JOURNAL INFORMATION

Hepatitis Monthly is a monthly journal compiled by Baqiyatallah research center for gastroenterology and liver diseases, Baqiyatallah university of medical sciences, Tehran, IR Iran. This journal is approved by:

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AIM AND SCOPE

Hepatitis Monthly is a clinical journal which is informative to all practicing gastroenterologists, hepatologists and infectious disease specialists and internists. This authoritative clinical journal is founded by Professor Seyed-Moayed Alavian in 2002. The Journal context is devoted to particular compilation of the latest worldwide and interdisciplinary approach and findings including original manuscripts, meta-analyses and reviews, health economic papers, debates and consensus statements of clinical relevance of hepatological field especially liver diseases. In addition, consensus evidential reports not only highlight the new observations, original researches and results accompanied by innovative treatments and all the other relevant topics but also include highlighting disease mechanisms or important clinical observations and letters on articles published in journal.

CONTENT COVERAGE

Hepatitis Monthly is an authentic clinical journal which its content is devoted to particular compilation of the latest worldwide and interdisciplinary approach and findings

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3. Tabriz liver and gastrointestinal diseases research center
4. Guilan gastrointestinal and liver diseases research center (GLDRC)

Further information can be seen at:

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Welcome Message

DEAR COLLEAGUES,

As the director of Iran Hepatitis Network and Global Hepatitis Community, I would like to mention that viral hepatitis is one of our priority in healthcare system now. The burden of hepatitis B virus (HBV) and hepatitis C virus (HCV) infections in the region mandates us to work more in this issue. We made a link between epidemiologists, clinicians, pathologists, virologists, specialists in transfusion medicine as well as research and laboratory centers from Iran and the world. We would like to facilitate scientific communication between researchers who are working in the field of viral hepatitis and other liver diseases. One of our activity is Tehran Hepatitis Conference which has been held for 5 times yet in Tehran, Iran.

I would like to take great pleasure in inviting you to participate in the 6th International Tehran Hepatitis Conference (THC6) hosted by Iran Hepatitis Network which will take place in Iran, May 2015. In THC5, around 1500 scientists participated and we had distinguished speakers from Canada, South Korea, Germany and the region. I invite all universities, research centers and other scientific professions in hepatology and liver diseases to join us.

In a close collaboration between Iran Hepatitis Network (IHN) and European Association for the Study of the Liver (EASL) the first day of the THC6 will be dedicated to the lectures of scientific leaders of hepatology from Europe and Iran. The Best of EASL day at THC6 will take place 27 May, 2015 with an interesting and comprehensive scientific program concentrated on viral hepatitis and other liver diseases. The guests from EASL will present the new findings in hepatology and the Iranian distinguished speakers will present their experience on management of liver diseases in Iran. We take great pleasure to invite you to participate in the Best of EASL day at THC6 which intends to promote the knowledge of hepatology in Iran and the region.

Kind Regards,

Seyed-Moayed Alavian, M.D.
THC6 Chairman
Professor of Gastroenterology and Hepatology

Director of Iran Hepatitis Network
Tel/Fax: +98 21 8126 2072
Tehran, I.R. Iran
editor@hepatmon.com / alavian@thc.ir

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O062 ECONOMIC BURDEN OF HEPATITIS B VIRUS RELATED DISEASES: EVIDENCE FROM IRAN

Khosro Keshavarz[1], Abbas Kebriaeezadeh[1], Farid Abedin Dorkoosh[1], Seyed Moayed Alavian[2], Ali Akbari Sari[3], Maryam Keshvari[4], Shekoufeh Nikfar[1]

[1]*Pharmaco-economics & Pharmaceutical Administration, Tehran University of Medical Sciences, Tehran, Iran;*
[2]*Baqiyatallah Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[3]*Health Management and Economics, Tehran University of Medical Sciences, Tehran, Iran;*
[4]*Blood Transfusion Research Centre, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran*

Presenting Author: Shekoufeh Nikfar, Email: shekoufeh.nikfar@gmail.com

ABSTRACT

Background: Hepatitis B infection is still the main cause of chronic liver disease in Iran, which is associated with significant economic and social costs.

Objectives: To estimate the financial burden caused by chronic hepatitis B infection and its complications in Iran.

Patients and Methods: A prevalence based and bottom up approaches were used to collect the data. Data on direct medical costs was extracted from outpatient medical records in a referral gastroenterology and Hepatology research center, inpatient medical records in several major hospitals in Tehran and Shiraz in 2013, and also from the self reports of specialists. Data on direct non-medical and indirect costs was collected based on patient self reports through face-to-face interviews carried out in the mentioned centers. To calculate the indirect costs, friction cost approach was used. To calculate the total cost-of-illness in Iran, the total cost per patient at each stage of the disease was estimated and multiplied by the total number of patients.

Results: The total annual cost for the activate population of chronic hepatitis B patients and for those receiving treatment at various disease stages were 449 and 225 million dollars, respectively. Of this amount, 64% and 70% were allocated to direct costs, and 36% and 30% were allocated to indirect costs. The total direct costs alone were approximately 1.17% and 0.6% of total health expenditure. Furthermore, the cost spent on drugs encompasses the largest proportion of the direct medical cost for all stages of disease.

Conclusions: According to the perspectives of payers, patients, and community, CHB infection can be considered as one of the diseases with a substantial economic burden; the disease, specifically in extreme cases can be too expensive and costly for patients. Therefore, patients should be protected against more severe stages of the disease through proper treatment and early diagnosis.

O064 EVALUATION OF L-CARNITINE EFFICACY IN THE TREATMENT OF NON-ALCOHOLIC FATTY LIVER DISEASE AMONG DIABETIC PATIENTS: A RANDOMIZED PILOT STUDY

Pezhman Alavinejad[1], Mehrnoosh Zakerkish[2], Eskandar Hajiani[1], Seyed Jalal Hashemi[1], Abdol Rahim Masjedizadeh[1], Mahmoud Chobineh[3]

[1]*GI Department, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran;*
[2]*Endocrinology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran;*
[3]*Department of Internal Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran*

Presenting Author: Pezhman Alavinejad, Email: pezhmanalavinejad@gmail.com

ABSTRACT

Introduction: Non-alcoholic fatty liver disease (NAFLD) is one of the most common liver diseases worldwide and while its pathophysiology is still unverified, most of the present theories are based on Insulin resistance and oxidative stress as key factors. According to role of L-Carnitine in the process of fatty acid oxidation and glucose metabolism, it seems that this drug could be potentially effective in the treatment of diabetic patients suffering from NAFLD. This study has been designed to evaluate this potential therapeutic effect.

Methods: 60 type 2 diabetic patients with NAFLD based on sonographic findings and elevated serum transaminases randomly divided into 2 groups. The intervention group (A) treated with L-Carnitine 750mg TDS while the control group (B) received placebo. After 3 months intervention the level of serum transaminases and sonographic degree of fatty liver compared between 2 groups.

Findings: In comparison of average level of AST and ALT between 2 groups, we found a meaningful effect ($P < 0.001$) while there were no significant reduction in serum level of Cholesterol, TG and FBS ($P > 0.05$) and also the sonographic degree of fatty liver didn't change among 2 groups.

Conclusions: It seems that L-Carnitine is effective in treatment of NAFLD among diabetic patients and could be a potential therapeutic approach in such patients. We recommend these findings to further be verified if future.

O068 HEPATITIS C GENOTYPES/SUBTYPES AMONG CHRONIC HEPATITIS C PATIENTS IN IRAQ.

Akram Ajeel Najeeb[1], Eman Sh. Al-Obeidy[2]

[1]*Gastroenterology and Hepatology, Medical City, Baghdad, Iraq;*
[2]*Virology, Medical City, Baghdad, Iraq*

Presenting Author: Akram Ajeel Najeeb, Email: akram_git@yahoo.com

ABSTRACT

Background: The HCV genome is a positive-sense, single-stranded RNA genome approximately 10 kb long. It has marked similarities to those of members of the genera Pestivirus and Flavivirus. Different HCV isolates from around the world show substantial nucleotide sequence variability throughout the viral genome. Based on the identification of these genomic differences, HCV has been classified into multiple strains. It is thought that genetic heterogeneity of HCV may account for some of the differences in disease outcome and response to treatment observed in HCV-infected persons.

Objectives: This study was established to assess the prevalence of HCV genotype among Iraqi patients.

Patients and Methods: genotyping was attempted on 230 HCV-infected Iraqi patients from different hospitals in the country. These included 150 males and 80 females with mean age 52.6 years. Testing for anti-HCV was done using the available commercial kits of the third generation enzyme immunoassay (Foresight-USA). According to the manufacture instructions, a sample was considered positive if the optical density value was equal to or greater than that of a strong positive reaction control multiply by 0.2 (cut-off). The positive samples were re-tested in duplicate. A sample was considered firmly positive when at least two positive results were obtained. Positive sera were then subjected to a confirmatory test using a third generation immunoblotting assay (Biokit-Spain). HCV genotyping was performed on PCR HCV RNA-positive samples using a commercial line probe assay (Abbott-USA).

Results: HCV genotype 1b is found to be the predominant genotype among HCV-infected Iraqi patients 44.6%followed by genotype 4 (36.9%).

Conclusions: The predominance of HCV genotype 1b&4 in our population in the same range most of the Arab countries in the Middle East, this will affect the duration and response to treatment.

O073 HEPATITIS B, C, AND D VIRUSES IN TAJIKISTAN

Saodat Azimova[1]

[1]*Institute of Gastroenterology of Ministry of Health and Social Protection of Population of the Republic of Tajikistan, Dushanbe, Tajikistan*

Presenting Author: Saodat Azimova, Email: asaodat_57@mail.ru

ABSTRACT

Aim: The implication of genotypes is increasingly recognized in the clinical course of HBV treatments and in response to antiviral drugs of HCV. Genotypic prevalence of both etiological agents varies geographically, and no data are available for Tajikistan. The present study was to investigate the genotypic prevalence and clinical significance of HCV, HBV, and/or HDV among chronic hepatitis patients with and without liver cirrhosis and/or HCC in Tajikistan.

Methods: Sera were obtained from 124 consecutive cases of chronic liver diseases. Patients in this study were classified into two clinical groups: (i) chronic hepatitis and (ii) liver cirrhosis. Genotyping of hepatitis C virus (HCV) was performed, and total RNA was extracted from serum, reverse transcribed into cDNA using random hexamer primers as described previously (Ohno et al, 1997). All of the HBsAg-positive samples were subjected to genotyping by commercial EIA kit (Institute of Immunology Co., Ltd, Tokyo, Japan).

Results: Genotypes of HBV, HCV, and HDV were determined by genetic sequencing. The overall prevalence of anti-HCV, HCV core antigen (HCVcAg) and HBsAg was 46% (57/124) and 41.1% (51/124), respectively. Co-infection of HCV/HBV, HBV/HDV, and HCV/HBV/HDV was found in 4.8% (6/124), 11.2% (12/124), and 0.8% (1/124) of cases, respectively. HDV genotype 1 was found in 19.6% (10/51) of HBsAg-positive patients. The HBV/HDV co-infection was relatively high in group 2 compared with group 1 (15% vs. 7.1%). HCV/1b was detected in 84.6% (44/52) of HCV RNA-positive patients, followed by 3a (7.6%), 2a (5.7%), and 2c (1.9%). HBV/D was detected in 94.1% (48/51) of HBsAg-positive patients, followed by HBV/A [5.8%, 3/51]. T1762/A1764 double mutation was associated with liver cirrhosis in HBV-infected patients (P.0.0004).

Conclusions: Among HBV-infected patients, the T1762/A1764 mutation was associated with liver cirrhosis.

O075 A STUDY ON CLINICAL & SEROLOGICAL MARKERS OF CHRONIC HBV INFECTION IN BABYLON

Monem Makki Alshok[1]

[1]*Medicine, Medical College, Hilla, Iraq*

Presenting Author: Monem Makki Alshok, Email: dr_monem_alshok@yahoo.com

ABSTRACT

Background: Viral hepatitis is a major health problem in many parts of the world and patients with chronic HBV infection is considered as an important sources of transmission of infection to other in addition to its complication of HCC and cirrhosis.

Patients & Methods: Plasma were collected from 70 patients with positive HBs Antigen detected by ELIZA technique and in these patients we test HBeAg Ag , HBeAb and HBcAb by the same technique in addition we do PCR test to measure the degree of viral load in these patients. All the patients had thorough clinical assessment, U\S examination, blood picture and liver function tests.

Results: From a total of 70 patients diagnosed as CLD according to the American Association of liver disease 15 found to have positive e antigen and about 85% of these patients are rural and 80% are symptomatic with abnormal LFTs and findings on liver U\S compared with e negative patients. Viral load of > 105 copies\ml .were reported in 87% of e antigen positive CHB in comparison to 50% in e antigen negative CHBV (P value < 0.05).

Conclusions: 1. the prevalence of e antigen positivity is 21 % among patients with CHBV infection in Babylon 2. HBeAg Ag is a marker of severity & infectivity, but its absence does not exclude the infectivity rate as a good percentage of these Patients had detectable levels of viral DNA.

O076 SEROPREVALENCE AND RISK FACTORS OF HEPATITIS B VIRUS INFECTION IN BIRJAND, IRAN: A POPULATION-BASED STUDY

Masood Ziaee[1], Gholam Reza Sharifzadeh[1], Ghodsyeh Azarkar[1], Azadeh Ebrahimzadeh[1], Zohreh Azarkar[1], Mohammad Hasan Namaee[1]

[1]*Hepatitis Research Center, Birjand University of Medical Sciences, Birjand, Iran*

Presenting Author: Masood Ziaee, Email: dr.m.ziaee@gmail.com

ABSTRACT

Background: Hepatitis B is a major global health problem and a potentially life-threatening liver infection caused by hepatitis B virus. Since information on its prevalence in general population is mandatory for formulating effective policies, the current population-based serological survey was conducted in Birjand, where no epidemiological data is available for determining the prevalence and risk factors of HBV infection.

Patients and Methods: Using the cluster-sampling method, 4010 individuals living in Birjand were studied. Data were collected by trained interviewers through validated questionnaires. The age of participants ranged from 15 to 70 years. Serum samples were tested for HBcAb and HBsAg through third generation ELISA screening tests. Various risk factors were recorded and multivariate analysis was performed.

Results: Out of 4010 subjects, 2117 (52.8%) were female and 1893 (47.2%) were male, with the mean age of 39.8 ±14.5 years. The prevalence of HBcAb and HBV markers were 14.7% and 1.3%, respectively. The prevalence of HBV marker was significantly higher in men (1.6%), compared to female participants (1%). The age groups had different frequencies of HBcAb and HBV markers. The lowest and the highest positivity rates of HBsAg (0.24%; 2.5%) and HBcAb (4%; 33.6%) were found in the age groups of 65 years, respectively (p=.03). The risk of infection in married individuals was significantly higher than singles in cases, (OR: 2.8). There was a significant relationship between HBV infection and the history of major surgeries, blood transfusion, and war injuries (p=.01), while such relationships were not found between HBV infection and the history of tattooing, imprisonment, injection drug use, and needle stick.

Conclusions: The study demonstrated a prevalence rate of 1% for HBsAg seropositivity in Birjand. It was found that variables including gender and age were significantly associated with HBsAg positivity. The lower prevalence of HBsAg positivity in the lower age groups is probably due to success of the HBV infant vaccination program in Iran, which initiated in 1993.

O080 VIRAL HEPATITIS: USING SOCIAL SCIENCES TO REDUCE THE BURDEN

Jack Wallace[1]

[1]*Australian Research Centre in Sex, La Trobe University, Melbourne, Australia*

Presenting Author: Jack Wallace, Email: j.wallace@latrobe.edu.au

ABSTRACT

Background: Hepatitis B and hepatitis C are the primary determinants of liver cancer with an estimated 130 million people globally living with chronic hepatitis B or hepatitis C. More than five million people are estimated to die as a result of these infections over the next 10 years in the Asia Pacific region, where mortality from chronic viral hepatitis outnumbers that of HIV, malaria and dengue combined. The World Health Organization is supporting the development of country level strategies to control the infections. The aim of the Viral Hepatitis Social

Research Program, La Trobe University is to reduce the morbidity and mortality of viral hepatitis by investigating viral hepatitis as a social and cultural issue. This perspective strengthens and broadens our understanding of the infections, and provides data that can be used by advocates and policy makers in developing strategic responses.

Methods: The program has conducted social research projects in Australia, Taiwan and China since 2008. These projects, interviewing clinicians, policy makers, people with viral hepatitis, and other stakeholders document the social impact of viral hepatitis and identify gaps that need to be addressed. Across the region these gaps include:

- only a small minority of people with viral hepatitis access clinical services
- l inadequate diagnostic processes
- l reduced access to health services by populations most affected
- l stigma and discrimination
- l poor knowledge of the infections by people infected, and the community at large

Outcomes: Reducing the global, national and individual burden of viral hepatitis requires comprehensive and systematic policy responses. Understanding the social implications and the cultural context of viral hepatitis and how these interconnect with clinical care provide valuable data informing a comprehensive response to the infections, from prevention through to clinical management. This presentation provides an overview of how social research findings can support the development of country level strategic to control viral hepatitis.

