38.820 samples were analyzed and 11,072 (28.5 %) of these samples were positive. For Anti-HCV 41,722 samples were analyzed and 757 (1.8 %) of these samples were positive. For Anti-HAV IgG 3,953 samples were analyzed and 3,106 (78.5 %) of these samples were positive.

Conclusion: The seropositivity rates for HBsAg and Anti-HCV in our city were similar to those seen in Turkey. When the risk factors for HBsAg and Anti-HCV seropositive patients (dialysis patients, outpatients, the preoperative examination and blood donors) were evaluated, the rates of seropositivity in dialysis patients were found to be crucially higher than the other groups. No statistically significant difference was found in the rates of seropositivity in the groups with other risk factor. In our province, the active immunity for hepatitis B should be increased in the middle age population by immunisation schedules. Training programs about hepatitis which can transmit through blood and its derivatives will be beneficial.

P153 PREVALENCE AND RISK FACTORS OF HEPATITIS D INFECTION AMONG INTRAVENOUS DRUG USERS, 2016

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Abstract

Background and aim: Hepatitis D Virus (HDV) causes accelerated liver diseases in patients with Hepatitis B Virus (HBV) infection. The incidence of hepatitis delta virus (HDV) infection has decreased during the last decades. However, an increasing trend has been reported recently. There is lack of data about its prevalence, related risk factors and interaction with HBV carriers in our country. The aim of this study was to estimate the prevalence of hepatitis delta and associated risk factors among IV drug users in Loghman Hakim and Imam Hossein hospital, Tehran, Iran.

Material and methods: This cross-sectional study consisted of all IVDUs who had been referred to Loghman and Imam Hossein hospital in Tehran from March 2016 to March 2017. Blood samples were collected and serum samples tested by ELISA for the presence of HBsAb, HBcAg and HDV Ab. Information related to the demographic variables and risk factors were collected by a questionnaire. Statistical analyses were done by SPSS 20.

Results: Of 94 IVDUs, 0% was HDV Ab positive, 90 individuals (97.74%) were HBsAb positive. The age group of 30-40 years old had highest patients but there was not statistically significant.

Conclusion: Although HDV had low prevalence in our area, it is vital to plan preventive strategies for HDV spread as well as HBV prevention. It is particularly important to support HDV infection among IVDUs.

P156 A SYSTEMATIC REVIEW AND ME-

TA-ANALYSIS FOR ESTIMATION OF OCCULT HEPATITIS B VIRUS INFECTION PREVALENCE AMONG DIFFERENT POPULATION OF IRAN

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Abstract

Background: Occult hepatitis B virus (HBV) infection characterized by the detection of HBV DNA without hepatitis B surface antigen (HBsAg)-positivity outside the acute phase window period. The prevalence of occult HBV infection (OBI) varies according to endemicity level of the infection, population studied and the techniques used to evaluate OBI.

Methods: In this systematic review, electronic resources including PubMed, SCOPUS, ISI, Sci-enceDirect, and Proquest as well as four main Iranian databases were searched using appropriate keywords. Regarding gray literatures such as thesis and abstracts, Iranian databases as well as some conference proceedings were reviewed. All cross-sectional studies which reported the prevalence of OBI among different Iranian population until June 2017 were selected. Inclusion criteria were assessment of HBV DNA among HBsAg-negative cases including healthy individuals and/or different high-risk groups with valid techniques. The overall prevalence rate was estimated using meta-analysis method with random effect model based on the results of heterogeneity test using R software version 3.4.0. Totally 399 citations found in foreign and Iranian electronic databases, of which 193 were non-duplicates. In addition, 13 un-duplicated non-overlapping documents were added by searching of gray literatures. Finally, 43 eligible records met the inclusion criteria and included in meta-analysis.

Results: Overall estimation of OBI prevalence rate was 2.61% (95% CI: 1.47%-4.58%). Based on surveys among blood donors, hemodialysis patients, and those with HCV and HIV infections, the rate of OBI were estimated as 0.24% (95% CI: 0.09%-0.64%), 2.5% (95% CI: 1.16%-5.33%), 4.77% (95% CI: 2.40%-9.28%), and 11.48% (95% CI: 3.83%-29.68%), respectively.

Conclusion: Our review showed that OBI is considerably common in Iranian population especially among high-risk groups such as HCV- and HIV-infected individuals.

P158 ORAL MANIFESTATION OF HCV INFECTION (A REVIEW STUDY)

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Abstract

More than 170 million people in the world are chronically infected by hepatitis c virus infection. The disease has no vaccine. So prevention and early diagnosis of the disease is very important. HCV infection has hepatic manifestations like cirrhosis but some extrahepatic signs can cause significant morbidity and also can help for early diagnosis of the disease. Extrahepatic manifestations include: mixed cryoglobulinemia, glomerulonephritis, polyarteritisnodosa, rashes, renal disease, neuropathy and lymphomaHepatitis c is a disease that has several extrahepatic manifestations. The aim of this study is review of oral manifestation of HCV infection that was reported in previous studies. These manifestations include: oral lichen planus, sjogren like sialadenitis, salivary gland lymphoma, and oral squamous cell carcinoma.Sjogren Syndrome is a chronic autoimmune disorder of the exocrine glands with associated lymphocytic infiltrates in the affected glands. Dryness of the mouth and eyes results from the involvement of the salivary and lacrimal glands. Several reports have initially suggested an association between HCV and SS following the development of serological tests, which has been supported with more than 250 reported cases of SS–HCV. Between these symptoms oral lichen planus may be significantly associated with HCV infection in some countries that may be related to immunogenic factors like HLA-DR6 allele.The incidence of HCV infection in Japanese oral Squamous cell carcinoma patients has been reported to be 16.7-24%.In a study on the prevalence of hepatitis virus infection in association with oral diseases requiring surgery performed in Japan, Takataet al. found that HCV antibody was higher in patients with oral cancer.

Conclusion: OLP and Sjogren Syndrome may be significantly associated with HCV infection, and the virus may be involved in the pathogenesis of these diseases, probably via an immunological pathway.

P160 DESIGN AND DEVELOPMENT OF A ONE STEP TAQMAN REAL TIME RT-PCR ASSAY TO QUANTIFY HEPATITIS C VIRUS RNA

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Abstract

Introduction: Molecular methods for quantification of nucleic acids are useful tools in management of HCV infection. Recently, various real time assays have been introduced.

Objective: In the present study an in-house one step TaqMan Real Time RT-PCR assay using LightCycler (LC) instrument (Roche Molecular Biochemicals) for detection and quantification of HCV-RNA was evaluated.

Materials and methods: A highly conserved region of HCV genome was selected for the primers and probe design, allowed detection of 5'UTR of HCV genome in four common HCV genotypes in Iran. Four quantification standards from 101 IU/ µl to 104 IU/ µl and clinical specimens were used to determine detection limit, reportable range, precision, analytical and clinical specificity and trueness of the assay. Statistical analysis was performed using SPSS, Version 16 software.

Results: The assay showed a reportable range of 101 IU/ µl to 104 IU/ µl (R2 =0.989). The detection limit of the assay with 95% probability determined by a probit analysis was 15 IU/ µl. The coefficient of variation for intra and inter assay precision of the assay based on threshold cycle value ranged from 0.24 to 0.4 and from 1.94 to 3.19, respectively. The analytical and clinical specificity were 100%. In method comparison between the results of 29 HCV RNA positive clinical specimens simultaneously tested by artus HCV LC RT-PCR reagents and in-house reagents, no bias in relation to concentration was observed.

Conclusion: The validated assay showed acceptable performance characteristics and represents a robustness and cost- effective method for detection and quantification of HCV.

P163 SEROPREVALENCES OF THE ANTI HAV IGM/IGG, HBSAG, ANTI-HBS, AND ANTI HCV IN PATIENTS APPLIED TO AFYON KOCATEPE UNIVERSITY ANS APPLICATION AND RESEARCH HOSPITAL IN PROVINCE OF AFYONKARAHISAR, TURKEY (2012-2017)

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Abstract

Objective: In this study, it was aimed to evaluate the seroprevalance rates of Hepatitis A, B and C viruses in our province of Afyonkarahisar. HBsAg, Anti-HBs, Anti-HCV, Anti-HAV IgG seropositivies determined according to gender, age and risk factors (dialysis, the preoperative tests, blood donors, outpatients) in patients applied to Afyon Kocatepe University ANS Application and Research Hospital between May 2012 and May 2017.

Material and Methods: Sera samples obtained from the patients and analysed by using both the chemiluminescence immunoassay (CLIA) and chemiluminescent microparticle immunoassay (CMIA) methods. Sera samples were analysed with Abbot Architect I2000 (Abbott Laboratories, IL, USA) and Advia Centaur XP (Siemens Healthcare Diagnostics, NY, USA). In total, 49,813 patients were tested for HBsAg, 38,820 for Anti-HBs, 41,712 for Anti-HCV tests and 3,953 for Anti-HAV IgG. Results: For HBsAg, 49,813 samples were analyzed and 2,046 (4.1 %) were found as positive. For Anti-HBs, 38,820 samples were analyzed and 11,072 (28.5 %) were found to be positive. For Anti-HCV 41,722 samples were analyzed and 757 (1.8 %) were found to be positive. Of the 3,060 samples 126 (4.1 %) were found as positive for anti HAV IgM. For Anti-HAV IgG 3,953 samples were analyzed and 3,106 (78.5 %) were determined as positive.

Conclusion: The seropositivity rates for HBsAg and Anti-HCV in our city were found to be similar to those were found before in many studies that carried out in different cities of Turkey. When the risk factors for HBsAg and Anti-HCV seropositive patients (dialysis patients, outpatients, the preoperative examination, blood donors) were evaluated, the rates of seropositivity in dialysis patients were found to be crucially higher than the other groups. No statistically significant difference was found in the rates of seropositivity in the groups with other risk factor. In our province, the active immunity for hepatitis B should be increased in the middle age population by immunisation schedules. Training programs about transmisission routes of viral hepatitis agents which can transmit through the blood and its derivatives will be beneficial. Key words: Anti HAV IgM/IgG, HBsAg, Anti-HBs, Anti-HCV, seroprevalance.

P164 TREATMENT RESPONSE RATES IN PAKISTANI HEPATITIS C VIRUS PATIENTS; CURRENT PROSPECTS AND FUTURE CHALLENGES

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Abstract

The estimated hepatitis C virus (HCV) carriers are approximately 10 million in Pakistan which usually

progresses to chronic hepatitis, with rare cases of spontaneous viral eradication. In Pakistani patients, the estimated mean value for sustained virological response (SVR) for standard IFN plus RBV combination therapy was 68.38% ± 14.13% (range 33.8% - 87.10%; SE 3.08) and pegylated-IFN plus RBV combination therapy 64.38% ± 8.68% (range 55.0%-76.00%; SE 3.88). The lowest value for SVR has been reported to be 24.3% (for genotype 1; administering INF-α 2b 3MU three times/week and Ribavirin 1000-1200 mg/day for 48 weeks) while highest of 87.5% (genotype 3a; INF-α 2a 3MU three times/week and Ribavirin 1000-1200 mg/day for 24 weeks). The mean value for rapid virological response (RVR) was found to be 48.18% ± 29.20% (SE 9.73). Relatively low SVR rates of 86% has been reported for sofosbovir + ribavirin combination therapy. As PEG-interferon and Direct Acting Antivirals (DAAs) are relatively expensive, interferon-alfa (IFN-α) and ribavirin (RBV) combination therapy have been used widely to treat HCV infected patients in Pakistan for the last one and half decade. On average, 2.45% of the patients discontinued treatment due to severe side effects to IFN-α + RBV combination therapy.We encourage further studies on understanding host and viral factors associated with specific focus on harder to treat viral variants (relapsers and non-responders). These variants are currently rising in the country.

P167 SYSTEMATIC REVIEW OF HEV SEROPREVALENCE AMONG EMRO AND MIDDLE EAST COUNTRIES

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Abstract

Context: Hepatitis E virus (HEV) as a hepatotropic virus is one of the major global health concerns. Autochthonous HEV transmitted by oral fecal-route in poor sanitation conditions as well as vertical and rarely blood transfusion. HEV occurrence is more common in developing countries and recently increased in developed countries too. Middle East (ME) and Eastern Mediterranean region (EMR) of WHO have been an endemic region for HEV infection. In this regard, we aimed to design a systematic review and pooled analysis to determine seroprevalence of anti-HEV antibody in ME and EMR countries. Evidence Acquisition: Byusing PRISMA guideline, data were collected from papers identified through PubMed, Web of Science, Science Direct, and Scopus and also from some national and regional databases from January 1990 to June 2016. Serum anti-HEV antibody (IgG) used for HEV prevalence estimation. HEV prevalence in the ME, WHO EMR countries, and in total, calculated by each country population size based on 2015 UN report.

Results: overall, 62 papers with a total sample size of 31673 were fulfilled our eligibility criteria and included in our project. Considering anti-HEV antibody (IgG), prevalence of HEV infection in the countries of ME, WHO EMR and in total were 12.17% (95% CI: 11.79-12.57), 11.81% (95% CI: 11.43-12.21) and 11.87% (95% CI: 11.52-12.23) respectively.

Conclusions: HEV seroprevalence in WHO EMR and ME countries has high rate and more considerations are needed for the prevention and control of this infection especially in high-risk groups such as pregnant women.

P168 RESISTANT ASSOCIATED VARIANTS (RAVS) INVESTIGATION IN THE NAÏVE HCV PATIENTS

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Abstract

Background: Viral hepatitis C is an important global health problem that affects about 2.2% of humans. Strategies on the control of this hepatotropic virus focused on chemotherapy and surveillance of emerging HCV drug resistant mutants, respectively. HCV genotype 1 response to therapy is one of major interests.The aim of this research was to study the prevalence of resistant associated variants (RAVs) in the naïve HCV patient candidate for direct acting antiviral (DAA) therapy.