O084 PILOT CLINICAL TRIAL WITH CHLOROQUINE IN NON-RESPONDING HCV PATIENTS

Kamran B Lakarani[1], Payam Peymani[1], Behzad Yeganeh[2], Saeid Ghavami[3], Siamak Sabour[4], Bita Geramizadeh[5], Mohammad Reza Fattahi[6], Hossein Keyvani[7], Negar Azarpira[8], Maryam Akbari[1], Kevin M Coombs[9]

[1]*Health Policy Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Hospital for Sick Children Research Institute, Department of Physiology & Experimental Medicine, University of Toronto, Toronto, Canada;*
[3]*Department of Human Anatomy and Cell Science, St. Boniface Research Centre, Manitoba Institute of Child Health, Biology of Breathing Theme, University of Manitoba, Winnipeg, Canada;*
[4]*Safety Promotion and Injury Prevention Research Center and Department of Clinical Epidemiology, School of Health, Shahid Beheshti University of Medical Sciences, Tehran, I.R. Iran;*
[5]*Department of Pathology and Organ Transplant Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[6]*Department of Internal Medicine and Gastroenterohepatology Research Center, School of Medicine, Shiraz University of Medical sciences, Shiraz, IR Iran;*
[7]*Department of Clinical Virology, Iran University of Medical Sciences, Tehran, Iran.;*
[8]*Organ Transplant Research Center, Namazi Hospital, Shiraz University of Medical Sciences, Zand Street, Shiraz, Iran;*
[9]*Department of Medical Microbiology, University of Manitoba, Winnipeg, Canada*

Presenting Author: Payam Peymani, Email: peymani.payam@gmail.com

ABSTRACT

Background: Hepatitis C virus (HCV) is a leading cause of chronic liver disease, which often leads to end stage liver associated diseases and is responsible for a significant burden of illness worldwide. There are no broadly effective anti HCV compounds; thus, more efficacious and tolerable therapeutic strategies are urgently needed. Recent studies have highlighted autophagy against diverse infections. Of interest, it has been reported that HCV infection induces the autophagic pathway. The aims of the present pilot clinical trial were to evaluate the therapeutic efficacy and short term safety of chloroquine (QC), in patients with chronic hepatitis C genotype 1 who were not responding to previous antiviral treatments.

Methods: Ten non-responders to previous antiviral treatment(s) were treated with QC (150 mg daily for 8 weeks), and were followed 4 weeks after QC therapy. HCV RNA load and alanine transaminase (ALT) level were evaluated at baseline, week 4 (initial response), at week 8 (end of treatment response) and at the end of 12 weeks follow-up.

Results: Loss of HCV RNA at the end of the treatments (week 8) was observed in all patients of QC group (P-Value 0.04). Persistent loss of HCV RNA at the end of the follow-up period (week 12) was not achieved in the QC patient group. Decreasing and normalization in ALT at the end of the treatments was observed in QC group.

Conclusions: This study provides preliminary evidence that QC may reduce viral load and normalize ALT in non-responder chronic HCV-infected patients. QC is safe for HCV non-responder patients in doses of 150 mg/daily and in its current form has significant effect on HCV RNA levels. Prolonging QC therapy in non-responding chronic HCV patients may increase sustained response rates. Because this is a pilot trial, larger controlled trials using QC in non-responsive HCV patients seem warranted.

O086 INVERSE ASSOCIATION OF GLUTATHIONE PEROXIDASEWITH LIVER FIBROSIS IN CHRONIC HEPATITIS B

Shirin Moossavi[1], Sima Besharat[2], Hossein Poustchi[1], Akram Pourshams[2], Reza Ghanbari[1], Maryam Sharafkhah[2], Ashraf Mohamadkhani[2]

[1]*Liver and Pancreatobiliary Diseases Research Center, Tehran University of Medical Sciences, Tehran, Iran;*
[2]*Digestive Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Ashraf Mohamadkhani, Email: mohamadkhani.ashraf@gmail.com

ABSTRACT

Background and Aim: Oxidative stress plays a major pathogenic role in liver injury following chronic hepatitis B (CHB). Glutathione peroxidase (Gpx) has a central role in regulating the oxidative state. Hepatitis B virus (HBV) results in down-regulation of Gpx. On the other hand, iron homeostasis is disrupted in HBV infected patients. Therefore, the objective of this study was to assess the interplay of Gpx and serum iron on clinical and virological characteristics of patients with chronic HBV.

Patients and Methods: One hundred and fifty adult treatment-naïve CHB patients were randomly selected from an ongoing HBV cohort. Plasma Gpx1concentration and HBV DNA quantity were measured. Liver stiffness was measured by transient elastography.

Results: Serum iron had a positive association with HBV DNA count in the total population. Serum iron was not associated with LSM. However, HBV DNA was significantly associated with LSM only in males. Serum Gpx was inversely associated with LSM. Serum iron and Gpx have indirect effects on LSM via HBV DNA count. We observed distinct effects of serum iron on HBV DNA and Gpx on LSM in males and females.

Conclusions: We identified an interplay of serum iron and Gpx1 in relation to level of liver fibrosis in CHB. Our results suggest that oxidative stress and serum iron are differentially implicated in the progression of CHB in male and female.

O098 TIME TO HEPATOCELLULAR CARCINOMA DIAGNOSIS AFTER NOTIFICATION OF HEPATITIS B OR C INFECTION: A POPULATION-BASED COHORT STUDY, 1992–2006

Maryam Alavi[1], Matthew G Law[1], Jason Grebely[1], Hla-Hla Thein[2], Behzad Hajarizadeh[1], Janaki Amin[1], Gregory J Dore[1]

[1]*The Kirby Institute, UNSW Australia, Sydney, Australia;*
[2]*Dalla Lana School of Public Health, University of Toronto, Toronto, Canada*

Presenting Author: Maryam Alavi, Email: msalehialavi@kirby.unsw.edu.au

ABSTRACT

Introduction: Chronic hepatitis B virus (HBV) and hepatitis C virus (HCV) infections are major risk factors for hepatocellular carcinoma (HCC). The aim of this study was to characterise "late hepatitis notification" among people with an HBV/HCV notification in NSW, Australia.

Methods: Notifications of HBV and HCV infection (mandatory anti-HBV/HCV positive serology notification since 1991) reported to the NSW Health Department 1992-2006 were linked to cancer registry data. Late hepatitis notification was defined by an HBV/HCV notification after, at the time, or within two years before HCC diagnosis.

Results: HBV and HCV cohorts comprised 43,511 and 84,436 individuals, respectively. HBV- and HCV-related HCC occurred among 516 and 559 people, respectively. Late HBV notification declined from 95% (58 of 61) during 1992-1994 to 36% (50 of 140) during 2004-2006. Late HCV notification declined from 94% (33 of 35) during 1992-1994 to 18% (36 of 200) during 2004-2006. Late HBV notification was associated with older age at notification (>53 years) (aOR 2.35, 95% CI 1.43, 3.87) and being born in Asia Pacific (aOR 5.14, 95% CI 1.09, 24.17). Late HCV notification was associated with older age at notification (>53 years) (aOR 3.94, 95% CI 2.05, 7.56). Compared to Australian-born people, overseas-born individuals were less likely to have a late HCV notification (Asia Pacific aOR 0.29, 95% CI 0.13, 0.61; other countries aOR 0.31, 95% CI 0.15, 0.63).

Conclusions: Despite significant declines in late hepatitis notification since early/mid-1990s, efforts to enhance hepatitis screening, particularly for HBV, are required. Late hepatitis notification defined by an HBV/HCV notification after, at the time, or within two years before HCC diagnosis, could be used as a measure of population-level HBV/HCV screening.

O110 PHYLOGENETIC EVIDENCE OF INTRAFAMILIAL TRANSMISSION OF HEPATITIS B VIRUS AMONG HOUSEHOLD MEMBERS WITH CHRONIC INFECTION

Shahnaz Sali[1], Maryam Vaezjalali[2]

[1]*Infectious Disease and Tropical Medicine Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran;*
[2]*Microbiology Department, Shahid Beheshti University of Medical Sciences, Tehran, Iran*

Presenting Author: Maryam Vaezjalali, Email: maryam.vaezjalali@gmail.com

ABSTRACT

Background: Intrafamilial transmission of hepati-

tis B virus (HBV) commonly occur through frequent and prolonged child-to-child or household contacts. In the present study, intrafamilial transmission of HBV among family members of Iranian index HBsAg carriers was investigated using phylogenetic analysis of the S region of the viral genome.

Methods: Nested polymerase chain reaction was used for detection of HBV DNA in serum samples from 22 index and 43 contact patients with chronic HBV infection. HBV DNA was detected in 37 samples (14 indexes, 23 contacts). The S gene region of the DNA isolates was subjected to direct sequencing and phylogenetic analysis.

Results: All isolates (from 26 patients) were clustered with genotype D, of which 24 strains were of subgenotype D1, subtype ayw2, while 2 additional strains were of subgenotype D2, subtype ayw3. Evidence of intrafamilial transmission of the virus was found in 8 families studied phylogenetically. Overall, 60 changes were detected in the amino acid sequences of the surface antigen protein in 23 patients. Four premature stop codon occurred in 3 isolates at residues 69 and 182. Of the 56 amino acid substitutions in HBsAg, 18 (32%) occurred in cytotoxic T cell antigenic epitopes, 14 (25%) in B cell epitope, and 9 (16%) in T helper epitopes. Seven out of 8 families displayed 25-100% common amino acid substitutions among their members.

Conclusion: Intrafamilial transmission of HBV frequently occurs among family members of chronic HBV carriers.

O114 PATTERNS OF HEPATITIS C VIRUS RNA LEVELS DURING ACUTE INFECTION: THE INC3 STUDY

Behzad Hajarizadeh[1], Bart Grady[2], Kimberly Page[3], Arthur Y. Kim[4], Barbara H. McGovern[5], Andrea L. Cox[6], Thomas M. Rice[3], Rachel Sacks-Davis[7], Julie Bruneau[8], Meghan Morris[3], Janaki Amin[1], Janke Schinkel[9], Tanya Applegate[1], Lisa Maher[1], Margaret Hellard[7], Andrew R. Lloyd[10], Maria Prins[2], Gregory J. Dore[1], Jason Grebely[1]

[1]*Kirby Institute, UNSW Australia (University of New South Wales), Sydney, Australia;*
[2]*Cluster Infectious Diseases, GGD Public Health Service of Amsterdam, Amsterdam, The Netherlands;*
[3]*Department of Epidemiology and Biostatistics, University of California, San Francisco, San Francisco, USA;*
[4]*Harvard Medical School, Boston, USA;*
[5]*Tufts Medical School, Boston, USA;*
[6]*Department of Medicine, Johns Hopkins Medical Institutions, Baltimore, USA;*
[7]*Burnet Institute, Melbourne, Australia;*
[8]*CRCHUM, Université de Montréal, Montréal, Canada;*
[9]*Academic Medical Center, Amsterdam, The Netherlands;*
[10]*School of Medical Sciences, UNSW Australia (University of New South Wales), Sydney, Australia*

Presenting Author: Behzad Hajarizadeh, Email: bhajarizadeh@kirby.unsw.edu.au

ABSTRACT

Background: Understanding the patterns of HCV RNA levels during acute HCV infection provides insights into immunopathogenesis and is important for vaccine design. This study assessed patterns of HCV RNA levels and associated factors during acute HCV.

Methods: Data were drawn from an international collaboration of nine prospective cohorts of acute HCV (InC3 Study). Individuals with well-characterized acute HCV (detected within 3 months post-infection and interval between the peak and subsequent HCV RNA ≤ 120 days) were categorised based on a priori-defined patterns of HCV-RNA levels: i) spontaneous clearance, ii) partial viral control with persistence (≥ 1 log IU/mL decline in HCV RNA levels following peak) and iii) viral plateau with persistence (increase or <1 log IU/mL decline in HCV RNA levels following peak).

Results: Among 643 individuals with acute HCV infection, 162 with well-characterized acute HCV were identified. Spontaneous clearance, partial viral control with persistence, and viral plateau with persistence were observed in 52 (32%), 44 (27%), and 66 (41%) individuals, respectively (Figure). HCV RNA levels reached a high viraemic phase one month following infection, with higher levels in spontaneous clearance and partial viral control with persistence groups, compared to viral plateau with persistence group (median: 6.0, 6.2, 5.3 log IU/mL; P=0.018). In two groups with persistence, interferon lambda 3 (IFNL3) CC genotype was independently associated with partial viral control compared to viral plateau (adjusted odds ratio [AOR]: 2.75; 95%CI: 1.08, 7.02). In two groups with viral control, female sex was independently associated with spontaneous clearance compared to partial viral control with persistence (AOR: 2.86; 95%CI: 1.04, 7.83).

Conclusion: A spectrum of HCV RNA patterns is evident in individuals with acute HCV infection. IFNL3 CC genotype is associated with initial viral control, while female sex is associated with ultimate spontaneous clearance.

O116 EFFICACY OF RESPONSE-GUIDED PEGYLATED INTERFERON AND RIBAVIRIN THERAPY FOR PEOPLE WHO INJECT DRUGS WITH HCV GENOTYPE 2/3 INFECTION: THE ACTIVATE STUDY

Jason Grebely[1], Olav Dalgard[2], Brian Conway[3], Graham Foster[4], Philip Bruggmann[5], Markus Backmund[6], Geert

Robaeys[7], Tracy Swan[8], Behzad Hajarizadeh[1], Janaki Amin1, Philippa Marks[1], Sophie Quiene[1], Martin Weltman[9], David Shaw[10], Adrian Dunlop[11], Margaret Hellard[12], Julie Bruneau[13], Stefan Bourgeois[14], Cornelia Staehelin[15], Gregory J. Dore[1]

[1]*The Kirby Institute, UNSW Australia, Sydney, Australia;*
[2]*Department of Infectious Diseases, Akershus University Hospital, Oslo, Norway;*
[3]*Vancouver Infectious Diseases Center, Vancouver, Canada;*
[4]*The Liver Unit, Queen Marys University of London, London, United Kingdom;*
[5]*Arud Centres for Addiction Medicine, Zurich, Switzerland;*
[6]*Ludwig-Maximilians-University Munich, Munich, Germany;*
[7]*Department of gastroenterology and hepatology, Ziekenhuis Oost Limburg, Genk, Belgium;*
[8]*Treatment Action Group, New York, United States;*
[9]*Nepean Hospital, Sydney, Australia;*
[10]*Royal Adelaide Hospital, Adelaide, Australia;*
[11]*School of Medicine and Public Health, University of Newcastle, Newcastle, Australia;*
[12]*Burnet Institute, Melbourne, Australia;*
[13]*Universite de Montreal, Montreal, Canada;*
[14]*Stuivenberg ZNA, Antwerp, Belgium;*
[15]*Division of Infectious Diseases, University Hospital and University of Bern, Bern, Switzerland*

Presenting Author: Jason Grebely, Email: jgrebely@kirby.unsw.edu.au

ABSTRACT

Aims: This study evaluated response-guided PEG-IFN alfa-2b/RBV treatment for chronic HCV genotypes (G) 2/3 infection among people who inject drugs (PWID).

Methods: ACTIVATE is a phase IV open-label, multicentre, international trial. Participants with chronic HCV G2/3 and active (previous 24 weeks) injecting drug use or receiving opioid substitution treatment (OST) were recruited between 2012 and 2014. Participants received directly observed PEG-IFN (1.5 μg/kg/week) and self-administered RBV (800-1400 mg daily, weight-based). Participants with a rapid virological response (RVR) received 12 weeks (shortened duration) and those without RVR received 24 weeks (standard duration) therapy. The primary endpoint was SVR at 12 weeks (SVR12) by ITT analysis. A preliminary ITT analysis included only patients having completed follow-up to SVR12 or having discontinued therapy prior to that time-point.

Results: Overall, 93 initiated treatment (87% HCV G3). At baseline, 35% (n=33) were receiving OST [15 (16%) injected in the previous 12 weeks], 43% (n=40) had injected in the past 4-12 weeks and 22% (n=20) had injected in the last month. In follow up, 66% (n = 61) achieved RVR (shortened treatment), 28% (n=26) did not (standard treatment), and 6% (n=6) discontinued therapy prior to week 4. In the preliminary ITT population (n=75), ETR and SVR were 83% (n=62) and 59% (n=44), respectively. SVR was 69% (38 of 55) in those with an RVR (shortened treatment) compared to 43% (6 of 14) in those without an RVR (standard treatment). SVR was similar among OST (52%, n=12), non-OST injecting in past 4-12 weeks (79%, n=11) and non-OST injecting in past month (55%, n=21, P=0.238) sub-groups. In adjusted multivariate analyses, RVR was the only factor associated with SVR (adjusted OR=4.38; 95% CI: 1.05, 18.31; P=0.043).

Conclusion: Among PWID with chronic HCV genotypes 2/3, on-treatment RVR was a strong predictor of SVR in patients receiving a 12 week course of PEG-IFN/RBV combination therapy, even in patients actively injecting drugs when treatment was initiated.

O117 RELATION BETWEEN INTERLEUKIN-12 RECEPTOR B1 GENE POLYMORPHISM (RS3746190 A/G) AND CHRONIC HEPATITIS B VIRUS INFECTION SUSCEPTIBILITY

Mojtaba Salehi[1], Seyed Reza Mohebbi[1], Mehrdad Ravanshad[2], Pedram Azimzadeh[1], Maryam Karkhaneh[1], Shaghayegh Derakhshani[1], Afsaneh Sharifian[1], Mohammad Reza Zali[1]

[1]*Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran;*
[2]*Department of Virology Group, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran*

Presenting Author: Mojtaba Salehi, Email: m.salehi.vir@gmail.com

ABSTRACT

Background: Hepatitis B virus (HBV) infection is a global health issue. It is a multifactorial disease and is associated with diverse liver disease, for example acute or fulminant hepatitis, chronic hepatitis, liver cirrhosis and hepatocellular carcinoma. Successful clearance and elimination of infection from the body or development of HBV infection to chronic disease depends on the age and host genetic background in immune system genes. IL12 and also IL12 Receptor B1 (IL 12 RB1) are the key factors in the spontaneous clearance of viral infections, especially HBV. The purpose of the present research is to investigate the association between Interleukin-12 receptor B1 gene polymorphism (rs3746190 A/G) and Susceptibility to chronic Hepatitis B virus infection.

Materials and Methods: In this case control study, genomic DNA of 150 chronic HBV infected patients and 150 healthy controls was extracted by salting out method and rs3746190 single nucleotide polymorphism was genotyped by using polymerase chain reaction/restriction fragment length polymorphism (PCR-RFLP).

Results: A total of 300 individuals (mean age: 36.26±11.98, range from 18 to 69 years) have been studied. No statistically significant difference between case and control groups has been observed

(P=0.845). Distribution of genotypes for rs3746190 were 20 TT (13.3%), 69 CT (46%), 61 CC (40.7%) in chronic HBV patients and 19 TT (12.7%), 74 CT (49.3%), 57 CC (38%) in control group.

Conclusion: In this study, we observed no significant relation between rs3746190 single nucleotide polymorphism of the IL12RB1 gene and susceptibility to chronic hepatitis B virus infection. Therefore, polymorphism in gene IL12RB1 is not a prognostic factor for susceptibility to chronic HBV infection.