Methods: A total of 70 HCV confirmed patients which referred to hospitals affiliated to Iran University of Medial Sciences, Tehran, Iran from May 2014 to March 2015 were enrolled in this cross sectional study. After RNA extraction, RFLP-RT-Nested-PCR was performed for HCV genotyping, then some genotypes 1 and 3 strains were used for further amplification of NS5B gene S282T mutation site and purified products were sequenced. Bioinformatics software was used for analysis of sequences.

Results: From a total of 70 HCV patients, 54 were male (mean age (y) ±SD 35.1 ± 8.2) and 16 were female (mean age (y) ±SD 43.4 ± 10.1); 26 isolates from 1a, 1b and 3a showed that there were no S282T resistant mutants. Moreover, 2 (4.8%) had a synonymous point mutation (C to T). Statistical analysis didn't found

any significant correlation between age, sex and genotype variables.

Conclusion: Finally, it can be concluded that there were no resistant mutants in our HCV genotypes 1 and 3 infected patients and broader scale of studies are required in this area using larger specimens, genotype groups and stages of treatment.

P171 EFFECT OF SILICON DIOXIDE NANOPARTICLES ON LIVER CYSTATIN ISOLATED FROM BUFFALO KIDNEY: AN IMPLICATION FOR LIVER DISEASES

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Abstract

Enter description here.Nanotechnology is one of the fastest growing fields of science owing to use of nanomaterials in industries and medicine across the globe. Currently silicon dioxide nanoparticles (SiO2 NPs) are one of the most popular nanomaterials owing to their inert toxicity profile and hence exposure to SiO2 nanoparticles is on the increase. Cystatins are thiol proteinase inhibitors (TPIs) ubiquitously distributed in plants and animals and they are now at the heed of a number of normal and pathological conditions and shouldn't be regarded solely as TPIs. Up till now many studies have targeted the potential toxicity of NPs on pulmonary target; although little focus is given to kidney which is a secondary target organ. The objective of this work is to study the structural changes in buffalo liver cystatin (BLC) induced by SiO2 NPs. UV and Fluorescence spectroscopy shows BLC transformation from native to non-native form evident by decreased absorbance and increased fluorescence. FTIR and CD spectroscopy further confirmed secondary structure disruption of BLC. Isothermal titration calorimetry (ITC) and microscopy were resorted to visualize interaction between SiO2 NPs and BLC. Comet assay (Fig 1)and MTT assay were utilized to perceive the toxicity of SiO2 NPs incubated BLC; decreased cell viability clearly suggesting toxicity of SiO2 NPs incubated BLC. Our work suggests that SiO2 NPs have a deteriorating effect on BLC thereby causing a decrease in its ability to inhibit papain and hence less functionality. This study also shows that BKC transforms to a toxic non-native form in presence of SiO2 NPs.

P172 MUTATION FREQUENCY OF THE SW172* MUTANTS AMONG IRANIAN CHRONIC HBV PATIENTS WHO PARTIALLY RESPONDED TO LAMIVUDINE PLUS ADEFOVIR DIPIVOXIL THERAPY

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Abstract

Introduction & Aim: Hepatitis B virus (HBV) is the leading cause of cirrhosis and hepatocellular carcinoma (HCC) in the world. The main goal of therapy in chronic hepatitis B (CHB) patients includes the driving viral replication to the lowest possible level in order to halt the progression of chronic hepatitis to prevent the development of liver failure, due to subsequent liver cirrhosis, and the emergence of HCC. The aim of this study was the detection of rtA181T/sW172* mutant frequency among chronic HBV patients who show incomplete response to antiviral therapy.

Methods: We selected 32 patients who partially responded to nucleoside analogues regimen after 48 weeks of therapy. Genotyping was done for all sequences according to amino acid variants specifying HBV genotypes A to H within overlapped surface proteins using real time PCR and direct sequencing. Amino acid variations within polymerase protein were compared with reference sequences obtained from different HBV genotypes and sequences from Iranian isolates obtained from Gen Bank.

Results: The results of the phylogenetic analysis tree reveled that all isolates were of genotype D. among patients, 6.4% rtA181T/P in RT domain and 6.4% (sW172C/stop) in surface genes.

Conclusions: Of clinical significance is the recent observation that NA therapy selects for HBV mutants that encode truncated surface proteins and therefore could theoretically accelerate the progression to HCC. Emergence of the rtA181T/sW172* mutant in patients increased the risk of HCC development in the subsequent courses of antiviral therapy. Detection of this mutation is benefit to prevention of HCC.

P180 POTENTIAL OF PROBIOTICS AGAINST AFLATOXIN ABSORPTION IN CACO-2 CELLS

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Abstract

Background and Purpose: So far, extensive studies have been done on the benefits of probiotics; but the basis information obtained from studies on their inhibitory effect on the absorption of aflatoxin is very limited and further studies should be done in context. Hence, in this study, we investigate the effects of probiotics on the inhibition of absorption and reduction of damages caused by Aflatoxin toxicity. So the path for replacement of biological methods rather than chemical methods gets to be easier.

Materials and Methods: In this method, the gastrointestinal absorption cells of Caco-2 are used to investigate the secretory of aflatoxin from the apical membrane to Basolateral Chamber in the presence and absence of probiotics. Then results are measured by HPLC and Possible Impact of probiotics on the inhibition of aflatoxin uptake is observed. Also the damages caused by the secretory of aflatoxin to the Basolateral Chamber are measured by microscopic studying on Caco-2 cells.

Results: Cell culture mediums containing probiotics, showed less aflatoxin absorption in post secretory area (Basolateral) and the gastrointestinal absorption cells showed fewer damages in the incidence of microscopic examination.

Conclusions: The scientific origin of study is responding to the possessed hypothesis which indicates the binding of aflatoxin to the bacterial membrane prior to be uptake by Caco-2 cells. This binding expected to cause inhibition in the absorption of aflatoxin and conclude to decrease the mutation in the genome of the cells, and eventually it will increase the Cell Viability.

P184 BURDEN OF HEPATITIS IN IRAN FROM 1990 TO 2015

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Abstract

Background: Hepatitis is one of the most important causes of chronic liver diseases through the world. It can be self-limiting or progress to fibrosis, cirrhosis or liver cancer. Hepatitis viruses are the most common cause of hepatitis in the world, there are 5 main hepatitis viruses, referred to as types A, B, C, D and E. These 5 types are of greatest concern because of the burden of illness and death they cause and the potential for outbreaks and epidemic spread. In particular, types B and C lead to chronic disease in hundreds of millions of people and, together, are the most common cause of liver cirrhosis and cancer.

Method: we used world Global Burden of Disease Study 2015 (GBD 2015) Results, to determine the Disability-Adjusted Life Year (DALYs), Years of Life Lost (YLLs) and Years Lost due to Disability (YLDs) and trend of them in Iran.

Findings: from 1990 to 2015, hepatitis deaths decreased from 2.56 deaths per 100,000 (95% Confidence interval [CI] 1.93–3.39) to 1.23 deaths per 100,000 (.97–1·56); YLLs from 168.87 per 100,000 (117.54 – 236.49) to 40.03 per 100,000 (31.93 – 51.52); YLDs from 5.53 per 100,000 (3.53–8.09) to 5.65 YLD (3.7–8.1); and DALYs from 147.4 DALYS (30·2–33·3) to 45.69 DALYS (36.8–57.25).

Discuss and Conclusion: Like most communicable diseases, the absolute burden and relative rank of viral hepatitis decreased in Iran between 1990 and 2015, in the past 4 decades, highly effective vaccines have become available for two of the five hepatitis viruses, in Iran national vaccination program started since 1993 for all neonates, and vaccination conducted in high risk groups, than most important reasons for this change is the availability of effective vaccines and treatments.

P185 INVESTIGATING THE STATUS OF IMMUNITY AGAINST HEPATITIS B IN THE STAFF OF TEHRAN\'S HEALTH CENTER IN 1394-1395

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Abstract

Background and Purpose: The hepatitis B virus is responsible for causing acute and chronic hepatitis, liver cirrhosis and hepatocellular carcinoma of the liver, and is currently the only reliable way of preventing, especially those exposed to the disease, such as health workers, vaccination. Hepatitis B vaccine can protect up to 95% of the individual. This study was conducted to determine the level of serum immunity in the center of western Tehran for the hepatitis B virus analysis.

Method: This descriptive cross-sectional study was carried out in 1394 on 172 employees of the staff and environment of West Tehran Health Center. 3 ml of peripheral blood was taken. The Hbs-Ab, Hbs-Ag test was performed after serum separation. The data were analyzed by SPSS-21 software and 95% confidence level after extraction.

Findings: 118 (68.6%) were female and 54 (31.4%) were male. The average age was 40.81 years. 116 (67.44%) had complete immunity (antibodies above

10) and 56 (32.56%) defective immunity (antibodies below 10). There was no significant relationship between the level of immunity and gender. There was no significant relationship between the place of service (headquarters, environment) and the level of safety (p> 0.05). There was a significant relationship between the level of immunity with age, so that with age, the amount of antibody was reduced (p <0.05).

Conclusion: Considering that with age, the level of immunity has decreased and the average age of the staff is 40/81 years, the need to follow up on the vaccination of hepatitis B prevention is necessary. As well as recommending vaccinations in those who are not vaccinated.

P187 DETERMINING THE ASSOCIATION OF PROGNOSTIC FACTORS ON SURVIVAL OF LIVER CIRRHOSIS PATIENTS: A FRAILTY MODEL APPROACH

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Abstract

Background: Liver cirrhosis is a serious disorder which leads to chronic liver disease and scar tissue (fibrosis) of liver. These changes put pressure on blood vessels and hepatic ducts. Several factors have been known for liver cirrhosis and in this study, we aimed to investigate the association of some prognostic factors on survival of patients with liver cirrhosis by using frailty models.

Methods: We abstracted data from 305 patients with liver cirrhosis who were on waiting list for liver transplantation (May 2008-May 2009) at Imam Khomeini Hospital and have followed them for at least 7 years since 2009. To assess the association of prognostic factors on survival of the cirrhotic patients in presence of latent variables, we applied the gamma frailty model with log-normal and log-logistic distributions. We also compared the effectiveness of the parametric models by using ROC curve analysis. The statistical significance level was considered at 0.05. All statistical analysis were performed by R statistical software.

Results: Totally, the study was carried out on 305 patients with liver cirrhosis including 180(59%) men and 125(41%) women. The mean age of the patients (±SD) was 39.8(14.54) year. At the end of the study, 82(26%) patients died, among them 48(58%) were men and 34(42%) were women. Hepatitis B was the main cause of cirrhosis (23.0%) and followed by cryptogenic as the second leading cause (22.6%). . Generally, mean of 7-years' survival was 28.44 month. Moreover, mean of occurring death outcome and time of censoring were estimated 19.3 and 31.79, respectively. The Multiple regression model results illustrated that age, serum bilirubin and encephalopathy had a significant effect on survival time of the cirrhotic patients Furthermore, ROC curve analysis depicted that, log-normal distribution with gamma frailty model was the most efficient model.

Conclusion: We indicated that, Frailty model could be considered as a useful approach to investigate the effect of prognostic factors on survival of cirrhotic patients in presence of latent variables. As the Hepatitis B is the leading cause of cirrhosis in Iran, implementing vigorous preventive strategies in terms of Hepatitis B can be effective approach to reduce overall burden of liver cirrhosis.

P188 ETIOLOGY OF HEPATIC CYSTIC HYDATIDOSIS IN BIRJAND, EASTERN IRAN

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Abstract

Background: Cystic echinococcosis (CE), or hydatidosis, is caused by the larval stage of Echinococcus granulosus spp. The liver is the most frequent location of parasitic cysts. This disease reported from different parts of Iran, while numerous cyst surgeries are done. It has been determined that there are different genotypes of E. granulosus exist. A particularly genotype of E. granulosus may creates different clinical symptoms. So, in the present study, we have determined the genotypes of human cysts using molecular methods.

Materials and methods: In this regard, a total of 9 patients underwent surgery at Birjand hospitals were studied. The profile of cyst size, the location and fertility of the cysts were recorded and their mitochondrial cox1 and nad1 genes were sequenced and analyzed using bioinformatics softwares. The appropriate gene sequences were deposited in the GenBank.

Results: All the human isolates (8/9) except one were strain G6 of Echinococcus canadensis, while one isolate were belonged to G1 genotype (sheep strain) of

E. granulosus sensu stricto (s.s.). Localization of the parasite in the patients infected with G6 was determined to be as follows: liver (37.5%), lung (37.5%), and intra abdominal (25%). In the patient infected with genotypes G1 of E. granulosus, cyst had been isolated from the abdominal cavity, only this patient had previous surgery for the treatment of hydatid cysts. All the nad1 sequences of G6 cysts of E. canadensis belonged to a haplotype, also in the case of cox1 sequences. Among hepatic cysts of the patients, only one cyst was fertile with protoscoleces, cyst volumes ranged from less than 50 ml to 300 ml.

Conclusion: According to studies, hydatid cysts from the G1 genotype of E. granulosus often infect the liver. But the present study shows that the risk of hepatic infection by G6 genotype is less than that of G1 genotype. At the same time, it seems that the main cause of hydatidiosis in South Khorasan province is genotype G6 of Echinococcus canadensis, for which the reservoir host in the region is camel.