O118 TIME TO SEROCONVERSION OF HBSAG TO ANTI-HBS IN THOSE WHO LOST HBSAG DURING FOLLOW-UP

Mohammad Reza Hasanjani Roushan[1], Mahbobeh Mohammadpour[1], Masomeh Bayani[1], Mohammad Jafar Soleimani Amiri[1]

[1]*Infectious Diseases and Tropical Medicine Research Center, Babol Medical University, Babol, Iran*

Presenting Author: Mohammad Reza Hasanjani Roushan, Email: hagar2q@gmail.com

ABSTRACT

Background and Objective: Time to seroconversion of HBsAg to anti-HBs after clearance of HBsAg was not clearly determined. This study was conducted to determine the time of appearance of anti-\ HBs in those who lost HBsAg during follow-up.

Methods: From 1991 through 2014, all cases of HBsAg positive who referred to the clinic of Infectious Diseases in Babol North of Iran were recorded. All of these cases were checked every six months interval regarding, HBsAg, Anti-HBs, HBeAg, anti-HBe, and α-fetoprotein. Liver sonography was also performed for those over 40 years and likewise those with history of cirrhosis or liver cancer in their family members due to HBV related cause. Those who lost HBsAg were entered in this study. HBsAg, anti-HBs and HBV DNA liver function test were assessed in these cases. Data were collected and analyzed.

Results: A total of 98out of 3963subjects lost HBsAg with 10.5±5 years of follow-up. The mean age of these patients at the beginning of the study was 33.72±12.88 years. Eighteen cases have not participated in the subsequent follow-up and were excluded from the study. So, 76 (48 males, 28 females) subjects were followed up. After a mean follow up of 77±52 months, anti-HBs appeared in 59 (77.6%) cases. The cumulative probabilities for the appearance of anti-HBs after disappearance of HBsAg for 1, 2, 3, 4, 5 years were 21.5%, 38.4%, 45.6%, 52.9%, and 62.1%, respectively. Anti- HBs developed in 80% of subjects within 10 years of follow-up.

Conclusion: The results show that the seroconversion to anti-HBs may develop in 80% of cases after 10 years of the HBsAg loss.

O133 PREVALENCE OF CHRONIC HB INFECTION IN CHILDREN AND SPOUSES OF INFECTED INDIVIDUALS: A PROSPECTIVE COHORT STUDY IN GOLESTAN PROVINCE

Hossein Poustchi[1], Aezam Katoonizadeh[1], Mohammad Reza Ostovaneh[2], Maryam Sharafkhah[1], Saeed Esmaili[3], Jacob George[3], Mehdi Mohammadnejad[1], Reza Malekzadeh[1]

[1]*Liver and Pancreatobiliary Diseases Research Center, Digestive Disease Research Institute, Tehran, Iran*
[2]*Division of Gastroenterology and Hepatology, Johns Hopkins Medical Institutions, Baltimore, USA;*
[3]*Storr Liver Unit, University of Sydney and Westmead hospital, NSW, Australia*

Presenting Author: Hosein Poustchi, Email: h.poustchi@gmail.com

ABSTRACT

Background/Aims: Despite other parts of Iran, Golestan province has a high prevalence of 7% for chronic hepatitis B (CHB) infection. CHB infection is the most common cause of end stage liver disease in Iran and in Golestan province. The infection can be transmitted both vertically and horizontally being an important concern for families, health service providers and policy makers. The aim of this study was to investigate intrafamilial transmission of CHB infection in this province.

Materials and Methods: Golestan Cohort Study (GCS) is a population-based cohort study of 50,045>40 years old individuals, initially (2004-2008) designed to study the upper GI cancers in Northern Iran. In 2008, a baseline measurement of HB surface antigen (HBsAg) on the stored serum samples of all GCS participants identified 3,505 HBsAg+ individuals. In 2011, we checked HB serological markers in those 3,505 initially HBsAg+ individuals and their first degree relatives including spouses (1454) and children (3934).

Results: HBsAg was positive in 2.2% of spouses and 8.3% of children (overall rate of 6.6% with a male predominance, P=0.0001). HBcAb was positive in 52.3% of spouses and 23% of children (overall rate of 31% with a male predominance, P=0.0001). A higher rate of HBsAg+ children (10.2%) were found in families where the mother was positive for HBsAg compared with the families where the father was positive for HBsAg (6.3%) (P=0.0001) which indicates the importance of mother in the spread of CHB infection. When both parents were positive for HBsAg the rate of HBsAg positivity was as high as 23.5% (p=0.0001), suggesting the importance of close contact between

parents and their children (maternal as well as paternal transmission route) in the spread of CHB infection.

Conclusion: Despite the aforementioned high virus exposure rate among spouses (52.3%), the rate of HBsAg positivity among them was very low (2.2%). This finding together with the finding of the highest infection rate among children with both infected parents reflects the fact that in our community sexual transmission, compared to parent to child transmission, is a less important route in the spread of CHB infection.

O136 STUDY OF EFFECT OF ITPA GENE POLYMORPHISMS ON PEGYLATED INTERFERON/RIBAVIRIN-INDUCED ANEMIA AND SUSTAINED VIROLOGIC RESPONSE IN IRANIAN PATIENTS WITH CHRONIC HEPATITIS C INFECTION

Mohammad Pouryasin[1,2], Maryam Keshvari[3]

[1]*Department of Biology, East Azarbaijan Science and Research Branch, Islamic Azad University, Tabriz, Iran;*
[2]*Department of Biology, Tabriz Branch, Islamic Azad University, Tabriz, Iran;*
[3]*Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran*

Presenting Author: Mohammad Pouryasin, Email: pouryasin@gmail.com

ABSTRACT

Introduction: Red blood cell ITPase deficiency, which is caused by rs1127354 and rs7270101 polymorphisms of Inosine Triphosphatase (ITPA) gene, has great impact on prevention of ribavirin (RBV)-induced anemia among hepatitis C virus (HCV)-infected patients. The impact of these polymorphisms on sustained virologic response (SVR) to HCV treatment is conflicting. This study aimed to assess related parameters which affect RBV-induced anemia and the rate of SVR in Iranian patients with HCV infection who were treated with Pegylated Interferon (PegIFN) and RBV combination therapy.

Materials and Methods: In this cross-sectional study, 142 Iranian patients with chronic hepatitis C infection were genotyped for rs1127354 and rs7270101 polymorphisms by restriction fragment length polymorphism (RFLP).

Results: The observed frequency for rs7270101 genotypes was 83.8% AA and 16.2% AC. The prevalence of rs1127354 genotypes was 82.4% CC, 16.9% CA and 0.7 % AA. In univariate and multivariate analysis, the great role of rs1127354 and RBV dose on week-4 hemoglobin (Hb) decline were observed. Baseline HCV RNA viral load has great impact on SVR. No association between ITPA polymorphisms and SVR was found.

Conclusion: The rs1127354 ITPA gene variant has great role in Hb decline at week 4 of PegIFN/RBV therapy. ITPA gene polymorphisms were not independent predictors of SVR.

O140 THE INCIDENCE RATE OF HEPATOCELLULAR CARCINOMA IN PATIENTS WITH CIRRHOSIS AND OFFERING A DECISION SUPPORT SYSTEM FOR EARLY CANCER PREDICTION

Mohammad Mehdi Sepehri[1], Mehdi Saberifiroozi[2], Melina Ebrahimi Khameneh[3]

[1]*Industrial Engineering, Tarbiat Modares University, Tehran, Islamic Republic of Iran;*
[2]*Tehran University of Medical Sciences, Tehran, Islamic Republic of Iran;*
[3]*Industrial Engineering, Islamic Azad University, Tehran, Iran*

Presenting Author: Melina Ebrahimi Khameneh, Email: ebrahimi.melina@gmail.com

ABSTRACT

Background & Aims: Cirrhosis is a risk factor for hepatocellular carcinoma (HCC) in about 80% of cases worldwide. HCC occurs at a rate of 1-4% per year after cirrhosis is established. Therefore, careful evaluation of patients with cirrhosis can cause more accurate understanding of this disease and more accurate prediction of cancer in these patients.

Methods: 381 patients with liver cirrhosis were followed up for four years. To build a cancer predictive model, data mining models were used. Data mining is the process of automatically discovering previously unknown and potentially beneficial information in databases.

Results: 256 (68%) of 381 patients, were male and 122 (32%) were female. 88 patients (23.1%) have chronic hepatitis B, 83 patients (21.8%) have chronic hepatitis C, and 85 patients (22.3%) have cryptogenic etiology. The etiology of HBV and HCV occurs more in men and the etiology of cryptogenic occurs more in women. In patients with cirrhosis, the etiologies of AIH, PBC, and BCS are more common in women than men. In other etiologies, the number of men is more than women. During the follow-up period, 43 patients were developed HCC. Etiologies (viral compared to nonviral with an increased risk of 53%), older than 65 years (with an increased risk of 46%), and body mass index range greater than 27kg/m2 (with an increased risk of 56%) are factors influenced the development of hepatocellular carcinoma in patients with cirrhosis of the liver. Cancer risk in patients with viral etiol-

ogy is much higher than that of patients with non-viral etiology. In patients with low AFP levels, the type of etiology can be very impressive in developing cancer. So that, a patient with AFP level less than 21ng/ml and platelet levels less than 41000mm3 is 73% more likely to develop cancer compared with someone who has a non-viral etiology.

Conclusion: Etiology, age, and body mass index are as effective factors in cancer predicting in patients with cirrhosis. Data mining results can be used to predict an increased risk of HCC developing and also early detection of liver cancer in patients with cirrhosis.

O145 PHYLODYNAMIC RECONSTRUCTION OF HEPATITIS B VIRUS D1, D2 AND D3 STRAINS IN IRAN

Nídia Sequeira Trovão[1], Andrea-Clemencia Pineda-Peña[1], Samad Amini-Bavil-Olyaee[2], Thomas Mina[1], Philippe Lemey[1], Piet Maes[1], Marc Van Ranst[1], Mahmoudreza Pourkarim[1]

[1]*Rega Institute, KU Leuven, Leuven, Belgium;*
[2]*Department of Molecular Microbiology and Immunology, University of Southern California, Los Angeles, USA*

Presenting Author: Mahmoudreza Pourkarim, Email: pourkarim1@yahoo.com

ABSTRACT

Objectives: Despite significant global coverage of Hepatitis B virus (HBV) vaccine, it is still a serious health problem. Prominent genome diversity has led to classification of HBV into eight different genotypes (A-H) in which, genotype D is a worldwide-distributed genotype and is found in all continents. Until now, 9 subgenotypes (D1-D9) have been defined for this genotype. Subgenotype D1 is the most prevalent one and is circulating in South-Eastern Europe, North Africa, the Middle East, West and Central Asia. In Iran, D1 is the main HBV isolated subgenotype. However few D2 and D3 strains have been recently identified. In a comprehensive study we attempted to reveal the epidemiological history of HBV D1, D2 and D3 in Iran.

Material and Methods: All full-length genome Hepatitis B virus isolated from Iran: D1: 165, D2: 5, and D3: 5 strains, were compared to 1140 HBV subgenotype D1-D9 strains retrieved from GenBank until 15 December 2014. To determine the epidemiological history of these isolates, strains with uncertain locations and collection dates together with recombinant strains were excluded from data set and analysed under a Bayesian phylogeographic framework.

Results: D1 posterior phylogenetic estimates can be summarized by an evolutionary rate of 9.33x10-4 (95% HPD interval=7.97x10-4–1.06x10-3) substitutions/site/year and time of the most recent common ancestor (TMRCA) dated at 1958.37 (95% HPD interval=1950.83–1966.29). In addition, phylogenetic analysis identified that, Iranian detected D2 strains clustered with strains from Lebanon and Syria. The TMRCA of first cluster of D2 was dated at 1925 (95% HPD interval=1925- 1974) while the second cluster was dated at 1934 (95% HPD interval=1914-1978). All five Iranian D3 strains formed a monophyletic cluster with Indian strain and dated back to 1965 (95% HPD interval=1944 - 1984).

Conclusion: While phylogenetic analysis showed several introduction points of D1 to Iran, Iranian D2 and D3 isolates were introduced on at least two and one occasions in Iran, respectively, and diverged from west and south Asian HBV strains. Considering the impact of the different sub/genotypes on clinical outcome, exploring the distinct mutational patterns of Iranian D1 and non- D1 strains is of clinical importance.

O146 BLOOD SAFETY AND THALASSEMIA MAJOR PATIENTS

Ali Davoudi-Kiakalayeh[1], Ali Akbar Pourfathollah[1]

[1]*Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran*

Presenting Author: Ali Davoudi-kiakalayeh, Email: davoudikiakalayeh@gmail.com

ABSTRACT

Introduction: Patients with thalassemia major who regularly receive transfusions, are at risk of developing post transfusion hepatitis. Study on thalassemia patients could reflects the safety of blood products in directly. The aim of this study was to identify the prevalence rate of HCV infection in thalassemia patients in the Guilan province, northern Iran.

Methods: This study is a descriptive, retrospective analysis of 1113 patients with β-thalassemia major in the Guilan province, northern Iran over ten year period (2002 to 2012) ,using multiple data sources. A blood sample was taken from each patient and a questionnaire regarding to demographic data (age group) and risk factors (history of blood transfusion) was completed for them. Enzyme-linked immunosorbent assay and recombinant immunoblot assay for HCV were performed in all cases. A step wise forward logistic regression analysis was done.

Results: The finding of this study demonstrated that the prevalence rate of hepatitis C infection among

beta-thalassemia major patients, 13.6%, less lower than previous report in study area and Iran. The risk of hepatitis C among beta thalassemia major patients was greater before screening program for HCV (OR=9.6, 95% CI: 2.3 – 40.5). Moreover, the prevalence of anti-HCV seropositivity was decreased dramatically among patients who have received transfusions after implementation of blood donor screening for HCV (1996).

Conclusion: The risk of HCV, can be reduced by implementing screening program for healthy blood.

O156 FACTORS ASSOCIATED WITH PREVENTIVE BEHAVIORS OF HEPATITIS B AMONG HIGH SCHOOL GIRLS USING THE HEALTH BELIEF MODEL

Sedigheh Sameti[1], Mojgan Goudarzi[2]

[1]*Nursing Department, Islamic Azad University-Borujerd Branch, Borujerd, Iran;*
[2]*Nursing Department, Imam Khomeini Hospital-Borujerd, Borujerd, Iran*

Presenting Author: Sedigheh Sameti, Email: sametis103@yahoo.cam

ABSTRACT

Background and Objective: Hepatitis B prevention is a very important issue in the young women, since it can transfer from mother to infant. This study was aimed to determine factors associated with preventive behaviors of hepatitis B among the high school girls during the academic year 2013- 2014 in the Borujerd, Iran.

Materials and Methods: This cross-sectional study was performed in ten high schools in the Borujerd city. A total of 780 students from the first and second grades, who agreed to take part in the study, enrolled using a cluster sampling method. The data were collected by a questionnaire, including constructs of perceived severity (15 items), perceived susceptibility (eight items), perceived barriers and benefits (seven items), behavioral intention (10 items), and self-efficiency (two items).

Results: The results showed that the mean age of students was 15.27 ± 0.72 years. Only 3.4% of students had received the hepatitis B vaccination in three intervals and more than one quarter (27.8%) of them were never used their personal equipment when they have gone to the barber salon. The constructs of perceived barriers (p=0.001), perceived susceptibility (p=0.022) and self-efficacy (p=0.001) were significantly associated with preventive behaviors of hepatitis B. The perceived barriers (4.76±0.60) had the maximum score, while self-efficacy (1.13± 0.87) had the minimum score.

Conclusion: Due to the low range of preventive behaviors of hepatitis B and since these behaviors were associated with constructs of perceived barriers, perceived susceptibility and self-efficacy, adult girls must know about real preventive barriers of this disease and suitable ways have to be prepared to perceive the susceptibility of this disease and developing of self-efficiency

O162 THE EFFECTS OF HEPATITIS C VIRUS NS3 PROTEIN ON THE EXPRESSION OF MIR-122 AND FIBROGENESIS OF HEPATIC STALLED CELLS IN VITRO

Sayyad Khanizadeh[1], Mehrdad Ravanshad[1], Seyed Younes Hosseini[2], Jamal Sarvari[2], Parivash Davoodian[3], Farzaneh Sabahi[1]

[1]*Department of Virology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran;*
[2]*Department of Bacteriology and Virology, Shiraz University of Medical Sciences, Shiraz, Iran;*
[3]*Infectious & Tropical Diseases Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran*

Presenting Author: Sayyad Khanizadeh, Email: khani.virologist@gmail.com

ABSTRACT

Background: Hepatitis C virus (HCV) proteins play an important role in the pathogenesis of liver diseases. TGF-β signal transduction recognized as the most important pathway during liver fibrogenesis. microRNAs (miRNAs) have emerged as key modulators in regulating of TGF-β Signaling and hepatic fibrosis.miRNA-122 has been widely to investigated in the pathogenesis of HCV infection. Our aim was to compare the effects of HCV NS3 protein on the expression of miRNA-122 and fibrogenesis of hepatic stellate cells (HSCs).

Methods: Plasmids expressing HCV NS3 protein were transfected into LX-2 cell lines. Subsequently, total RNA extracted and real-Time PCR performed to measure the expression level of miRNA-122, TGF-β, COL-1A1, α-SMA and TIMP-1. Furthermore, TGF-β in supernatant of cell also assessed by ELISA assay. MTT assay was performed to test the effect of NS3 construct on LX-2 cell viability.

Results: The results indicated that the expression of miRNA-122 was down-regulated in NS3 protein-treated LX-2 cells (P<0.001) and also the gene expression analysis of fibrotic genes in LX-2 cells displayed that HCV NS3 protein left significant fibrotic impact when compared to normal cells or GFP control plasmids(P<0.001).. In addition, NS3 protein showed no cytotoxic and proliferative effects on LX-2 cells by MTT assessment.

Conclusions: Our results suggested the HCV NS3 protein, is effective to prompt fibrotic state in HSCs and also NS3 protein lead to down-regulated expression of miRNA-122.The interaction between HCV proteins and miRNAs can give a novel vision into the controlling of chronic HCV infection.