P190 A NOVEL INDUCTIVE IMMUNOBIOSENSOR BASED ON MODIFIED MAGNETIC NANOPARTICLES FOR DETECTION OF HEPATITIS B SURFACE ANTIGEN

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Abstract

Early diagnosis of diseases are an important factor in their treatment. So far the hepatitis B virus was detected using different methods such as ELISA, chemiluminescence, amperometry, voltammetry and capacitance changing. The main objective of this research is to design an immunosensor with high accuracy and fast detection rate. In the present research at first, we will design and make a new kind of electrodes that consist of a coil on a glass base in very small scale. The coil will be 250 turns of a flat gold wire (the thickness is approximately 200nm, the width is 5μm and the length is 1256mm) in a circle area with 5mm in diameter. Then, the primary antibody (anti-hepatitis B) will be stabilized on the coil. Thus, the inductive immunosensor is formed. Afterwards, by exposing the hepatitis B surface antigen (HBsAg), antibody-antigen interactions is occurred. In the next stage, by adding the secondary antibody conjugated with magnetic nanoparticles, the immuno-sandwich was formed. Due to high permeability (electromagnetism) of magnetic nanoparticles and their existence near the coil, influence on coil inductance. Therefore, changes in inductance will increase the sensitivity of the system significantly. All of the factors affecting immunosensor function such as temperature, pH, number of turns, the dimensions of coil wire and the electrode surface area will be optimized.

P191 THE ROLE OF TRAINING IN THE PREVENTION OF HEPATITIS IN THE COMMUNITY: AN OVERVIEW ARTICLE

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Abstract

Introduction: Hepatitis B prevention involves improving the health of the population and, therefore, the fact that if it does not prevent the disease, it can cause death of energy in the event of irreversible damage to the body, causing chronic pulmonary disease to cause other people to become infected.One of the applications of health education in preventative behaviors is the health belief model. It is a model of the relationship between beliefs and the person's perception of the threat to the health and well-being of individuals and their behavior.This study is intended to determine the role of people's education in the prevention of hepatitis B and the need for this issue.

Method: This article is a review and descriptive study that was conducted with the use of library resources and information banks and Internet search sites in of PubMed, SID, Civilka, Google Scholar, and Scopus from 2000 to 2016, and this is a general conclusion of what has been done so far in this area.

Findings: The most important influence on the general precautions of skin and body specimens was observed and the patient's blood transfusion was observed in the eye.Among the factors that can affect health behaviors are age, sex, occupation, race, economic status, social awareness, knowledge and knowledge about the disease, and the amount of health education that one finds. The findings showed that the most occupational exposures Skin pains have been infected with bronchial asthma.

Conclusions: Public health trainings for health care workers can have a beneficial effect in reducing their occupational exposure. It is suggested that the Ministry of Health and Medical Education provide training programs with the prevention of hepatitis B for all people in the workplace in non-medical care facilities tailored to the cultural, ethnic, and other needs. Designed to ensure that preventive behaviors are related to the health belief model, the development of effective prevention barriers is essential to understanding sensitivity to the disease and their

improved self-efficacy.

P193 THE PREVALENCE OF HEPATITIS B SURFACE ANTIGEN AND HEPATITIS C VIRUS IN PEOPLE REFERRING TO DR.SHAFAZAND LAB, SIRJAN FROM MARCH TO JUNE 2017

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Abstract

Background and Aim: Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections accounts for substantial proportions of the world wide liver disease. The two hepatotropic virus share common modes of transmission and their co-infection are common. Patients with dual HBV and HCV infection have more severe liver disease and are high risk of progression to hepatocellular carcinoma. The aim of this study was to determine the frequency of HBV and HCV infections markers as epidemiological data in Sirjan city.

Methods: This retrospective cross sectional study was conducted on serum samples of individuals who were referred to Dr Shafazand Laboratory from March to June 2017. HBsAg and Anti-HCV were measured using ELISA method in the serum samples. Data were analyzed using SPSS version 19 statistical package.

Results: In this study, the medical records of 472 referring were studied. The prevalence of positive HBsAg was 0.59% in the study population while seropositive for HCV was 0.0%.

Conclusion: Although the prevalence of positive HBsAg and HCV were relatively low among referred to Dr shafazand Laboratory Sirjan city, their screening were highly recommended.

P194 THE PREVALENCE OF HEPATITIS A SURFACE ANTIBODY AND THE RELATIONSHIP BETWEEN HAV AB AND THE ALT AND AST ENZYMES IN REFERING TO DR.SHAFAZAND LAB, SIRJAN, FROM MARCH TO JUNE 2017.

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Abstract

Background and Aim: Hepatitis A ishigh contagious liver infection caused by the hepatitis A virus. This Virus is one of several types of hepatitis viruses that cause inflammation and affect your liver's ability to function.

Methods: In this study, 21 specimens that were referred to the Dr.Shafazand laboratory were evaluated and measured for HAV Ab level by ELISA method. In samoles with high HAV Ab level, the level of AST and ALT enzymes were also measured.

Results: Out of 21 Samples, 8 were female and 13 were male. With 4 women and 9 men with HAV Ab about 20. In the 13 pations with HAV.Ab, the high level of AST and ALT enzymes were also high. The prevalence of HAV Ab positive in 21 patient's refered to the Dr.Shafazand labpratory was%69 prevalence in women was %50 and in men was %69.

Conclusion: The prevalence of HAV.Ab positive was high in patients referring to Dr.Shafazand Lab.There is a direct relationship between HAV Ab level and ALT and AST enzymes.

P195 OUTCOME OF INACTIVE CARRIERS OF HBV IN 10 YEARS FOLLOW-UP IN IRAN

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Abstract

In patients of hepatitis B the natural progress of hepatitis B is different from inactive carriers of hepatitis to cirrhosis and hepatocellular carcinoma. The largest group of chronic hepatitis is inactive carriers of hepatitis B. The prognosis of inactive carriers of hepatitis B is usually good, but rarely in these patients, the disease becomes active again, progresses and leads to serious liver damage; therefor, planning for routine monitoring of patients is very important. This study was conducted in Hepatitis Clinic associated with Blood Transfusion Organization and labbafi

nezhad hospital in Tehran in 2003-2013. The patients were selected randomly.Inactive carriers of hepatitis B were followed for 5-10 years. 420 patients had been studied for 5 years, and 73 of them had been studied for 10 years. In a 5-year study, 83.3% of patients remained Inactive carriers. From 73 patients who were studied for 10 years, 94.5% remained inactive carriers. Chronic hepatitis had been reported as 4.3% in the 5-year study and 1.4% in the 10-year study. A low percentage of patients showed adverse outcomes such as chronic hepatitis and no cases of cirrhosis or hepatocellular carcinoma were reported but the disease rarely reactivates spontaneously in inactive carriers of hepatitis B so Follow-up of healthy carriers of hepatitis B is very importantere.

P197 EFFICACY OF HEPATITIS B VIRUS VACCINATION ON IRANIAN PATIENTS WITH HEMOPHILIA AND THALASSEMIA

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Abstract

Aim: This study was designed to investigate the efficacy of HBV vaccination and also determine factors affecting on its response among Iranian patients with hemophilia and thalassemia.

Background: Hepatitis B virus (HBV) is still proposed as a major public health problem which can lead to cirrhosis, hepatocellular carcinoma, and death. Recipients of blood and blood products such as patients with hemophilia and thalassemia can be at risk of HBV infection.

Methods: In this cross-sectional study, 73 patients with hemophilia and 84 with thalassemia who attended in Tehran hepatitis centre, were randomly selected. Demographic data, time of last HBV vaccination, test results of HBsAb, HBsAg and HBcAb levels from patients' files were extracted.Effect of different factors like demographic data and elapsed time from last vaccination on its effectiveness was evaluated using SPSS software.

Results: Sixty-five (89%) of hemophilia and 59 (80.8%) of thalassemia patients were male. Mean age (standard deviation) was 28.05 (9.41) and 45 (53.6) years for hemophilia and thalassemia patients respectively. In hemophilia group 59 (80.8%), and in thalassemia group 74 (88.1%), had an effective response (HBsAb 10 mIU/Lit) to HBV Vaccination. Among all of the evaluated factors, only elapsed time from last vaccination was significantly effective in the response to HBV vaccination in both hemophilia (more than 4 years) and thalassemia (more than 7 years) patients (P=0.02).

Conclusion: Based on our data, checking HBsAb titer, booster doses, and revaccination are recommended every four and seven years in the thalassemia and hemophilia patients respectively.

P199 EVALUATION OF KNOWLEDGE, ATTITUDE AND BEHAVIOR OF ACTIVE DENTISTS IN THE HEALTH SYSTEM OF MASHHAD UNIVERSITY OF MEDICAL SCIENCES FOR PEOPLE WITH HEPATITIS B AND C (2017)

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Abstract

Background: Given the widespread advances in infection control, there is still a negative attitude toward the acceptance of people with hepatitis B and C. Reviewing these findings is important because the attitude of dentists who do not accept hepatitis B and C patients depends on a misunderstanding or a person's perception for their admission, which may lead to a rejection for health services Which itself causes this disease to be secretly hidden. The purpose of this study was to assess the attitude of dental practitioners in Mashhad University of Medical Sciences regarding the acceptance or non-acceptance of these individuals, as well as the reasons for this.

Methods: In this descriptive study, 45 dental practitioners from Mashhad University of Medical Sciences were selected by convenience sampling. Data were collected using a three-part questionnaire, the first part including demographic characteristics, the second part, including knowledge about Infectious diseases, hepatitis B and C, and the third part, have been used to assess the attitudes and behavior of dentists regarding admission of affected people. Data were analyzed using SPSS19 software and descriptive statistics such as mean, standard deviation and Pearson correlation coefficient were used

Result: Twenty-five (56.4%) of the dentists were male and the remaining 20 (43.6%) were female, the mean age of dentist was 41.18 ± 11.18 years. The results

showed that 62.2% of the dentists in the case of dealing with people with blood diseases only considered the standard precautions, however, about22% of them have offered dental services at the end of their work in order to better comply with precautionary measures. 82.2%of dentists have stated the most important principle in meeting the standard precautions assume Contaminated fluids by all patients. In response to the question whether the right to dentists accept patients about 31.1% of answer was yes.

Conclusion: There is still a negative attitude among some health care workers for admission people with blood diseases. This requires further examination and training in order to prevent stigma for rejection and to change attitudes and behaviors in dealing with these patient.

P203 REGULATION OF HEPATIC FUNCTION BY CENTRAL FATTY ACIDS

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Abstract

Nowdays the role of fatty acids (FA) as messenger molecules between environmental tissues, in particular the liver and the central nervous system, has been associated with the formation of metabolic diseases, including non-alcoholic fatty liver disease (NAFLD) and even possibly neurological diseases, which are widely accepted by the researchers. The purpose of the present review study is to investigate the results of fatty acids as a CNS sensory system in the regulation of all liver metabolites (including glucose, lipids and proteins), markers of liver function and even immune system.The hypothalamus acts as a key regulator of energy balance receive and prosses and at last respond to information about the amount of access to energy through a combination of blood signals (insulin, ghrelin and leptin). This phenomenon called the FA Sensing can be play a role in controlling eating habits, producing glucose by the liver, secreting insulin, and generally contributing to regulating blood glucose levels and maintaining the body's energy homeostasis.The mechanism of their effect is through the KATP channels in the VMH (Ventro-medial Hypothalamus) neurons that they are responsible for the system of the fatty acid sensor system.The ability of this sensor system to respond to the volatility of the body's important brain tissue and maintain its normal range for the body is essential. Finally, FA overload energy homeostasis could through hypothalamic sensory pathways, contribute to the pathogenesis of diabetes of obesity and/or type 2 and nonalcoholic fatty liver disease (NAFLD) and maybe Neurological diseases like Alzheimer's disease (AD).Since various complex pathways regulate intracellular and extracellular amounts of carbohydrates, lipids and amino acids. Also their metabolites are in perfect harmony, the disruption of each of these pathways can lead to metabolic diseases in humans. Finaly, suggesting an indirect impact of central fatty acids on hepatocytes function and metabolism. Further clinical attention and research is warranted to elucidate associations of central fatty acids to liver disease in human.

P204 CONTENT AND STRUCTURE ANALYSIS OF IRAN NOHEP SOCIAL NETWORK: NEW PERSPECTIVE FOR NEEDS ASSESSMENT

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Abstract

Online social network is an online platform that is used by users for social relationship. This technology could support social resources and a variety of populations including clinicians, researchers, and health managers & companies. The aim of this paper is to study the topological characteristics of social network of Iran Nohep and its power as an opportunity of health information sharing. This is a knowledge management study that involved content and structure analysis of channel and group of Iran Nohep network by systematic classification. This network was analyzed from July 2016 until July 2017. Content classified by clinical information type, executive information type, research information type, advertisement information type, interaction type, information references and other classification. Content classified by behavior pattern, number of active and non-active users, number of likes, relationship of like and content and direction roadmap. Evaluation of social network can be used for resource management, need assessment and planning of activities.

P206 KNOWLEDGE AND ATTITUDE LEVELS TOWARD HEPATITIS B AMONG NURSING STUDENTS IN TREATMENT AND EDUCATIONAL CENERS OF URMIA UNIVERSITY OF MEDICAL SCIENCES, URMIA, IRAN

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Abstract

Introduction: Hepatitis B is a common cause of liver disease and many infected individuals remain diagnosed. Patients may be asymptomatic or have non-specific symptoms, and nursing students can help to identify those at risk and arrange testing and also encourage and support infected individuals to attend specialist hospital clinics for assessment and treatment by giving clear and accurate information about infection and therapy, including common side-effects.

Aim: The aim of this study was to assess the knowledge and attitude toward hepatitis B among nursing students in treatment and educational centers of Urmia University of Medical Sciences.