O173 ASSOCIATION OF IL-28B GENE POLYMORPHISM AT RS12979860 T/C WITH SPONTANEOUS CLEARANCE OF HCV INFECTION IN FARS PROVINCE, SOUTH OF IRAN

Jamal Sarvari[1], Mehran Mansori[1], Seyed Younes Hosseini[2], Mohammad Reza Fattahi[2], Afagh Moattari[1], Neda Pirbonyeh[1], Razieh Dowran[1], Maryam Moeeni[2]

[1]*Department of Bacteriology and Virology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Gasterohepathology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Jamal Sarvari, Email: sarvarij@sums.ac.ir

ABSTRACT

Background: Hepatitis C virus (HCV) infection is a worldwide health concern, which associated with end stage liver diseases including cirrhosis and hepatocellular carcinoma. Following HCV infection, spontaneous viral clearance occurs in 10-40% 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

Objectives: We wish to determine the frequency of genotype and allele of IL-28B gene at rs12979860 C/T loci in HCV-infected subjects and investigate their association with spontaneous clearance of infection.

Methods: 92 patients with chronic hepatic C infection and 35 individuals who spontaneously clear their infection were included in this study. The presence of chronic HCV infection and/or spontaneously clearance of infection in participants were confirmed using ELISA and quantitative and qualitative RT-PCR techniques. Genomic DNA of the participant was extracted using salting out method. IL-28B gene polymorphisms were performed using PCR-RLFP method on genomic DNA.

Results: The frequency of CC genotype and allele of IL-28B gene at rs12979860 C/T loci were significantly higher (p=0.006 and p=0.0008 respectively) in spontaneous clearance subjects than those with chronic infection.

Conclusion: Our finding indicated that individuals with CC genotype and/or C allele at rs12979860 loci of IL-28B gene could clear HCV infection spontaneously than those with TT genotype and/or T allele.

O193 HCV PREVALENCE CAN PREDICT HIV EPIDEMIC POTENTIAL AMONG PEOPLE WHO INJECT DRUGS: PRELIMINARY RESULTS

Vajiheh Akbarzadeh[1], Laith J. Abu-Raddad[1]

[1]*Infectious Disease Epidemiology Group, Weill Cornell Medical College-Qatar, Doha, Qatar*

Presenting Author: Vajiheh Akbarzadeh, Email: vaa2010@qatar-med.cornell.edu

ABSTRACT

This work examines whether hepatitis C virus (HCV) prevalence can be used as a predictor for HIV epidemic potential among people who inject drugs (PWID). A cohort-type population-level mathematical model was used to simulate the epidemiological overlap between HCV and HIV among PWID. The model was parameterized using empirical data for HCV and HIV transmission probability and natural history. Five dynamical regimes describing the epidemiological overlap were identified: I. HCV and HIV infections are below epidemic sustainability threshold for epidemic expansion. II. HIV is below epidemic sustainability threshold, but HCV is just above epidemic sustainability threshold. III. HIV is just above epidemic sustainability threshold, and HCV prevalence is in the range of 30%-70%. IV. HIV prevalence is large scale, and HCV prevalence is between 70%-80%. V. HIV prevalence approaches saturation, and HCV prevalence is saturating. Empirically most epidemics of interest were found to fit in regime III. The risk ratio of HCV to HIV prevalence (RR), as well as the corresponding odds ratio (OR), were used as a measure of the association between the two infections and to predict the scale of future HIV epidemics among PWID. These findings inform HIV prevention policy and programming and resource allocation for interventions.

O194 PROTOCOL FOR A SYSTEMATIC REVIEW AND METAANALYSIS OF HEPATITIS C VIRUS (HCV) PREVALENCE AND INCIDENCE IN THE HORN OF AFRICA SUBREGION OF THE MIDDLE EAST AND NORTH AFRICA

Karima Chaabna[1], Laith J. Abu-Raddad[1]

[1]*Infectious Disease Epidemiology Group, Weill Cornell Medical College-Qatar, Doha, Qatar*

Presenting Author: Karima Chaabna, Email: kac2047@qatar-med.cornell.edu

ABSTRACT

Background: In the Middle East and North Africa (MENA), hepatitis C virus (HCV) distribution appears to present a wide range of prevalence. The scale and nature of HCV disease burden is poorly known in the Horn of Africa sub-region of MENA including Djibouti, Somalia, and Sudan in addition to Yemen at the south-west corner of the Arabian Peninsula. The aim of this review is to provide a systematic review and synthesis of all epidemiological data on HCV prevalence and incidence among the different population groups in this sub-region of MENA. A second aim of the study is to estimate the national population-level HCV prevalence for each of these four countries.

Methods/Design: The systematic review will follow the Preferred Reporting Items for Systematic Reviews and Meta- Analyses (PRISMA) guidelines. PubMed, Embase and the World Health organization (WHO) regional databases will be searched for eligible studies without language or date restrictions. Observational and intervention studies reporting data on the prevalence or incidence of HCV in any population group in Djibouti, Somalia, Sudan or Yemen will be included. Additional sources will be obtained through the database of the MENA HIV/AIDS Epidemiology Synthesis Project, including international organizations' reports and country-level reports, and abstracts of international conferences. Study and population characteristics will be extracted from eligible publications, with previously agreed pro formas; and entered into a computerized database. We will pool prevalence using DerSimonian and Laird random-effect models after a Freeman-Tukey transformation to stabilize variances. We will conduct meta-regression analysis to explore the effect of study-level characteristics as potential sources of heterogeneity.

Conclusion: This proposed systematic review and meta-analysis aims to better describe HCV distribution across countries in the Horn of Africa sub-region of MENA; and between sub-population groups within each country. The study will provide empirical evidence necessary for researchers, policy makers and public health stakeholders to set research, policy and programming priorities for HCV prevention, control, and treatment in MENA.

O208 AUTOIMMUNE HEPATITIS AND APOPTOSIS, AUTOPHAGY, UNFOLDED PROTEIN RESPONSE

Behzad Yeganeh[1], Peyman Peymani[2], Adel Rezaei Moghadam[3], Emilia Wiechec[4], Seyed Moayed Alavian[5], Seyed Mohammad Miri[5], Bita Geramizadeh[6], Kamran Bagheri Lankarani[2], Martin Post[1], Kevin M Coombs[7], Saeid Ghavami[8]

[1]*Physiology and Experimental Medicine, Sick kids Hospital, University of Toronto, Toronto, Canada;*
[2]*Health Policy Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[3]*Young Researchers and Elite Club, Ardabil Azad University, Ardabil, Iran;*
[4]*Department of Clinical and Experimental Medicine, Linköping University, Linköping, Sweden;*
[5]*Baqiyatallah Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[6]*Department of Pathology, Shiraz University of Medical Sciences, Shiraz, Iran;*
[7]*Department of Medical Microbiology and Infectious Diseases, University of Manitoba, Winnipeg, Canada;*
[8]*Department of Human Anatomy and Cell Science, University of Manitoba, Winnipeg, Canada*

Presenting Author: Behzad Yeganeh, Email: behzad.yeganeh@sickkids.ca

ABSTRACT

Background and Aims: Autoimmune hepatitis (AIH) is a chronic inflammatory liver disease with unknown cause, characterized by a loss of tolerance to hepatocyte specific autoantigens. If untreated, AIH can lead to the destruction of hepatic parenchyma, cirrhosis and liver failure. A growing body of evidence suggests involvement of apoptosis, autophagy and unfolded protein response (UPR) dysregulation in autoimmune disorders however association between autophagy, apoptosis and UPR in pathogenesis of AIH remains to be defined. Thus, the aim of this study was to investigate induction of autophagy, apoptosis and UPR in AIH human liver tissues.

Materials and Methods: Immunofluorescence (IF) confocal microscopy was performed on 7 liver biopsies from AIH patients. We performed double-label IF staining using specific antibodies for LC3-II, cleaved caspase-3, BIP (GRP78), and XBP1 to detect activation of autophagy, apoptosis and UPR respectively.

Results: The results showed that 35% of the AIH-associated inflammatory cells express both autophagy and apoptosis markers (LC3-II and cleaved caspase-3), while 31% of these cells were positive for BIP expression, an UPR protein. Interestingly, 19% of the cells display nuclear translocation of XBP protein (sXBP), suggesting activation of XBP protein in AIH-associated inflammatory cells.

Conclusion: Our results highlight the importance of apoptosis, autophagy, and UPR in AIH. Further studies are needed to uncover the connections between autophagy, apoptosis and UPR activation in pathogenesis of AIH.

O213 CYTOCHROME P450 GENE (CYP2E1 AND CYP1A1) POLYMORPHISMS AND SUSCEPTIBILITY TO CHRONIC HEPATITIS B

INFECTION

Maryam Lotfi[1], Galia Amirbozorgi[1], Farhang Babamahmoodi[2], Mohammad Karimi Alivije[3], Mahmoud Sadeghi-Haddad- Zavareh[4], Masomeh Bayani[4], Haleh Akhavan-Niaki[5], Mohsen Asouri[1], Sadegh Fattahi[1]

[1]*Cellular and Molecular, North Research Center, Pasteur Institute of Iran, Amol, Iran;*
[2]*Antimicrobial Resistance Research Center, University of Medical Sciences, Ghaemshahr, Iran;*
[3]*Department of Infectious Diseases, Imam Reza Hospital, Amol, Iran;*
[4]*Infectious Diseases and Tropical Medicine Research Center, Babol University of Medical Sciences, Babol, Iran;*
[5]*Department of Anatomy, Babol University of Medical Sciences, Babol, Iran*

Presenting Author: Galia Amirbozorgi, Email: galia1926@yahoo.com

ABSTRACT

Background: Hepatitis B virus (HBV) infection is an important global health problem leading to significant morbidity and mortality especially in the developing countries. Both viral and host factors were reported as having a significant effect on infection, replication and pathogenesis HBV. The aim of this study was to investigate effect of genetic polymorphisms of CYP2E1 and CYP1A1 on susceptibility of hepatitis B virus (HBV) infected patients.

Methods: One hundred and forty-seven individual were enrolled in the genotyping procedure including 54 chronic HBV patients and 93 healthy controls. Rs2031920 and rs3813867 at CYP2 E1 as well as rs4646421 and rs2198843 at CYP1A1 loci were studied in all subjects using PCR followed by enzymatic digestion and RFLP (restriction fragment length polymorphism) analysis.

Results: Genotype frequencies of both SNPs at CYP2 E1 were monomorphic in controls and hepatitis individuals. Genotype frequency of rs4646421 was significantly different (P = 0.0387, OR, 0.2245; 95% CI, 0.05- 0.92) between chronic HBV patients and healthy blood donors as well as individuals carrying at least one C allele (genotypes CC or CT) versus TT genotype seemed to have a decrease risk of hepatitis (P = 0.0358).

Conclusion: Our results showed that a relationship between the rs4646421 TT genotype (rare genotype) and four times higher risk for chronic HBV infection.

O219 EPIDEMIOLOGY OF HEPATITIS C VIRUS INFECTION AMONG DRUG USERS IN IRAN: A META-ANALYSIS

Ali Kabir[1], Seyed Moayed Alavian[2], Masoud Ahmadzad-Asl[3], Kamran Bagheri Lankarani[4]

[1]*Epidemiology Department, Shahid Beheshti University of Medical Sciences, Tehran, Iran;*
[2]*Gastroenterology and Hepatology Department, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[3]*Psychiatry Department, Iran University of Medical Sciences, Tehran, Iran;*
[4]*Gastroenterology and Hepatology Department, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Ali Kabir, Email: aikabir@yahoo.com

ABSTRACT

Objective: Drug users (DUs) have had a key role in the spread of hepatitis C virus (HCV) because of high risk behaviors such as sharing contaminated injection equipment. The aim of this study is to determine the prevalence of HCV infection in DUs in Iran.

Methods: In a systematic review study, we collected all journal articles, thesis, reports of studies, abstracts of congresses, and unpublished documents related to HCV infection prevalence in Iranian DUs from April 2001 to March 2008. We selected surveys that have sufficiently declared objectives, proper sampling method with identical and valid measurement instruments for all study subjects and proper analysis methods regarding sampling design and demographic adjustments. We used met analysis to calculate prevalence estimation.

Results: The studies have reported prevalence of HCV in 9818 drug users between 17.42% and 55.86%. Meta-analysis of all studies regardless of HCV detection methods revealed the HCV prevalence as 37.3% (95%CI: 29.5%-45.2%). Results in studies with RIBA/PCR methods and with ELISA method revealed HCV prevalence as 30.2% (95%CI: 16.5-43.9%) and 40.3% (95%CI: 31.5- 49.1%), respectively.

Conclusion: High prevalence rate of HCV in DUs in Iran reinforces the need for the emergent and comprehensive programs to reduce high risk behaviors among DUs.

O233 SPONTANEOUS LOSS OF HBSAG IN CHRONIC HEPATITIS B INFECTED INDIVIDUALS AND THEIR CHILDREN: A LARGE POPULATION-BASED PROSPECTIVE COHORT STUDY IN GOLESTAN

Aezam Katoonizadeh[1], Hossein Poustchi[1], Mohammad Reza Ostovaneh[2], Saeed Esmaili[3], Akram Pourshams[1], Ashraf Mohammadkhani[1], Jacob George[3], Reza Malekzadeh[1]

[1]*Liver and Pancreatobiliary Diseases Research Center, Digestive Disease Research Institute, Tehran, Iran;*
[2]*Division of Gastroenterology and Hepatology, Johns Hopkins Medical Institutions, Baltimore, USA;*
[3]*Storr Liver Unit, University of Sydney and Westmead Hospital, NSW, Australia*

Presenting Author: Aezam Katoonizadeh, Email: azkatoonizadeh@yahoo.com

ABSTRACT

Background/Aims: Spontaneous Hepatitis B surface antigen (HBsAg) loss is a favourable outcome of chronic HB infection. There is no population based report on the exact annual rate of spontaneous HBsAg clearance in Iran. We aimed to investigate the rate of spontaneous HBsAg seroclearance in 3,505 HBsAg+ individuals of GHBCS, nested in Golestan Cohort Study (GCS), and their first degree relatives followed between 2004 and 2013.

Materials and Methods: The GCS is a population-based cohort of 50,045 >40 years old individuals, initially (2004-2008) designed to study the upper GI cancers in Northern Iran. In 2008, a baseline measurement of HBsAg on the stored serum samples of all GCS participants identified 3,505 HBsAg+ individuals. In 2011, we repeated HBsAg measurement and also checked other HBV serological markers in 3,505 initially HBsAg+ individuals and their spouses and children.

Results: During the repeated measurements, after an average of 4.8 years of follow-up, 2590 individuals were available for HBsAg, HBcAb and HBsAb evaluations. Of those, 2269 (87.6%) subjects were still HBsAg positive and 321 (12.4%; annual rate: 2.6%) were HBsAg negative. Among 321 HBsAg negative individuals, 175 (54.5%; annual rate: 1.4%) had positive HBcAb and 75 (23.4%; annual rate: 0.6%) developed HBsAb. Annual spontaneous HBsAg seroclearance had occurred in 0.6%-1.4% of individuals during a follow-up period of 12107 pearson-years. Among 5030 HBsAg negative first degree relatives, 22.7% (n=1141) had antibodies against both HBs and HBc antigens suggesting spontaneous clearance of HBsAg. The mean (SD) age of HBsAg seroclearance was 43 (14) years and 61.2% (n=698) were female. Females cleared HBsAg more frequently than males (P=0.01). HBsAg seroclearance in the family member group was correlated with individual age group with higher frequencies in the age groups of ≥60 and 50-59 years (95%) and lower frequencies in the age groups of 18-29 and<18 years (61.5%) respectively (P=0.0001).

Conclusions: Our cohort study of untreated HB chronically infected individuals from general population found an annual HBsAg loss of 1.4% during 4.8 years of follow up with females and older patients having a higher clearance rate. This may increase in case of longer follow up periods.

O247 OCCULT HEPATITIS B VIRUS INFECTION IN HIV INFECTED PATIENTS OF IRAN

Sareh Zhand[1], Chiman Karami[2], Ahmad Hosseinzadeh Adli[2], Ghassem Rostamian[3], Alijan Tabarraei[2], Abdolvahab Moradi[2]

[1]*Molecular Medicine, Golestan University of Medical Sciences, Gorgan, Iran;*
[2]*Microbiology, Golestan University of Medical Sciences, Gorgan, Iran;*
[3]*Medicine, Iran University of Medical Sciences, Tehran, Iran*

Presenting Author: Sareh Zhand, Email: sa_zh2006@yahoo.com

ABSTRACT

Introduction: Occult HBV infection (OBI) is characterized by presence of HBV DNA in blood or liver tissue with no detectable HBsAg, and with or without antibodies to hepatitis B core antigen (anti- HBc) or antibody against HBsAg (anti-HBs). The mechanisms leading to occult HBV are poorly understood. OBI in HIV infected patients may be viewed as the result of opportunistic reactivation of HBV due to cellular immune deficiency, as reflected by the decreased CD4 counts in HIV infection. The prevalence of OBI in HIV infected patients remains controversial and the available data are widely divergent. We aimed to evaluate occult hepatitis B infection in HIV infected patients in Iran.

Materials and Methods: 160 HIV infected patients, which120 of them were negative for HbsAg and positive for anti-HBc antibody were entered. Demographic data of the patients were recorded. HBV DNA was extracted from whole blood and plasma samples of patients and polymerase chain reaction (PCR) was done with specific primers for S gene of HBV. The results and data were entered in SPSS version 16 software and statistically analyzed.

Results: The mean age of the patients was 39.11±10 years and 62.9% of them were male. HBV-DNA was detected in 42(35%)of HBsAg negative patients that extraction was done from their whole blood, But HBVDNA was not find in any samples that extraction was done in plasma samples. 50% of them were intravenous drug users.

Conclusions: Results indicates that the rate of occult HBV infection among HIV infected patients is different in samples extracted from plasma and whole blood and it needs more study.

O254 EVALUATION OF IMMUNE RESPONSES FOR A RECOMBINANT HCV CORE+1 PROTEIN FORMULATED IN DIFFERENT HUMAN COMPATIBLE ADJUVANTS- A POTENTIAL IMMUNOTHERAPEUTIC FOR HCV INDUCED HCC?