Methods and Materials: A demographic questionnaire and a questionnaire to evaluate the knowledge and attitude toward hepatitis B was duly filled by 120 nursing students. All the questions were close ended. Statistical analysis was carried out using the ANOVA test.

Results: Most of nursing students were aware of the dangers of hepatitis B infection, the level of awareness regarding the methods of transmission and correct vaccination was weak. Awareness level regarding the infection among novice and apprentice, nursing students was statistically significantly lower than the proficient students. A significant relation was found between their knowlegs scores and attitude scores, which showed that the students with better knowledge level had better attitudes toward prevention of the infection transmission.

Conclusion: Nursing is a recognized as a science that focuses on the promotion of health, the prevention of illness, the care and support of clients experiencing liver-related diseases such as hepatitis B. Attitudes are directly related to knowledge levels; therefore, it is necessary to increase the level and quality of training among nurses to prevent the spread of hepatitis B virus.

P207 DEVELOPMENT OF AN ELECTROCHEMICAL IMMUNOSENSOR USING MAGNETIC BEADS FOR DETECTION OF HEPATITIS B SURFACE ANTIGEN

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Abstract

Hepatitis B virus (HBV) is a viral infection and one of the major health problems worldwide that can lead to some serious disease, including long lasting infection, hepatitis, cirrhosis and primary liver cancer. In this study, a strategy based on a sandwich type immunoassay system was designed for the detection of hepatitis B surface antigens. According to the specific affinity interaction between streptavidin and biotin recognition systems, hepatitis B surface antibody (HBsAg) was immobilized on magnetic beads and interact with HBsAg. To enhance electrochemical signals, gold nanoparticles (AuNPs) was used to conjugating with secondary antibody labeled with horseradish peroxidase (HRP). The electrochemical detection of HBsAg was carried out using Aminophenol (o-AP) as substrate for conjugated HRP, in which the electroactive enzymatic production was proportional to the HBsAg concentration. According to this strategy, the detection mode would be simple, low cost and integrated into a portable instrumentation.

P209 PREVALENCE OF HEPATITIS D VIRUS IN HEPATITIS B VIRUS INFECTED PATIENTS REFERRED TO SHAHID MOHAMMADI HOSPITAL IN BANDAR ABBAS, SOUTH OF IRAN

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Abstract

Background: Hepatitis D is caused by the hepatitis delta virus (HDV), a unique RNA pathogen that requires the hepatitis B surface antigen (HBsAg) to infect.HDV become superinfected or co-infection with the HBV that can increase the incidence of fulminant hepatitis, cirrhosis and Hepatocellular carcinoma (HCC).There are approximately 15-20 million people with HDV in the worldwide but, various statistics are available on the prevalence of HDV in Iran.

Objective: The aim of this study was to assess the prevalence of HDV and risk factors among Hepatitis B virus infections patients that referred to clinic of Shahid Mohammadi hospital in Bandar Abbas, south of Iran.

Patients and methods: In a descriptive cross- sectional study, patients with chronic hepatitis B who presented at clinic of Shahid Mohammadi hospital in Bandar Abbas, province in south Iran in 2015–2016 were included. Serology test for anti-HDV was measured by ELISA (Dia.Prokit, Italy) in these patients .Before the study of CHB patients had positive hepatitis

B surface antigen for at least 6 months. Informed consent obtained before being included in the study. A questionnaire containing demographic variables and related factors was completed for each patient. Data analysis was performed using SPSS version 16. A p value < 0.05 was considered significan.

Results: A total of 252 patients with chronic hepatitis B (CHB) that had positive HBsAg for at least 6 months ,142 (56.3%) of patients were male. The mean age of CHB patients was 40.23 ± 14.15 (range 18-79) years .The prevalence of HDV infection was 1.2% (3 cases) and two cases of patients had 1.1 and 1.01 equivalent results for anti- HDV .seven patients (2.8%) had history of imprisoned, in 15 (6%) cases was seen history of addiction and also 93(36.9%) had positive family history of HBV infection.

Conclusions: This study showed that prevalence of HDV infection was low but, it is very important that us to suspected HDV infection in high risk population such as prisoners, addicts, injecting drug users and also family of HBsAg positive and must be evaluated any HBsAg positive for anti-HDV by ELISA and even HDV-RNA test.

P210 INVESTIGATION OF COVALENT ATTACHMENTS BETWEEN STREPTAVIDIN AND ANTI- HEPATITIS B ANTIBODY USING DOCKING

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Abstract

The immuno-sensors are a special device for detecting antigens. That importance is in the specific application to antigens. Immune-sensors were applied in medical science, medicine industry and food protection. In this study, we investigated the covalent attachment effects of streptavidin (STP) to anti-Hepatitis B antibody (HB-Ab) as a novel conjugated protein. This conjugated protein was applied as apartments of diagnostic techniques. The attachment of STP to HB-Ab can amplify the immunosensor signal due to STP multi-binding sites. When STP is covalently attached to the Fc region of anti-HBsAg antibody, it can provide one, two, three or even four different binding sites for the biotin. According to experimental data, the hypothesis is the bio-conjugation of streptavidin to antibody were accrued based on covalent bound between accessible amine groups of streptavidin to Fc carboxylic acid groups on surface of antibody. To prepare the conjugated system, the monomer of streptavidin conjugated to Fc of antibody. For finding the best orientation of streptavidin to antibody was used blind docking (protein-protein interaction) and web software HADDOCK2.2 then two protein sections were closed to each other and the binding between them was created through the docking calculated orientation. Based on results, there are too many Glu residues on Fc surface of antibody that each one could attach to Gly of N-terminal or accessible lysine 121 of STP. Between all possibility of residues could attribute to conjugation, 417-Glu of antibody with 121-Lys of streptavidin have nearest distance to covalent attachment. The amide bound between the two residues was appeared at 1.3 A°.

P214 EPIDEMIOLOGY OF HEPATITIS B & C DURING 2014-2016 IN RAZAVI KHORASAN PROVINCE

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Abstract

Field and target: Viral hepatitis is one of the most important health problems among them Blood-infected hepatitis is one of the major causes of death and mortality, disability, economic, social and psychological burden, and chronic cases of this Diseases have already caused many problems and consequences on society.In 2015, hepatitis B caused 887,000 deaths.also, Hepatitis B is an important occupational hazard for health workers. Around the world, about 71 million people are infected with chronic hepatitis C infection.

Materials and Methods: This cross-sectional study was carried out between 2014-2016 and all cases of hepatitis B and C were evaluated by available sampling method. It should be noted that all of the cases during this period were recorded by the Ministry of Internal Medicine's Center for Disease Control Hygiene and the data after entering the Excel program, its variables were analyzed by statistical software 23spss.