Farzin Roohvand[1], Fahimeh Baghbani[2], Niloufar Kossari[3]

[1]*Virology, Pasteur Institute of Iran, Tehran, Iran;*
[2]*Department of Genetics & Biotechnology, Islamic Azad University, Varamin, Iran;*
[3]*School of Biological Science, Universite de Versaille-Hopital Foch, Paris, France*

Presenting Author: Farzin Roohvand, Email: farzin.roohvand@gmail.com

ABSTRACT

Infection with Hepatitis C virus (HCV) is currently the main source of chronic hepatitis (CH) and fatal liver diseases worldwide. In around 80% of acutely infected individuals, HCV infection persist and results to cirrhosis in about 10% who may develop hepatocellular carcinoma (HCC) in a rate of ~1–4% per year. Although emergence of DAAs has improved treatment of HCV induced-CH but they have no curative efficacies in cirrhosis & HCC. The capsid (core) region of HCV genome encodes a core+1 or alternate reading frame protein (ARFP) via an overlapping ORF with unknown biological functions. However, humoral and cellular immune responses against this protein does exist in HCV-infected individuals in general and in much higher frequency in HCV induced-cirrhosis and -HCC and thus suggesting a potential immunotherapeutic value for this protein. To address this concern, the DNA sequence corresponding to the ARFP/F protein (amino acid 11–161) was PCR-amplified using a frame-shifted forward primer exploiting the capsid sequence of the lb-subtype as template. The amplicon was cloned into the pET- 24a vector, expressed in E.coli BL21, purified through nickel-nitrilotriacetic acid (Ni-NTA) agarose beads and confirmed by SDS-PAGE, Western blot and ELISA via specific interaction with HCV infected human sera and sera of mice immunized with the peptide encoding a dominant ARFP/F B cell epitope. To assess the immunomodulatory potential of HCV ARFP, protein was formulated in various human compatible adjuvants: Montanide ISA720 and 50v, Pluronic F127 (F127) and Imiquimod (IMIQ) and was used for immunization of BALB/c mice (s.c.) with 100μl of immunogens at weeks 0, 3, 6. Evaluation of immune responses for total and IgG subtypes by ELISA and interferon gamma/IL4-Elispot assays indicated high immunogenicity for core +1 protein and a far superiority for Th1-oriented antibody titers and cytokine secretions for Montanide ISA720 and 50v formulations TY6compared to other two adjuvants. In tumor challenge studies, mice immunized by montanide formulations of Core+1 and injected with 2x 105 CT26/core+1 cells (three weeks after the last immunization) significantly showed reduction in the growth of tumor cells at the day 12 post challenge compared to mice immunized by adjuvant alone or PBS, indicating partial protection by immunization. Taken together, these results indicated the proper immunogenicity of ARFP and Montanide ISA720 and 50v formulations and may imply some therapeutic potential value for targeting infected cells producing this protein in HCV-induced liver diseases.

O260 OUTCOME OF PATIENTS WITH HEPATITIS C IN GILAN PROVINCE FROM 1381 TO THE END OF 1391

Fariborz Mansour-Ghanaei[1], Farahnaz Joukar[1], Mazyar Jamali[1], Mehrnaz Asgharnezhad[1]

[1]*Gastrointestinal & Liver Diseases Research Center (GLDRC), Guilan University of Medical Sciences, Rasht, Iran*

Presenting Author: Fariborz Mansour-Ghanaei, Email: ghanaie@yahoo.com

ABSTRACT

Purpose: The actual treatment of patients with hepatitis C infection remains unknown, based on studies, in this study we examined the factors associated with treatment, and then we expected the effect of the prescribed treatment and outcomes in the population.

Methods: In this retrospective study 150 patients with hepatitis C who were undergoing treatment were followed, the 86 people who completed the treatment period were included, and the remaining patients were excluded, based on existing records, including age at onset of treatment, location, gender, alcohol consumption and smoking, comorbidities, type of treatment received, method of diagnosis, genotype, liver function tests and coagulation tests before treatment and after completion of therapy, liver biopsy (Grade and Stage), the result of fibro scan test, liver ultrasound result, the amount Viral load in patients before treatment, HCV-PCR test after the 6 months and 1 year after treatment were recorded. The information which is collected after the end of treatment was recorded in the attached questionnaire and was analyzed.

Results: Among 86 patients, genotype 1a and 3a is most prevalent genotypes No significant difference was observed between genotype and response to

treatment. Most of the participants were treated with Pegasys and Ribavirin. SVR in patients with different treatment regimens were nearly identical, significant differences were not observed. There was no significant relationship between sex and response to treatment But between increasing age and smoking and alcohol consumption were significantly associated with treatment failure. The relationship between living in a town with response to treatment was significant, based on the results 7% of the participants in this study had Viral load less than 10_4 IU / Ml (Low), 41/9% had Viral load between 10_4IU / Ml - 10_6IU / Ml (Medium) and 51/1% had Viral load more than 10_6IU / Ml (High),Changes in AST and ALT before treatment and after treatment in those who were treated with ribavirin and Peginteron were significant, But the changes in those who were treated with Pegasys and ribavirin, there was significant only in the case of AST Enzymes

Conclusions: According to the results of this research project individuals were recruited from patients referred to a gastroenterologist's office, patients were followed up based on treatment objectives regardless of research objectives. This makes the treatment of patients largely similar to each other and some types of treatment used less than other therapy.

O261 PREVALENCE OF OCCULT HEPATITIS C VIRUS INFECTION IN THE IRANIAN PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS INFECTION

Farah Bokharaei-Salim[1], Hossein Keyvani[1], Maryam Esghaei[1], Shohreh Zare Karizi[2], Sahar Farahani[3], Khashayar Hesami-Zadeh[1], Shahin Fakhim[4]

[1]*Virology, Iran University of Medical Sciences, Tehran, Iran;*
[2]*Genetic, Islamic Azad University, Varamin Pishva Branch, Tehran, Iran;*
[3]*Biology, Islamic Azad University, Varamin Pishva Branch, Tehran, Iran;*
[4]*Civil Engineering, Faculty of Engineering, Payame Noor University, Karaj, Iran*

Presenting Author: Farah Bokharaei-Salim, Email: bokharaeifarah@gmail.com

ABSTRACT

Background: Occult hepatitis C (OCI) infection is a new form of infection that has been known as detectable genomic HCV-RNA in the liver biopsy and or peripheral blood mononuclear cell (PBMCs) samples in the undetectable level or the absence of detectable genomic HCV-RNA in the serum or plasma specimens, and in the presence or the absence of anti-HCV antibodies in the plasma sample by the new techniques currently being used. So far, the OCI infection has been reported in several various patients groups throughout the world.

Objectives: The aim of the present study was to evaluate the occurrence of occult HCV infection between human Immunodeficiency virus (HIV) infected individuals in Iranian patients by reverse transcriptase-nested polymerase chain reaction (RT-nested PCR).

Patients and Methods: From March 2014 until April 2015, 109 Iranian patients with established HIV infection, referred to Hospitals related to Iran University of Medical Sciences, were enrolled in this present cross sectional study. About 6 mL of peripheral blood was taken from patients and after extraction of viral RNA from plasma and PBMC samples, HCV RNA status was examined by RT nested PCR using primers from the 5´-Non translated region (5´-NTR). Hepatitis C virus genotyping was conducted by restriction fragment length polymorphism (RFLP) analysis. For the confirmation of HCV genotyping by RFLP method, the PCR amplicons of 5-NTR were cloned into the pJET1.2 / blunt cloning vector and then sequenced.

Results: Of the 109 patients, 50 patients were positive for antibodies against hepatitis C virus, so they has no criteria for inclusion. As a result, the criterion for inclusion in the current study were 59 patients. Out of the 59 patients, Genomic HCV-RNA was detected in PBMCs specimens among 6 (10.2%) patients.

Conclusions: This study revealed the occurrence of occult HCV infection (10.2%) in HIV infected Iranian patients, moreover our data showed that testing only for anti-HCV Abs fails to determine the true frequency of HCV infection among HIV infected individuals. So that, designing prospective studies focusing on the detection of occult HCV infection in these patients would be informative.

O265 HBSAG & HCVAB PREVALENCE AMONG FEMALE SEX WORKERS REFERRED TO DICS AND VCTS IN SELECTED CAPITAL CITIES, IRAN

Ali Reza Shoghli[1], Mojtaba Fallahnezhad[2], Seyed Mahmood Nabavi[3], Roshanak Namazi[4], Mansour Mohajeri[5], Seyed Moayed Alavian[6], Mohammad Mehdi Goya[4]

[1]*Department of Social Medicine, Zanjan University of Medical Sciences and Health Services, Zanjan, Iran;*
[2]*Research Department, Razi Science Researchers Institute, Tehran, Iran;*
[3]*Tropical and Infectious Diseases Department, Shahid Beheshti University of Medical Sciences and Health Services, Tehran, Iran;*
[4]*Center for Communicable Diseases Control, Ministry of Health and Medical Education, Tehran, Iran;*
[5]*Research Department, Zanjan University of Medical Sciences and Health Services, Zanjan, Iran;*
[6]*Research Center for Gastroenterology and Liver Diseases, Bagiyatallah Hospital, Tehran, Iran*

Presenting Author: Mojtaba Fallahnezhad, Email: atabak76@yahoo.com

ABSTRACT

Background: Prostitution is a risk behavior for infection with hepatitis B virus (HBV) and hepatitis C virus (HCV). There is little data on the prevalence of HBV and HCV in female sex workers (FSWs) in Iran. A study was carried out to identify the risk behaviors of FSWs in selected capital cities and its association with the seroprevalence of hepatitis B and C markers.

Methods: In a cross-sectional study, we surveyed 613 FSWs who were referred to DICs and VCTs in six capital cities in various geographical area of the country (including Sari, Kermanshah, Tabriz, Mashhad, Zahedan, and Karaj) in 2013. 5CC blood was drawn to determine the prevalence of hepatitis B surface antigen (HBsAg) and antibodies to hepatitis C (HCVAb). Markers for HBV and HCV were measured by the rapid immunofiltration using the fourth generation kit. Also, a structured questionnaire on demographics and risk behaviors data in a face-to-face interview was completed for each participant.

Results: The mean age of the FSWs was 29.1 ± 6.8 years. Their mean age at the commencement of the prostitution was 22.6 ± 5.8 years. The mean number of their clients during a week before the interview was 5.7 ± 9.1 cases. 38.3% (235 cases) of FSWs and their partners never used condom during intercourse. The seroprevalence of HBsAg and HCVAb was 0.3% (n= 2) and 8% (n= 49), respectively. There was no any case of co-infection with HBV and HCV.

Conclusions: HCV prevalence is a significant problem among FSWs in Iran. Because hepatitis C virus infections are serious and the cost of treatment is high, and due to the absence of vaccines against HCV, preventive interventions and education programs aiming at behavioural changes should be intensified.

O267 TORQUE TENOVIRUS INFECTION FREQUENCY IN IRANIAN HIV/HCV COINFECTED PATIENTS AND COMPARISON WITH CHRONIC HEPATITIS C VIRUS MONO INFECTION AND HEALTHY CONTROLS

Hosna Rastegarpouyani[1], Seyed Reza Mohebbi[1], Seyed Masoud Hosseini[2], Pedram Azimzadeh[1], Mahsa Khanyaghma[1], Maryam Karkhane[1], Yasin Hatami[1], Afsaneh Sharifian[1], Mohammad Reza Zali[1]

[1]*Gastroenterology and liver Diseases Research Center, Shahid Behehsti University of Medical Sciences, Tehran, Iran;*
[2]*Department of Microbiology, Faculty of Biological Sciences, Shahid Beheshti University, Tehran, Iran*

Presenting Author: Hosna Rastegarpouyani, Email: hosna_rp@yahoo.com

ABSTRACT

Background: Human torque teno virus (TTV) is a small and non-enveloped virus, which carries a circular negative sense, single-stranded DNA genome. Although TTV is highly prevalent in general population, a clear association between the virus and clinical diseases has not been demonstrated yet. However, there are still a lot of unanswered questions about the frequency, effect and pathogenesis of TTV coinfection with other viruses; especially in hepatitis C virus (HCV) and human immunodeficiency virus (HIV) coinfected patients. So the aim of this study is to investigate TTV infection frequency in HIV/HCV coinfected patients and also in HCV mono-infected patients.

Methods: A total of 239 Serum samples (68.2% male and 31.8% female) from 36 HIV/HCV coinfected patients, 101 HCV mono-infected patients and 102 healthy controls were studied. Biochemical and serological markers were determined and Nested PCR was performed for detection of TTV DNA and the results were statistically analyzed.

Results: TTV DNA was detected in 135 of 239 samples (56.5%).Although, higher frequency of TTV infection was observed among HCV monoinfected patients (64.40%) in comparison with HIV/HCV coinfected patients (55.55%) and healthy controls (49.02%), the difference was not statistically significant (p value=0.88). In addition, frequency of TTV infection among male and female was close to each other (56.44% vs 56.57%, p value=0.984).

Conclusions: Our results demonstrated that the frequency of TTV infection in patients is a higher than healthy controls. Interestingly the prevalence of TTV in HIV/HCV coinfected patients is lower than HCV mono infection. It seems that TTV doesn't have a significant effect on liver functional tests among patients.

O268 IMMUNOGENICITY OF HCV MULTI-EPITOPE DNA VACCINE AND ITS FUSION TO N-TERMINAL DOMAIN OF HEAT SHOCK PROTEIN GP96 CONSTRUCT IN MICE MODEL

Leila Pishraft-Sabet[1], Katayoun Samimi-Rad[2], Anna.D Kosinska[3], Sima Rafati[4], Azam Bolhassani[5], Tahereh Taheri[4], Arash Memarnejadian[5], Seyed Moayed Alavian[6], Michael Roggendorf[3]

[1]*Department of Virology, Razi Vaccine and Serum Research Institute & Tehran University of Medical Science, Tehran, Iran;*
[2]*Department of Virology, Tehran University of Medical Science, Tehran, Iran;*
[3]*University Hospital of Essen, Institute of Virology, Essen, Germany;*
[4]*Molecular Immunology and Vaccine Research Laboratory, Pasteur In-*

stitute of Iran, Tehran, Iran;
[5]Hepatitis & AIDS Department-NRGB Lab, Pasteur Institute of Iran, Tehran, Iran;
[6]Baqiyatallah Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran

Presenting Author: Leila Pishraft-Sabet, Email: lp_sabet@yahoo.com

ABSTRACT

Hepatitis C virus (HCV) infection represents a worldwide health problem with a prevalence of about 3%. The majority of infected individuals evolve toward the development of a chronic disease that can be associated with serious liver disorders. It is well documented that vigorous, polyclonal and multispecific cellular immune response against HCV antigens is required for spontaneous clearance of acute HCV infection. Hypervariability of the HCV proteins is an important obstacle to design an efficient vaccine for HCV infection. Multi-epitope vaccines containing the conserved B- and T-cell epitopes of the virus could be a promising strategy against HCV. N-terminal domain of heat shock protein gp96 (NT(gp96)) proved to be a potent adjuvant to improve cellular and humoral immunity. In this study, we designed a multi-epitope DNA-vaccine (PT) encoding HCV immunodominant CTL epitopes (HLA-A2 and H2-Dd) from Core, E2, NS3 and NS5B, a Th CD4+ epitope from NS3 and a B cell epitope from E2. To enhance the immunity of the vaccine, NT (gp96) was fused to the 3'- or 5-' of the PT DNA (PT-NT (gp96) or NT (gp96)-PT). Cellular and humoral immune responses induced with PT, PT-NT (gp96) and NT (gp96)-PT were evaluated in mice model. The frequency of CD8+ T-cells expressing antiviral cytokines such as IFN-α and TNFα was measured by flow cytometry in splenic and hepatic lymphocytes of the immunized. The frequency of CD8+ T-cells producing IFN-α And TNFα in splenocyte and hepatocyte of the immunized mice was significantly higher in mice vaccinated with PT-NT (gp96) and NT (gp96)-PT compared to PT. Moreover, these responses were multifunctional and majority of CD8+ T-cells induced by the vaccination produced both cytokines simultaneously. The level of IgG antibody in the group of the mice immunized with PT-NT (gp96) was significantly higher than the mice injected with PT and NT (gp96)-PT. We showed that cellular and humoral immune responses induced by PT-NT (gp96) were more efficiently than those of NT (gp96)-PT. Our findings indicated that different NT (gp96) fusion direction could effect on the quantity of the induced PT-specific cellular and humoral immune responses. Our data demonstrated that NT (gp96) was able to enhance the cellular and humoral immune responses. More potent adjuvant activities of NT (gp96) were shown when fused downstream of HCV DNA PT; hence supporting the significance of fusion direction in PT DNA vaccine. These results provide enough motivations to warrant further preclinical studies towards the analysis of T-cell responses against the HLA-A2-restricted incorporated epitopes in HLA-transgenic mice.

O270 THE INTRAFAMILIAL PREVALENCE OF HEPATITIS C VIRUS INFECTION AMONG FAMILIES WITH ONE INDEX CASE, A STUDY FROM SOUTH OF IRAN

Kamran B. Lankarani[1], Seyed Younes Hosseini[2], Maryam Ardebili[2], Masood Sepehrimanesh[2], Maryam Nejabat[2], Mohammad Amir Hemmati Rad[2]

[1]Health Policy Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;
[2]Gastroenterohepatology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Presenting Author: Seyed Younes Hosseini, Email: yovirus2002@yahoo.com

ABSTRACT

Background: The role of intrafamilial transmission in HCV epidemiology is still debated. Here, our aim was to survey the interfamilial prevalence of HCV among families with one index case.

Material and Method: A cross-sectional study was conducted in the south of Iran on 34 random families with 1 HCV index case. Totally, 240 family members were first evaluated for anti-HCV antibody by ELISA assay. The positive cases were then checked for the presence of HCV viral RNA using 2 different PCR methods.

Results: In 18 out of 34 families, HCV total antibody was detected in another family members as serologically positive persons (52.9%). Majority of cases had brother-brother relationship in family. Also, among them, HCV RNA positive in 11 families (32%) was also confirmed by PCR methods.