Findings: In 1765 cases, 93% had hepatitis B, 5.92% had hepatitis C, and 74.0% had both hepatitises. In addition, 2.5% of all cases had an injection drug addiction, 11.9% of the affected family and 22.3% of pregnancies. Most of the cases were 93-95 years old in terms of gender (63%). And most cases were in the age group of 31-35 years (16.1%).According to the source of the disease report, most of the cases were

reported by the laboratory (24.3%) and the lowest (0.85%) by the blood transfusion agency, prisons and private clinics to the health centers of the city, which provided comprehensive oversight and a coordinated system Disease reporting is required. Considering the importance of vaccination in patients with hepatitis B, 86.3% had no history of vaccination. Only 11.8% had a history of hepatitis B vaccination.

Discussion and conclusion: Due to the high risk of hepatitis, it requires training in ways to transmit the disease and carry out trials of people at risk, as well as periodic tests and follow-ups for affected people to prevent cirrhosis of the liver and vaccination of high-risk groups. It is suggested.

P215 ASSOCIATION STUDY ON HUMAN LEUKOCYTE ANTIGEN (HLA-DPB1) POLYMORPHISM RS1042151 IN IRANIAN PATIENTS WITH CHRONIC HEPATITIS C VIRUS INFECTION

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Abstract

Background and aim: There have been evidences that hepatitis C virus (HCV) can lean to a persistent infection in 70-80% of infected individuals, and the infection may progress to chronic liver disease, cirrhosis and hepatocellular carcinoma (HCC). Host genetic variants including single nucleotide polymorphisms (SNPs) and immunological factors can affect the outcome of viral infections. Human leukocyte antigen (HLA) complex is a cell-surface protein complex that is responsible for the regulation of immune responses in human. HLA-DPB1 plays a central role in the immune system by presenting peptides derived from extracellular proteins. Recently, specific HLA associations with hepatitis B and C virus infection are described for viral persistence/clearance, disease progression, and the risk of vertical transmission and the efficiency of response to antiviral therapies. In this study, we aim to detect a possible association between HLA-DPB1 polymorphism (rs1042151) in Iranian Patients and Chronic Hepatitis C Virus Infection.

Material and methods: We genotyped the rs1042151 polymorphism in 110 patients with chronic HCV infection and 111 healthy individuals by PCR-RFLP method. Direct sequencing has been used to confirm the genotyping results.

Results: Our results show that HLA-DPB1 rs1042151 SNP genotype frequencies were AA=62.7%, AG=21.8% and GG=15.5% in chronic HCV patients and AA=70.3%, AG=10.8% and GG=18.9% in the control group. There is no statistically difference in genotype frequency between case and control groups (P value=0.083). Allele frequency were A=73.0%, G=27.0% in case group and A=75.9%, G=24.1% in control group. Results show that there is no difference between two groups (P value=0.516).

Conclusion: According to our results there is no correlation between HLA-DPB1 gene (rs1042151) polymorphism with HCV chronic infection in Iranian patients.

P217 LACK OF ASSOCIATION BETWEEN INTERLEUKIN-21 GENE POLYMORPHISM (RS3117229) AND CHRONIC HEPATITIS C VIRUS INFECTION

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Abstract

Background and Aim: More than 180 million people around the world are infected with hepatitis C virus (HCV). Many studies strongly support that diversity in host genetic background such as single nucleotide polymorphisms (SNPs) have been implicated in the outcome of HCV infection. Recently, novel findings have shown that polymorphisms in cytokine genes may be associated with the development of viral infection and progression of the infection. Interleukin-21 (IL-21) is a member of the type-I cytokine superfamily that has regulatory effects on the immune system and it is important for the proliferation and differentiation of T cells, B cells, and natural killer (NK) cells, and also lymphocyte activation. For this reason, it was suggested that IL-21 can be influential in the potency of immune responses to viral infections such as Hepatitis B or C viruses. The aim of this study was to determine the association between Interleukin-21 gene polymorphism (rs3117229) and chronic HCV infection in Iranian patients.

Methods: In this case-control study, blood samples were collected from 100 HCV infected patients and 127 healthy people as control group. After genomic DNA extraction by standard salting out method; the SNP was genotyped by the PCR and restriction fragment length polymorphism (RFLP) technique and then data analysis was performed using SPSS soft-

ware.

Results: Based on the results, genotype frequencies were GG=26%, GT=49% and TT=25% in chronic HCV patients and GG=18.9%, GT=64.5% and GG=16.6% in the control group. Results showed that there is no significant difference among genotype frequencies between case and control groups (P value=0.061). Allelic frequencies were G=50.5%, T=49.5% in case group and G=51.2%, T=48.8% in control group. Also there is no significant difference among two groups (P value=0.925).

Conclusion: According to these findings, there is no correlation between IL21 gene (rs3117229) polymorphism and chronic HCV infection and its outcome.

P218 ANALYSIS OF BASELINE RESISTANCE-ASSOCIATED VARIANTS (RAVS) IN HCV-INFECTED GENOTYPE 1A TREATMENT-EXPERIENCED PATIENTS

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Abstract

Background and aim: Treatment of chronic hepatitis C virus (HCV) infection has advanced significantly over the last 5 years, with the introduction of drug combination regimens based on direct-acting antiviral (DAA) agents. HCV genotypes, disease severity, Type of DAA, and the preexistence at treatment baseline of resistance-associated variants (RAVs) changes the SVR rates. Selection of HCV RAVs are generally associated with therapeutic failure which is viral variants with reduced susceptibility to the DAA(s) administered. NS5A inhibitors have a low genetic barrier to resistance, and the selected variants confer cross-resistance across all members of the drug class. Approximately 10%-15% of HCV genotype-1 infected patients without prior exposure to NS5A inhibitors are detectable HCV NS5A RAVs at the population level prior to treatment. While the clinical impact of NS5A RAVs is not yet fully understood, in patients with genotype 1a infection, large reduction in the activity of NS5A inhibitors (>5 fold) has been caused by the presence of baseline NS5A RAVs which impacts response to NS5A-containing regimens. The presence of viral variants resistant to NS5A inhibitors at baseline is associated with lower rates of virologic cure in certain groups of patients, such as those with genotype 1a, cirrhosis and/or prior nonresponders to pegylated interferon-based regimens. The aim of this study is to assess the frequency of Baseline NS5A RAVs in nonresponders to pegylated interferon-based regimens.

Methods: Plasma samples were collected from patients without cirrhotic including 20 HCV-infected genotype 1a treatment-experienced (pegylated interferon-based regimens) and 10 HCV-infected genotype 1a treatment-naive (Control Group). Viral RNA was extracted from serum, reverse-transcribed and NS5a region amplified by the two-step nested PCR method. The PCR products were purified and sequenced.

Result: RAVs analysis of sequencing data shows that 4 patients (20%) of treatment-experienced group have Baseline low level Resistance Variants (Q30H, L31T, Q30T, P32A). In Control group one patients (10%) have Baseline Resistance low level variants (28M).

Conclusion: Due to moderate frequency of NS5a RAVs in treantment-experinced patients (20%), RAVs test of patients before treatment could help physician to choose appropriate DAA regims and/or remove ribavirin from treatment procedure.

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