Conclusions: Our finding may support the significant role of intrafamilial transmission in HCV epidemiology and also emphasized the impact of close relative, especially brother relationship but not spouses in HCV virus infection spread.

O277 HIGH RESPONSE RATE TO PEGYLATED INTERFERON ALPHA AND RIBAVIRIN COMBINATION THERAPY IN HAEMOPHILIC CHILDREN WITH CHRONIC HEPATITIS C; A CASE-CONTROL STUDY

Heidar Sharafi[1], Leila Mehrnoush[2], Seyed Moayed Alavian[2], Bita Behnava[2], Shima Salimi[2], Maryam Keshvari[3]

[1]Baqiyatallah Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran;
[2]Department of Clinical Hepatology, Middle East Liver Disease Center, Tehran, Iran;
[3]Blood Transfusion Research Centre, High institute for Research and Education in Transfusion Medicine, Tehran, Iran

Presenting Author: Maryam Keshvari, Email: m.keshvari@ibto.ir

ABSTRACT

Introduction: Scarce data is available on the efficacy of Pegylated Interferon (Peg-IFN) and Ribavirin (RBV) combination therapy in haemophilic children with chronic hepatitis C. The aim of this study was to evaluate the efficacy of Peg-IFN and RBV combination therapy for haemophilic children infected with hepatitis C virus (HCV) in comparison with adult haemophilic patients with chronic hepatitis C.

Patients and Methods: A case-control study comprised 31 pediatric haemophilic patients ages under 16 years with previously untreated HCV genotype-1 or -3 infection as the case group and 62 treatment naive adult haemophilic patients with chronic HCV infection as the control group. Case and control groups were matched case by case according to HCV genotype, HCV RNA level and rs12979860 polymorphism. All patients in the case and control groups were treated with Peg-IFN and RBV for 24-48 weeks according to HCV genotype.

Results: Sustained virological response (SVR) was achieved in 26 (83.9%) pediatric patients and in 39 (62.9%) of adult patients (P=0.05, OR=3.07, 95%CI=1.03-9.09). The rate of SVR was not different according to HCV genotype, HCV RNA level and rs12979860 polymorphism in both studied groups whereas achieving early virological response (EVR) was associated with achievement of SVR in both groups.

Conclusions: The efficacy of Peg-IFN and RBV combination therapy in haemophilic children with chronic hepatitis C is higher than that of adult haemophilic patients.

O278 PREVALENCE AND TRENDS OF TRANSFUSION TRANSMITTED INFECTIONS AMONG BLOOD DONORS IN TEHRAN, IRAN FROM 2008 TO 2013

Maryam Keshvari[1], Seyed Moayed Alavian[2], Sima Zolfaghari[1], Haleh Mehrabadi[1], Heidar Sharafi[3]

[1]Blood Transfusion Research Centre, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;
[2]Department of Clinical Hepatology, Middle East Liver Disease Center, Tehran, Iran;
[3]Baqiyatallah Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran

Presenting Author: Heidar Sharafi, Email: h.sharafi@meldcenter.com

ABSTRACT

Background: Evaluation of trends in the rate of transfusion-transmitted infections (TTIs) in blood donors is essential for monitoring blood supply safety and donor screening effectiveness. The aim of this study was to determine the trends and prevalence of hepatitis B virus (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV), and syphilis seromarkers among blood donors referred to Tehran Blood Transfusion Center (TBTC) through 2008 to 2013.

Materials and Methods: The data of all blood donors referred to TBTC between 2008 and 2013 were collected. The prevalence of HBV, HCV, HIV, and syphilis infections were expressed by donation year and donors' characteristics (age, gender, educational level and donor status).

Results: Among 1,796,090 individuals who donated blood at TBTC through 2008 to 2013, analysis of trend for the prevalence of HBV showed a significant decrease from 423 to 153 per 105 donors. The similar pattern of decrease was observed for the prevalence of HCV from 139 to 69 per 105 donors, however the rate of decrease in HCV prevalence was slower than the rate of decrease in HBV prevalence. The prevalence of HIV was constant while the prevalence of syphilis showed a sharp decrease in 2009 and a constant prevalence from 2010 to 2013. The top three parameters influenced the rate of TTIs were donor status, age, and educational level.

Conclusions: The decreasing prevalence and trends of TTIs among the studied donors demonstrated that the safety measures which were employed in recent years in Iranian Blood Transfusion Organization have been effective.

O280 HEPATITIS B AND HEPATITIS C SEROPREVALENCE AMONG INJECTING DRUG USERS REFERRED TO DICS AND VCTS IN SELECTED CAPITAL CITIES, IRAN

Ali Reza Shoghli[1], Mojtaba Fallahnezhad[2], Seyed Mahmood Nabavi[3], Roshanak Namazi[4], Mansour Mohajeri[1], Seyed Moayed Alavian[5], Mohammad Mehdi Goya[4]

[1]Department of Social Medicine, Zanjan University of Medical Sciences and Health Services, Zanjan, Iran;
[2]Research Department, Razi Science Researchers Institute, Tehran, Iran;
[3]Tropical and Infectious Diseases Department, Shahid Beheshti University of Medical Sciences and Health Services, Tehran, Iran;
[4]Center for Communicable Diseases Control, Ministry of Health and Medical Education, Tehran, Iran;
[5]Research Center for Gastroenterology and Liver Diseases, Baqiyatallah Hospital, Tehran, Iran

Presenting Author: Ali Reza Shoghli, Email: shoghli@yahoo.com

ABSTRACT

Background: Injecting drug use is an important risk factor for several infections, especially hepatitis B (HBV) and hepatitis C (HCV). Iran has the highest rate of opiate use worldwide, and most of them are not screened for hepatitis virus infections. The objective of this study was to determine the seroprevalence and risk behaviors for HBV, and HCV infection among injecting drug users (IDUs) in Iran.

Methods: In a cross-sectional study, we surveyed 1259 IDUs who were referred to DICs in six capital cities in various geographical area of the country (including Sari, Kermanshah, Tabriz, Mashhad, Zahedan, and Karaj) in 2013. 5CC blood was drawn to determine the prevalence of hepatitis B surface antigen (HBsAg) and antibodies to hepatitis C (HCVAb). Markers for HBV and HCV were measured by the rapid immunofiltration using the fourth generation kit. Also, a structured questionnaire on demographics and risk behaviors data in a face-to-face interview was completed for each participant.

Results: The mean age of the IDUs was 35.1 ± 9.1 years. Mean duration of non-injected and injected drug use was 12.3 ± 8.2 and 4.6 ± 4.8 years, respectively, and age of first injection was 26.1 ± 8.2 years. 43% of IDUs injected at least once per day, and 35.9% reported needle sharing. The seroprevalence of HBsAg and HCVAb was 3.3% (n= 41) and 38.8% (n= 489), respectively. 1.5% (n= 19) of IDUs co- infected with HBV and HCV.

Conclusions: HCV are highly prevalent among Iranian IDUs. Due to the absence of vaccines against HCV, harm reduction strategies may help reduce the high incidence of certain blood-borne infectious diseases among high-risk IDUs.

O288 HEPATITIS B VIRUS; GENOTYPING AND MUTATION PATTERN OF S/RT GENE IN HBV ISOLATES OF BIRJAND

Davod Javanmard[1], Masood Ziaei[1], Mohammad Hasan Namei[1]

[1]*Birjand Hepatitis Research Center, Birjand University of Medical Sciences, Birjand, Iran*

Presenting Author: Davod Javanmard, Email: djavanmard@hotmail.com

ABSTRACT

Background: Hepatitis B virus (HBV), Is an enveloped partially double stranded DNA virus which has eight genotypes, distributed geographically. HBV surface protein gene completely overlaps with polymerase gene. Mutations in Pol gene result in changes in the overlapping hepatitis B surface antigen (HBsAg). The present study aimed to evaluate genotypes and prevalence of mutation in a segment of POL/S gene in HBV isolates of Birjand, Iran.

Method: This is a population based study with 5000 randomized sample for HBV screening. A nested- PCR test was done with a pair of primer from S gene. The PCR products subjected to sequencing and the obtained sequences blast with present sequences of NCBI database for genotyping. Alignment and phylogenetic analysis was done with Mega6 software and finally mutation pattern of this segment surveyed in Geno2pheno database.

Results: The mean age of patients was 45 years, 57.7% male and 42.3% female. Eighty one of 5000 was HBsAg positive, among them 61 cases (75.3%) had HBV-DNA. The blast showed that all isolates belong to HBV genotype D, sub genotype D1 and subtype ayw4. Based on analysis of these sequences with Geno2pheno database and mega6 software, nucleotide substitution which observed in RT region was; rtN131D, rtQ149K, rtN118D, rtA113S, rtL157M, rtK60.nd, rtM129L and D144E, 143L, 134S, 129P, 117T, in HBs- Ag was the predominant escape mutation in this isolates.

Conclusions: This project indicate that HBV genotype D is predominant in Birjand as another regions of Iran. Our study and studies like this showed that A large number of spontaneous mutations occurring in surface gene which concomitantly affect the polymerase gene and subsequently would interfere with immune system and drug response.

O302 EPIDEMIOLOGICAL CHARACTERISTICS OF ACUTE SYMPTOMATIC HEPATITIS A IN AL ALWYIA PEDIATRIC TEACHING HOSPITAL DURING 2013

Tareef Fadhil Raham[1], Assad Muhsen Abood[1]

[1]*Al Alwyia Pediatric Teaching Hospital, Baghdad, Iraq*

Presenting Author: Tareef Fadhil Raham, Email: tareeffadhil@yahoo.com

ABSTRACT

Background: Concerns about hepatitis A infections is increasing worldwide specially after improving economic and sanitary conditions in many countries making older age groups who escape infection on early life vulnerable to infection.

Objectives: The objectives were to estimate the number of hepatitis A among children consulting Al Alwyia pediatric Teaching Hospital during 2013-2014 and to study some demographic characteristics of the disease.

Methods: This cross sectional hospital -based study was conducted during 2013-2014 and include pediat-

ric patients (43525 patients) who consult Al Alwyia pediatric hospital during that time. The outcome is total IgM antibodies to hepatitis A virus detected using Enzyme Linked Fluorescent Assay (ELFA) the test is performed on 380 clinically suspected cases. The age distribution of the susceptible population is estimated using a simple catalytic model.

Results: The age groups (1-4 and 5–9) constitute 43.6% and 42 % of seropositive cases respectively. Those 5 years and above constitutes 54.4%. The incidence is more among males (56%). Incidence is more during June and July 40 %and 15.6% respectively. 1.2% needed causality or ward admissions.

Conclusions and Recommendations: High incidence in school age group might indicate transition to older age groups and vaccinations should be considered at near future.

O307 THE ROLE OF POLYMORPHISMS NEAR IL28B GENE ON RESPONSE TO PEG-INTERFERON AND RIBAVIRIN IN THALASSEMIC PATIENTS WITH HEPATITIS C

Heidar Sharafi[1], Maryam Keshvari[2], Ali Pouryasin[3], Leila Mehrnoush[4], Shima Salimi[4], Pegah Karimi Elizee[4], Seyed Moayed Alavian[4], Bita Behnava[4]

[1]*Baqiyatallah Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[2]*Blood Transfusion Research Centre, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;*
[3]*Department of Genetics, Islamic Azad University-Arsanjan Branch, Arsanjan, Iran;*
[4]*Middle East Liver Disease (MELD) Center, Tehran, Iran*

Presenting Author: Bita Behnava, Email: bita_behnava@yahoo.com

ABSTRACT

Background & Aims: Hepatitis C virus (HCV) is the major cause of liver failure in thalassemic patients. In these patients, iron overload and their comorbidities make difficulties during pegylated interferon (PEG-IFN) and ribavirin (RBV) therapy. We aimed to assess the impact of polymorphisms near IL28B gene on virological response in thalassemic patients who were treated with PEG-IFN and RBV.

Methods: This cross-sectional study was conducted on 143 thalassemic patients with chronic hepatitis C who were treated with combination of PEG-IFN and RBV regimen. The rs12979860 and rs8099917 polymorphisms were assessed as the most common polymorphisms near IL28B gene by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method.

Results: The rate of sustained virological response (SVR) was significantly lower in thalassemic patients with HCV genotype-1 infection compared to patients with HCV genotype-3 infection (P=0.015; OR=0.42). Among baseline predictors, rs12979860 and rs8099917 polymorphisms were found to be the only parameters associated with achievement of SVR in thalassemic patients with HCV genotype-1 infection. However, there was no association between these polymorphisms and the rate of SVR in thalassemic patients with HCV genotype-3 infection.

Conclusions: In HCV genotype-1-infected thalassemic patients with rs12979860 CC genotype and without severe comorbidities, PEG-IFN and RBV combination therapy can be tried but in those with rs12979860 CT/TT who have severe liver fibrosis or who have some comorbidities it may be reasonable to treat them with new direct-acting antivirals.

O308 HEPATITIS E VIRUS IN PATIENTS WITH HIV INFECTION

Abdusamad Dustov[1], Saodat Azimova[1], Safarali Umarov[1]

[1]*Institute of Gastroenterology of the Ministry of Health and Social protection of Population of the Republic of Tajikistan, Tajikistan*

Presenting Author: Abdusamad Dustov, Email: dustovsamad@gmail.com

ABSTRACT

Objectives: Hepatitis E virus (HEV) infection is an emerging infection in developed countries and is thought to be a porcine zoonosis. HEV can cause chronic infection and cirrhosis in the immunosuppressed, including patients with HIV infection. Little is known about HEV and HIV coinfection. The aim of the study was to document the incidence of chronic HEV coinfection in patients with HIV infection and to determine the anti-HEV seroprevalence and compare it with that of a control population.

Materials and Methods: A total of 246 patients with HIV infection and 94 control subjects were tested for HEV using an immunoassay for anti-HEV IgG and were tested for anti-HCV and HBsAg. Demographic, lifestyle and laboratory data were prospectively collected on each patient with HIV infection. The anti-HEV IgG seroprevalence in patients with HIV infection was compared with controls group.

Results: The prevalence of HEV IgG seropositivity in the 246 HIV infection is shown that in the male group, 19.1% (27/141) were positive as against 29.5% (31/105) in the female group. The prevalence of HEV IgG seropositivity was significantly higher in women than in men (P< 0.05). In addition, subjects over 40 years of age had a higher prevalence of HEV IgG seropositivity than those aged >40 years (OR = 2.780, P <0.01). There was no difference in anti-HEV IgG se-

roprevalence between the HIV-infected patients and controls. The only risk factor predictive of anti-HEV seropositivity was the consumption of raw/undercooked meat or liver; sexual risk factors were unrelated. No patient with HIV infection had evidence of chronic coinfection with HEV. We also examined the relationship between HEV infection and HBV or HCV coinfection in patients with HIV infection. The results showed no significant difference in HBsAg positive status (6.8% vs 7.4%) and HCV positive status (5.1% vs 6.3%) between HEV IgG positive and negative patients with HIV infection. No statistically significant association between HEV seropositivity and HBV and HCV infection was observed.

Conclusions: Anti-HEV seroprevalence is similar in controls and patients with HIV infection. Risk factor analysis suggests that HEV is not transmitted sexually. No statistically significant association between HEV seropositivity and HBV and HCV infection was observed.

P063 THE EFFECT OF PENTOXIFYLLINE ON LIVER FUNCTION TESTS IN NON-ALCOHOLIC FATTY LIVER DISEASE NON-DIABETIC PATIENTS

Raika Jamali[1]

[1]*Research Development Center, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Raika Jamali, Email: raika.jamali@gmail.com

ABSTRACT

Background: Pentoxifylline might have a role in the suppression of inflammatory cytokines in nonalcoholic fatty liver disease (NAFLD).The aim of study is to evaluate the effect of Pentoxifylline on liver function tests in non-diabetic subjects with NAFLD.

Method: This clinical trial was performed in 120 NAFLD patients. They were divided to two groups by Balance Block Randomization method. A dietitian in both arms performed regulation of daily calorie intake. Pentoxifylline was prescribed to intervention arm at the dose of 1200 m/g per day. Liver function tests were checked at 2 months interval up to 6 months.

Results: Fifty-four patients in control group and fifty-six ones in Pentoxifylline group were evaluated. The participants mean of age was 36.65 ± 8.82 years. The mean aminotransferase levels were not statistically different in two arms at the study period. However, the speed of aminotransferase reduction was faster in Pentoxifylline arm. The mean aminotransferase levels were decreased during the study period in each arm.

Conclusions: A 6-month prescription of Pentoxifylline together with hypocaloric diet was effective in reducing aminotransferase in NAFLD patients.

P069 HELICOBACTER PYLORI SEROPREVELANCE IN IRAQI PATIENTS INFECTED WITH HEPATITIS C VIRUS

Akram Ajeel Najeeb[1], Eman Sh. Al-Obeidy[2]

[1]*Gastroenterology and Hepatology, Medical City, Baghdad, Iraq;* [2]*Virology, Medical City, Baghdad, Iraq*

Presenting Author: Akram Ajeel Najeeb, Email: akram_git@yahoo.com

ABSTRACT

Introduction: Chronic hepatitis C (CHC) is a major public health problem and a leading cause of chronic liver disease globally including in all region. H. pylori, on the other hand, leads to acute and chronic gastritis and duodenal and gastric ulcers, moreover, it can result in mucosa-associated lymphoid tissue (MALT) lymphoma. The association between H. pylori infection and liver cirrhosis in patients with hepatitis C virus has been documented in different parts of the world; nevertheless, no conclusive data is available in Iraq.

Materials and Methods: In the present study, the status of H. pylori infection was sought in 90 patients with chronic HCV infection and in 66 HCV-free healthy controls.

Results: The study showed that the H. pylori positivity was increased significantly (P = 0.03) in the HCV-infected patients when compared to that in healthy controls, where H. pylori infection was found in 50 (55.6%) out of 90 of the HCV-infected patients versus 26 (39.4%) out of 66 of the healthy controls. In HCV-infected patients, the prevalence of H. pylori infection was increased significantly (P = 0.04) from chronic active hepatitis to cirrhosis. H. pylori infection was present in 6/18 (33.3%), 10/21 (47.6%), 16/27 (59.3%), 18/24 (75.0%) patients with chronic active hepatitis, Child-Pugh score A, Child-Pugh score B and Child-Pugh score C, respectively. More importantly, the prevalence of H. pylori infection in HCV-infected patients was increased very significantly (P = 0.003) with increasing Meld (model for end-stage liver disease) score. The prevalence of H. pylori was documented in 9/28 (32.1%) patients with Meld score >10 and in 41/62 (66.1%) patients with Meld score >10.

Conclusions: It may be stated that our results collectively reflect a remarkable increase in H. pylori prevalence with advancing hepatic lesions, and the eradication treatment may prove beneficial in those patients with chronic hepatitis C.

P070 SEROLOGICAL PROFILE OF HBV INFECTION AND THE ASSOCIATED RISK FACTORS AMONG HIV POSITIVE INDIVIDUALS IN SHIRAZ, SOUTHERN IRAN

Mohammad Ali Davarpanh[1], Nasrin Motazedian[1], Ebrahim Falahzadeh[2], Maryam Rasti[1], Hashem Rahmati[3], Nadia Motazedian[1]

[1]*Shiraz HIV/AIDS Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Gastroenterohepatology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[3]*Nursing School, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Nasrin Motazedian, Email: motazediann@yahoo.com

ABSTRACT

Background: Human immunodeficiency virus-1and hepatitis B virus are transmitted through common route, so simultaneous infection with both viruses is

common. The aim of this study was to determine serological profile of HBV infection and the associated risk factors among HIV positive individuals in Shiraz.

Methods: In this cross-sectional study, 186 HIV infected individuals older than 18 years old, who referred to Shiraz voluntary counseling and testing center during 2010- 2011 were enrolled. All participants were assessed for the serological status of HBV infection using hepatitis B surface antigen, hepatitis B surface antibody, hepatitis B core antibody levels, and HBV polymerase chain reaction.

Results: A total of 186 HIV positive individual eligible for analysis including 164 (88.2%) men and 22 (11.8%) women entered our study. HBs Ag, HBsAb and HBcAb were detected in 66(35.5%), 62(41.3%), and 39(21%) of participants, respectively. HBV DNA was detected in 39 subjects (21%).

Conclusions: Our study showed that less than half of the HIV positive participants had evidence of previous exposure to HBV. Also, risk of chronic HBV was higher than normal population. Educating HIV positive individuals regarding prevention and transmission of other viral infections such as HBV, HCV and compliance with their medication is also suggested.

P072 HEPATITIS E VIRUS SEROPREVALENCE IN HIV POSITIVE INDIVIDUALS IN SHIRAZ, SOUTHERN IRAN

Hassan joulaei[1], Omid Rudgari[1], Nasrin Motazedian[1]

[1]*Shiraz HIV/AIDS Research Center, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Omid Rudgari, Email: rudgari@yahoo.com

ABSTRACT

Background: Hepatitis can be found globally, but the highest prevalence in the world is found in the East and South of Asia. As a whole, Hepatitis E virus (HEV) is the most common cause of acute viral hepatitis in the world. Hepatitis E is usually a self-limited disease but it leads to the deaths of about 20% of pregnant women in developing countries.

Objective: The present study was conducted to determine the prevalence of HEV infection among HIV individuals.

Materials and Methods: This is a cross-sectional survey of HIV positive individuals in voluntary counseling and testing center of Shiraz in 2013. Using the systematic random sampling method, 159 patients enrolled for the research. They were asked about their age, gender, area of residence, marital status, number of children, education level, occupation, history of imprisonment, mode of HIV transmission, and viral hepatitis co-infection. Three ml venous blood sample was drawn from each subject and transferred to the laboratory of VCT.

Results: The overall seroprevalence of hepatitis E was 26 (16.4%), where it increased significantly with age ranging from zero in subjects less than 30 years of age to 47.4% in those aged 50 years or older.

Conclusions: Co-infection of HIV positive individuals with HEV is an issue that should be of concern to health care providers.

P074 PARTICULARITIES OF THE COURSE OF CHRONIC HEPATITISES OF MIXED VIRAL ETIOLOGY (HBV + HCV)

Saodat Azimova[1]

[1]*Institute of Gastroenterology of Ministry of Health and Social Protection of Population of the Republic of Tajikistan, Dushanbe, Tajikistan*

Presenting Author: Saodat Azimova, Email: asaodat_57@mail.ru

ABSTRACT

Aim: specifying the leading role of HBV, HCV or HBV+HCV at natural course of chronic hepatitis of mixed viral etiology.

Materials and Methods: Materials included the results of clinical, biochemical, virology (PCR) and morphological analyses of 48 patients (36 males and 12 females) with chronic hepatitis of mixed viral etiology (HBV+HCV). The average age is 38 years old.

Results: During investigation of the detection ratio of HBV DNA and HCV RNA in blood sera of 48 patients with markers of both viruses (HBsAg and anti-HCV) we detected the following. In 14 patients with presence of markers of both viruses we detected only replication of HBV (virus DNA > 100 thousand copies/ml) and at the same time there was no HCV RNA. HBV replication was more frequent (in 10 patients) at presence of HBeAg ("wild virus"). HCV RNA detection frequency in patients with mixed infection was higher and equal to 28 people. In 6 patients was weak viremia (up to 30 thousand copies/ml), in 12 –average viremia (up to 100 thousand copies/ml) and in 10 high viremia (more than 100 thousand copies/ml). In 6 patients with chronic hepatitis of mixed viral etiology (HBV+HCV)during PCR investigation there was neither HBV DNA no HCV RNA. We did not detect simultaneous replication of both viruses. Clinical and biochemical features of the process activity correlated with active replication of viruses and were expressed at chronic HBV (ALT – 571.7±109.6) comparing to HCV (ALT – 259.9±42.5).

Conclusions: Thus, at chronic hepatitis of mixed viral etiology (HBV+HCV) dominating is HCV, which suppresses HBV replication and is less severe

P077 SURVEY OF SEROLOGICAL AND VIROLOGICAL MARKERSOF HEPATITIS B IN PATIENTS CO-INFECTED WITH BOTH HIV AND HEPATITIS C

Mohammad Mahdi Majzoobi[1], Seyyed Hamid Hashemi[1], Hossein Mahjub[1], Mina Nikbakht[1]

1Research Center of Brucellosis, Medical University of Hamadan, Hamadan, Iran

Presenting Author: Mohammad Mahdi Majzoobi, Email: majzoobi_mehdi@yahoo.com

ABSTRACT

Objective: Due to the similarity of transmission roots of HIV, HBV and HCV, Infected patients with HIV are considered high risk for hepatitis B and C. Hepatitis B causes a large number of liver complications such as cirrhosis, human deaths and increase the hepatotoxic effects of anti-retroviral drugs in patients with HIV/AIDS. Therefore, proper diagnosis and treatment of hepatitis B is too important in these patients. Due to inhibitory effect of HIV, HCV or both on replication of hepatitis B virus, request of HBsAg alone, is not enough to correct diagnosis or role out of hepatitis B and also, recognize any previous contact with HBV, so we have decided to evaluation of serologic and virological markers of hepatitis B in HIV/HCV co-infected patients.

Material and Method: In a cross-sectional study, HBsAg and HBcAb test was performed for all HIV-HCV co-infected patients, referred to the HIV/AIDS Care Center of Hamadan. HBsAb was requested for HBsAg negative-HBcAb positive individuals and if its result was negative, HBV-DNA PCR was performed. Finally collected data were analyzed with SPSS.

Results: Of 103 HIV-HCV co-infected patients, both HBsAg and HBcAb were positive in 7 patients (6.8%), negative in 44 (42.7%) and 52 (50.5%) of all patients were HbsAg-/ HbcAb+. In the last group HBsAb and HBV-DNA PCR were done, which titer of antibody was positive in 4 patients (7.7%) and PCR was negative in all (100%) of patients.

Conclusions: Significant number of co-infected HIV-HCV patients had only isolated HBcAb positive test, therefore due to attention of important of early diagnosis and treatment of HBV infection, we recommend that other diagnostic procedures including virologic markers should be done.

P079 CHANGES OF EPIDEMIOLOGICAL MODEL OF HEPATITIS IN ILAM PROVINCE BETWEEN 2009-2012

Khadijeh Javaheri[1], Parisa Shabibi[2]

[1]Mehran City Health Network, Ilam, Iran;
[2]Ilam University of Medical Sciences, Ilam, Iran

Presenting Author: Khadijeh Javaheri, Email: khadijehjavaheri@yahoo.com

ABSTRACT

Problem: Hepatitis is a systemic infection that mostly affects liver. The epidemiological model of viral Hepatitis is different in societies with different cultural, social, economic and even geographical backgrounds. So, it is necessary to pay more attention to this subject.

Methods: In this cross sectional study, the required data were collected through a questionnaire from the files of 400 patients diagnosed with this disease in the health care system between 2009-2012. Data were analyzed by SPSS version 18.

Findings: Patients under study were 400 including 220 males and 180 females that were diagnosed through the health care system. The changes observed in the process and epidemiology of the disease in the time period under study were: the number of male patients showed a 15% reduction while female patients showed a 15% increase. The cases without any symptoms increased about 36.8%. Hepatitis types C and D had an increase of 4% each. In the consideration of risk factors, the cases for intravenous drug addicts increased about 8.5% and in infants, transfusion and the family members of the infected person reduced for 0.7, 0.7, and 5% respectively. The ratio of the diagnosis in urban areas had a 10% increase. The ratio of acute and carrier reduced for 11% and 15% respectively and chronic cases increased for 5%.

Discussion and Conclusions: Based on the changes in the epidemiological model and the positive diagnosis of this disease in this province, a serious action should be taken for the planning and modification of the program for an effective control and treatment of this disease.

P083 VIRAL LOAD CHANGES IN HEPATITIS C PATIENTS WITH DIFFERENT GENOTYPES, GOLESTAN PROVINCE

Behnaz Khodabakhshi[1], Fatemeh Fazli[1], Abdolvahab Moradi[2], Sima Besharat[2], Taghi Amiriani[2], Abdolah Abbasi[1], Aida Hashemifard[1]

[1]Infectious Disease Research Center, Golestan University of Medical Sciences, Golestan, Iran;
[2]Golestan Research Center of Gastroenterology and Hepatology, Golestan University of Medical Sciences, Golestan, Iran

Presenting Author: Sima Besharat, Email: s_besharat_gp@yahoo.com

ABSTRACT

Background and Aim: Viral load is considered an effective potential factor in dosage, duration and response to the standard treatment in patients with hepatitis C (HCV) infection. It could be very different regards to the virus genotypes. In this study we assessed the viral load changes in Hepatitis C patients with different genotypes, Golestan province, Northeast of Iran.

Patients and Methods: In this cross-sectional study 65 anti-HCV positive patients were recruited. These patients were under the standard treatment regiments. Viral load and genotypes were determined once before starting the treatment and again after completion of the treatment. Liver enzyme tests and biochemical parameters were extracted from the patients' medical records. Data were analyzed using SPSS-16 software by Student t-test, paired T-test, one-way ANOVA and Friedman tests.

Results: All patients were genotype 1 and 3. A lower response to the standard treatment was seen in genotype 3 compared to 1. There was no significant difference in viral load changes regards to the demographic variables. Those HCV cases with genotype 3 and normal ALT before treatment showed a better response to standard treatment than patients with elevated ALT.

Conclusions: In the present study, a lower response to the standard treatment regimen was seen in HCV genotype 3 compared to genotype 1.

P088 PREVALENCE AND RISK FACTORS OF HEPATITIS C INFECTION IN BIRJAND

Azadeh Ebrahimzadeh[1], Zohreh Azarkar[1], Masood Ziaee[1], Gholam Reza Sharifzadeh[1], Bita Bijari[1]

[1]Hepatitis Research Center, Birjand University of Medical Sciences, Birjand, Iran

Presenting Author: Azadeh Ebrahimzadeh, Email: mr14436@yahoo.com

ABSTRACT

Background: Hepatitis C is an important global concern with a frequency of 3%, that is, 170 million of the population have HCV-Ab. In chronic patients, risk of cirrhosis is up to 44% along with 13% risk of HCC and 14% risk of mortality. As there is no vaccine for the virus yet and most of the cases are asymptomatic, attention to the epidemiology of the disease in the population is so important.

Aim: The aim of this study is to determine the prevalence and risk factors of Hepatitis C in Birjand city.

Patients and Methods: In this descriptive-analytical study, 5,235 people who live in Birjand city were selected and after gaining permission for the study, a form was signed for each patient. Prevalence of Hepatitis C was determined by ELISA test after which positive cases underwent PCR and genotyping for confirmation tests.

Results: The mean age of participants was 39.7±14.4. Of them, 52.2% were female and 29.9% had university degree. Prevalence of HCV-Ab positive was about 0.2% with ELISA of which 0.14% of them were confirmed by PCR. Positive HCV-Ab had no significant relationship with age, sex, and education (P>0.05). Also, there was no significant relationship with risk factors such as endoscopy, blood transfusion, surgery, hospitalization, phlebotomy, and alcohol drinking (P>0.05). Prevalence of HCV-Ab in IV-drugs abusers was 200 times more than non-addict people. Also, prevalence of HCV-Ab in non-IV-drugs abuser addicts was 9.3 times more than non-addict patients.).

Conclusions: In this study, prevalence of Hepatitis C was 0.2% which is lower than its average prevalence in Iran (1%). Prevalence of Hepatitis C had a significant relationship with IV-drugs abusing.

P091 PREVALENCE OF HCV GENOTYPES AMONG PRISONER PATIENTS WITH CHRONIC HEPATITS C INFECTION IN SOUTH KHORASAN PRISONS-2014

Zohreh Azarkar[1], Gholamreza Sharifzadeh[2], Azade Ebrahimzadeh[1], Malihe Vakili[2]

[1]Birjand Hepatitis Researches Center, Medical Sciences of University, Birjand, Iran;
2Medical Sciences of University, Birjand, Iran

Presenting Author: Zohreh Azarkar, Email: drz.azarkar@yahoo.com

ABSTRACT

Background: Hepatitis C virus one of major factor causing chronic liver disease has been classified in to six major genotypes based on variation in genome sequencing. The HCV genotype has a distribution and an important role in clinical and histological outcome. Since response to antiviral therapy in patients depend on HCV genotypes, determination of such genotype is of great significance to treatment. The aim of this study is determination of HCV genotypes in prisoner's patients with chronic hepatitis C infection in south Khorasan prisons.

Method: This cross sectional study was conducted

in south Khorasan prisons. Of three thousand prisoner were resided in south Khorasan prisons in 2014, 41 prisoner were detected as positive for anti HCV by ELISA. After collecting demographic and epidemiologic data, anti HCV test performed and RNA genotyping of virus was done by using genotype specific primers(by RT- PCR).

Results: After repeat trial, of 41 patient who were detected as positive for anti-HCV only 30 patients were anti-HCV positive. The median age of patients was 39+8.8years (range 22-62).46.3% was single and 53.7%was married. 97.6% of patients were addicted and 22.5% of patient were IVDA. 4 patient (9.8%) have HBV and 1 patient (2.4%) have HIV. Of 30 patient 20(93.3%) were positive PCR for HCV. Median load of virus was 383206 copy /ml. The most common genotype was 3a (90%).Two samples were1a and two samples not classified into any of the known HCV subtypes. No patients was infected with more than one genotype. There was not significant relation between genotype and sex, age and kind of addiction.

Conclusions: Our finding suggested that genotype 3a is the most common among prisoner patients with chronic hepatitis C infection in south Khorasan prisons.

P092 ASSOCIATION OF THE HEPATIC SORTILIN WITH REDUCED LEVEL OF HEPATIC HBSAG IN CHRONIC HEPATITIS B PATIENTS

Ashraf Mohamadkhani[1], Sima Besharat[1], Shirin Moossavi[2], Maryam Sharafkhah[1], Akram Pourshams[1], Masoud Sotoudeh[2], Hossein Poustchi[1]

[1]*Liver and Pancreatobiliary Diseases Research Center, Tehran University of Medical Sciences, Tehran, Iran;*
[2]*Digestive Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Ashraf Mohamadkhani, Email: mohamadkhani.ashraf@gmail.com

ABSTRACT

Background: Sortilin that is encoded by the SORT1 gene implicated in metabolism of lipoprotein in the liver and adipose tissue. Likewise, HBsAg particles have lipoprotein-like structure. The aim of this study was to assess the association of hepatic expression of sortilin and HBsAg.

Patients and Methods: Thirty chronic hepatitis B patients (8 females and 22 males) were enrolled in this study. Liver biopsies were stained for HBs antigen and sortilin fold changes were conducted by real-time PCR.

Results: Hepatocyte HBsAg expression had considerably inverse association with increased fold change of sortilin (r= -0.41, P= 0.02). However a moderate negative correlation has been identified between sortilin fold change and serum level of HBsAg (r= -0.33, P= 0.07). Expression of sortilin was higher in lower fibrosis stage when compared to higher fibrosis stage though not significant.

Conclusions: Sortilin binds a number of unrelated ligands and participates in a wide range of cellular processes. Our results suggest that sortilin is inversely associated with the expression of HBsAg.

P095 A SURVEY OF THE PREVALENCE OF DEPRESSION IN BLOOD DONORS WITH HEPATITIS C IN SHIRAZ

Leila Kasraian[1], Mohammad Hosein Karimi[1]

[1]*Blood Transfusion Research Centre, High Institute for Research and Education in Transfusion Medicine, Shiraz, Iran*

Presenting Author: Leila Kasraian, Email: lkasraian@yahoo.com

ABSTRACT

Objectives: Depression is the most common psychiatric disorders associated with hepatitis C. This study surveyed the prevalence rate of depression in Hepatitis C Virus (HCV) patients before they were aware of their HCV results.

Methods: This cross-sectional study was conducted on the blood donors who had confirmed positive HCV test as the case group and the age- and sex-matched ones with negative tests as the control group. Beck depression questionnaire were performed for both groups by a psychiatrist. The total score of the questionnaire was computed by summing up all the scores and ranged from 0 to 63. A cut-off score of 19 was used to classify moderate/severe depressive symptoms. Then, the two groups were compared regarding the prevalence rate of depression. The data were analyzed by chi-square and logistic regression tests using the SPSS statistical software (v. 19).

Results: This study was conducted on 118 subjects (59 cases and 59 control group). The most frequent risk factors for getting HCV were intravenous drug abuse (59.3%), and unsafe sexual contact (30.5%), and history of being imprisoned (25.4%). However, 18.9% of the HCV patients did not mention any risk factors. Moreover, the prevalence rate of depression was higher among the HCV group compared to the control group (55.9% vs. 17.7%) (P<0.001). The severity of depression was also higher in the HCV group (P<0.05). Besides, the prevalence rate of depression was higher among the HCV patients with lower education

levels, previous history of drug abuse, unsafe sexual contact, and previous history of psychiatric diseases. The prevalence rate of depression was higher in the case group even after adjusting other variables.

Conclusions: Our study underlined the significant prevalence of depression among the HCV patients. Therefore, designing depression screening tests is helpful in such patients before starting the treatment.

P096 INFLUENCING FACTORS ON SUSTAIN VIROLOGICAL RESPONSE THROUGH PEG & RIBAVIRIN IN CHRONIC HEPATITIS C VIRUS

Shahnaz Sali[1], Davood Yadegarinia[1]

[1]*Infectious Diseases and Tropical Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran*

Presenting Author: Shahnaz Sali, Email: dr.shsali@gmail.com

ABSTRACT

Background: There are significant advances in treatment of chronic hepatitis C in the recent years. In Iran, however, Peginterferon and Ribavirin are being used more extensively in comparison with new generation of antiviral drugs. Reaching sustained virological response (SVR) is affected by several different factors.

Objectives: Investigation is carried out to outline different factors contributing to sustained virological response amongst some target patients.

Patients and Methods: This study was conducted on 87 patients referred to the Hepatitis Clinic in Labbafinejad Hospital during 2011 and 2014. The patients were prescribed with combination of Peginterferon α-2a-Ribavirin, based on the standard protocol. At the end of the treatment, SVR rate and predictors were evaluated.

Results: The mean age of the patients was 49 and 86% were male. Genotype 1a was the most common (72%) and 65% of patients were treatment naïve. We found that 12%, and 19% patients were; non-responders and relapsers, respectively, while 69% of the patients reached SVR. Patients reaching SVR were aged 43 years or lower, more likely to have a non-1a genotype, without fatty liver and a lower number had an HCV RNA of less than 600 000 IU/ml. The multivariate analysis showed that an age of 43 or lower (OR = 3.73, CI95% = 1.52-9.23), a non-1a genotype (OR = 3.72, CI 95% = 1.40-9.82) and an HCV RNA less than 600 000 IU/ml (OR = 2.53, CI 95% = 1.03-6.16) may be useful SVR predictors.

Conclusions: Findings of the present study indicates that more than half the patients reached SVR when treated with combination of Peginterferon α-2a and Ribavirin. Majority of these patients had genotype 3a and a minority had genotype 1a and 1b. In addition, an age of 43 or lower, non-1a,1b genotype and a viral load less than 600 000 IU/ml were strong influencing factors on SVR.

P097 OCCULT HEPATITIS B VIRUS INFECTION AMONG HUMAN IMMUNODEFICIENCY VIRUS-INFECTED PATIENTS WITH ISOLATED HEPATITIS B CORE ANTIBODY IN ISFAHAN, IRAN

Farzin Khorvash[1], Abbasali Javadi[2], Katayoun Tayeri[3], Behrooz Ataei[2], Parisa Shoaei[1]

[1]*Nosocomial Infection Research Center, Isfahan University of Medical Sciences, Isfahan, Iran;*
[2]*Infectious Diseases and Tropical Medicine Research Center, Isfahan University of Medical Sciences, Isfahan, Iran;*
[3]*Acquired Immune Deficiency Research Center, Isfahan University of Medical Sciences, Isfahan, Iran*

Presenting Author: Parisa Shoaei, Email: shoaei@idrc.mui.ac.ir

ABSTRACT

Background: Detection of hepatitis B virus (HBV) genomes without detectable hepatitis B surface antigen (HBs-Ag) is termed occult HBV infection (OHBV) that may be transmitted by blood transfusion or organ transplantation and has acute reactivation when an immunosuppressive status like human immunodeficiency virus (HIV) infection occurs. We aimed to evaluate OHBV in HIV-infected patients with isolated antibodies to hepatitis B core antigen (anti-HBc) in Isfahan, Iran.

Materials and Methods: In a cross-sectional study during August-September 2011, serum samples from HIV-infected patients who attended Isfahan Consultation Center for Behavioral Diseases were tested for HBs-Ag and anti-HBc using ELISA method. HBV deoxyribonucleic acid (DNA) was detected and quantified in plasma of HBs-Ag negative/anti-HBc positive subjects by real-time polymerase chain reaction.

Results: From 64 HIV-positive individuals, 12 (18%) patients were HBs-Ag negative/anti-HBc positive, and from those 3 (25%) had detectable HBV-DNA in their plasma.

Conclusion: It seems that occult HBV might be assessed and be treated in HIV-infected patients.

P100 NON-INVASIVE HISTOLOGIC MARKERS OF LIVER DISEASE IN PATIENTS WITH CHRONIC HEPATITIS B

Shahnaz Sali[1], Shoaei Simin Dokht[2], Mehdi Karamipour[3], Esmail Riahi[4]

[1]*Infectious Diseases and Tropical Medicine Research Center, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran;*
[2]*Shahid Beheshti University of Medical Sciences, Tehran, IR Iran;*
[3]*Clinical Research and Development Center, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran;*
[4]*Imam Hossein Hospital, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran*

Presenting Author: Shahnaz Sali, Email: dr.shsali@gmail.com

ABSTRACT

Background: An exact histologic staging of liver fibrosis is essential for identifying the best therapeutic strategy and determining the disease prognosis in patients with chronic hepatitis B (CHB). While liver biopsy has a vital role in the management of liver diseases, it also sustains some limitations hampering its widespread use.

Objectives: In this study, we evaluated and compared several available indices of the severity of liver diseases in patients with hepatitis.

Patients and Methods: Exclusion criteria were as follows: decompensated liver disease, alcoholic liver disease or alcohol intake of 40 g or more per week; co-infection with human immunodeficiency virus, hepatitis C virus, or hepatitis D virus.

Results: Results showed that AST to platelet ratio index (APRI) (odds ratio = 2.35, P = 0.01) and age (odds ratio = 1.04, P = 0.007) were independently predictive of the presence of significant liver necrosis and inflammation. On the other hand, AARPRI (odds ratio = 3.8, P = 0.07), age (odds ratio = 1.04, P = 0.02), and ALT levels (odds ratio = 1.01, P = 0.007) were predictive of a significant liver fibrosis. Further analysis with receiver-operating curve showed that none of these predictors had a fair diagnostic value (area under the curve < 70).

Conclusions: The APRI had the highest sensitivity and specificity (64% and 71%, respectively) for prediction of the presence of liver disease. We suggest that APRI may be applicable for the detection of a severe liver disease.

P102 EFFECTS OF ORAL LEVAMISOLE AS AN ADJUVANT TO HEPATITIS B VACCINE IN HEALTH CARE WORKERS NON RESPONDER TO PREVIOUS VACCINATIONS: A RANDOMIZED CONTROLLED TRIAL

Babak Sayad[1], Armin Vazirian[1], Siavash Vaziri[1], Feyzolah Mansouri[1], Mandana Afsharian[1], Alireza Janbakhsh[2]

[1]*Infectious Diseases, Kermanshah University of Medical Sciences, Kermanshah, Iran;*
[2]*Infectious Diseases, Kermanshah University of Medical Sciences, Kermanshah, Iran*

Presenting Author: Babak Sayad, Email: babaksayad@yahoo.com

ABSTRACT

Background: Health care workers are at increased risk to the hepatitis B virus infection. Hepatitis B vaccination results in decreased occupational hazard of HBV. This study aimed to evaluate the effectiveness of oral levamisole as an adjuvant to hepatitis B vaccine compared with the revaccination alone, in previously non responder health care workers.

Study Design: Parallel randomized controlled, double blind, trial. Randomization and allocation to trial group were carried out by a central computer system.

Participants: 28 health care workers, without any seromarkers of HBV infection which remained non responder after at list three dose of hepatitis B vaccine, were randomly allocated into experimental and control groups.

Intervention: HBV vaccination was performed using the Hepavax-Gene TF vaccine, 40 μg three times at intervals of; zero, one, and two months. Levamisole 50 mg twice a day or a placebo, was administered to the experimental and control groups, respectively, for a period of six days before to six days after the vaccination. Immune response was evaluated by measuring hepatitis B surface antibodies (HBsAb) concurrently with the second vaccine administration, and at one month at the conclusion of the vaccination program.

Analysis: We used a chi-squared test and two independent sample t-tests, in order to compare the level of immune response and Ab titer, respectively

Findings: 22 individuals finished the trial (11 in each group).The immune response following the three vaccinations was similar and interestingly high (90.9%) in two groups. Furthermore, the mean antibody titer following the repeated vaccination in the experimental group showed a higher increase than in the control group (318 vs. 286 IU/Ml) with no significant difference(P=0.87).

Conclusions: Revaccination can increase the immune response in health care workers rather than levamisole adjuvant, although mean antibody titer maybe higher with levamisole adjuvant.

P104 THE THERAPEUTIC USE OF ANALGESICS IN PATIENTS WITH LIVER CIRRHOSIS: A LITERATURE REVIEW AND EVIDENCE-BASED RECOMMENDATIONS

Mahsa Motavaf[1], Saeid Safari[2], Seyed Moayed Alavian[3]

[1]Department of Genetics, Tarbiat Modares University, Tehran, Iran;
[2]Department of Anesthesiology and Pain Medicine, Iran University of Medical Sciences, Tehran, Iran;
[3]Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran

Presenting Author: Mahsa Motavaf, Email: motavaf.m@gmail.com

ABSTRACT

Context: Pain management in cirrhotic patients is a major clinical challenge for medical professionals. Unfortunately there are no concrete guidelines available regarding the administration of analgesics in patients with liver cirrhosis. In this review we aimed to summarize the available literature and suggest appropriate evidence-based recommendations regarding to administration of these drugs.

Evidence Acquisition: An indexed MEDLINE search was conducted in July 2014, using keywords "analgesics", "hepatic impairment", "cirrhosis", "acetaminophen or paracetamol", "NSAIDs or nonsteroidal anti-inflammatory drugs", "opioid" for the period of 2004 to 2014. All randomized clinical trials, case series, case report and meta-analysis studies with the above mentioned contents were included in review process. In addition, unpublished information from the Food and Drug Administration are included as well.

Results: Paracetamol is safe in patients with chronic liver disease but a reduced dose of 2-3 g/d is recommended for long-term use. Non-steroidal anti-inflammatory drugs (NSAIDs) are best avoided because of risk of renal impairment, hepatorenal syndrome, and gastrointestinal hemorrhage. Most opioids can have deleterious effects in patients with cirrhosis. They have an increased risk of toxicity and hepatic encephalopathy. They should be administrated with lower and less frequent dosing in these patients and be avoided in patients with a history of encephalopathy or addiction to any substance.

Conclusion: No evidence-based guidelines exist on the use of analgesics in patients with liver disease and cirrhosis. As a result pain management in these patients generates considerable misconception among health care professionals, leading undertreatment of pain in this population. Providing concrete guidelines toward the administration of these agents will lead to more efficient and safer pain management in this setting.

P105 HEPATOTOXICITY OF HALOGENATED INHALATIONAL ANESTHETICS

Saeid Safari[1], Mahsa Motavaf[2], Seyed Moayed Alavian[3]

[1]Department of Anesthesiology and Pain Medicine, Iran University of Medical Sciences, Tehran, Iran;
[2]Department of Genetics, Tarbiat Modares University, Tehran, Iran;
[3]Research Center for Gastroenterology and Liver Diseases, Baqiyatallah University of Medical Sciences, Tehran, Iran

Presenting Author: Mahsa Motavaf, Email: motavaf.m@gmail.com

ABSTRACT

Context: Halogenated inhalational anesthetics are currently the most common drugs used for the induction and maintenance of general anesthesia. Postoperative hepatic injury has been reported after exposure to these agents. Based on much evidence, mechanism of liver toxicity is more likely to be immunoallergic. The objective of this review study was to assess available studies on hepatotoxicity of these anesthetics.

Evidence Acquisition: We searched PubMed, Google Scholar, Scopus, Index Copernicus, EBSCO and the Cochrane Database using the following keywords: "inhalational Anesthetics" and "liver injury"; "inhalational anesthetics" and "hepatotoxicity"; "volatile anesthetics" and "liver injury"; "volatile anesthetics" and hepatotoxicity for the period of 1966 to 2013. Fifty two studies were included in this work.

Results: All halogenated inhalational anesthetics are associated with liver injury. Halothane, enflurane, isoflurane and desflurane are metabolized through the metabolic pathway involving cytochrome P-450 2E1 (CYP2E1) and produce trifluoroacetylated components; some of which may be immunogenic. The severity of hepatotoxicity is associated with the degree by which they undergo hepatic metabolism by this cytochrome. However, liver toxicity is highly unlikely from sevoflurane as is not metabolized to trifluoroacetyl compounds.

Conclusion: Hepatotoxicity of halogenated inhalational anesthetics has been well documented in available literature. Halothane-induced liver injury was extensively acknowledged; however, the next generation halogenated anesthetics have different molecular structures and associated with less hepatotoxicity. Although anesthesia-induced hepatitis is not a common occurrence, we must consider the association between this disorder and the use of halogenated anesthetics.

P107 COMPARATIVE STUDY OF HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH HEPATITIS C AND HEALTHY PEOPLE AND PRESENT A STRUCTURAL MODEL

Atefeh Ghanbari[1], Rabiolla Farmanbar[2], Fariborz Mansour-Ghanaei[3], Maryam Momeni[4]

[1]*Health Research Center, Guilan University of Medical Sciences, Rasht, Iran;*
[2]*Guilan University of Medical Sciences, Rasht, Iran;*
[3]*Gastrointestinal & Liver Diseases Research Center (GLDRC), Guilan University of Medical Sciences, Rasht, Iran;*
[4]*Qazvin Nursing & Midwifery College, Qazvin University of Medical Sciences, Qazvin, Iran*

Presenting Author: Maryam Momeni, Email: momeni65@gmail.com

ABSTRACT

Background and Objective: Hepatitis C is an asymptomatic disease. The quality of life is a major concern in these patients; the effects of hepatitis C virus infection on quality of life and presentation a structural model about it are emerging as important parameters in the evaluation of patients.

Materials and Methods: This is a cross-sectional study in which a total of 61 patients with confirmed hepatitis C and 78 healthy accompaniers of them were included. A questionnaire composed of Persian translation of SF-36 and Sweden QOL was used for measuring the HRQOL. Then, the data were analyzed by SPSS16 and LISREAL 8.80.

Results: Total adjusted score of HRQOL (mean ± SE) was 60.77±3.95 and 67.13± 4.80 in patients versus control group (p<0.0001). Age, ALT were 0.15 and -0.19 had path coefficient respectively with physical health. Age and Co disease were 0.26 and -0.36 had path coefficient respectively with psychological health. Physical health as a mediator accounted for 95 % of the variance and psychological health as a mediator accounted for 78 % of the variance in quality of life.

Conclusion: This study showed that hepatitis C is responsible for great alterations in HRQOL. Every effort such as provide structural models in prediction of quality of life would play a significant role in resolving of problems.

P115 DETERMINATION OF GENOTYPE AND VIRALLOAD OF HCV AMONG THALASSEMIC PATIENT SUFFERING HEPATITIS

Vahid Babaei[1], Shahram Teimourian[1], Yassaman Saghaei[2], Hojjat Afradi[2]

[1]*Genetics Department, Iran University Medical Science, Tehran, Iran;*
[2]*Zafar Clinic, IBTO, Tehran, Iran*

Presenting Author: Vahid Babaei, Email: vahidbabaei2012@yahoo.com

ABSTRACT

Background: Hepatitis C is one of the most common causes of the liver failure and cancer and represents a major public health problem. Recent studies have focused on whether different hepatitis C virus (HCV) genotypes, are associated with different profiles of pathogenicity, infectivity and response to antiviral therapy. Genotyping system based on polymerase chain reaction (PCR) of the core region with genotype-specific PCR primers for the determination of HCV genotypes 1a, 1b, 2a, 2b, 3a, 3b, 4, 5a, and 6a was developed. Different genotypes have been reported in different parts of the world. Genotype 1 is difficult to treat, while genotypes 2 and 3 are easy to treat. Therefore, identification of HCV genotype in patients is necessary to begin and follow up the treatment.

Aim: Detection of genotypes and viral load of HCV in thalassemic patients who suffer from hepatitis C.

Materials and Methods: Viral RNA was isolated from serum samples, cDNA was prepared and amplified using a specific nested PCR (nested RT-PCR). In this study, serum sample of 200 thalassemic patient (93 female and 107 male) suffering hepatitis were used to extract HCV genome. Nested- RT PCR were performed and PCR products were studied by restriction fragment length polymorphism (RFLP). For viral load determination, the Amplicor HCV Monitor test version 2.0 was used, according to the instructions of the manufacturer.

Results: Among the 200 patients in our study, the frequency of different genotypes is: 1a (20.5%), 1b (14.5%), 2a (12.5%), 2b (12.5%), 3a (24%), 3b (16 %) which shows the higher frequency for 3a and 1a. Genotype 1 was associated with a significantly (P<0.001) higher viral load as compared to genotypes 3 and 2. Some cities show a higher rate of patients: 46% Sari, 32% Tehran and 5.5% Ahvaz.

Conclusion: In our study the type 3a and 1a HCV in thalassemic patients suffering hepatitis show the most prevalence.

P119 MOLECULAR GENOTYPING OF HEPATITIS C VIRUS IN THE GENERAL POPULATION IN IRAN

Maryam Karkhane[1], Seyed Reza Mohebbi[1], Yasin Hatami[1], Pedram Azimzadeh[1], Afsaneh Sharifian[1], Mohammad Reza Zali[1]

[1]*Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran*

Presenting Author: Maryam Karkhane, Email: maryam_karkhane@hotmail.com

ABSTRACT

Introduction: This present study was focused on determination of hepatitis C virus genotypes among infected patients in general population of Iran. 100 HCV infected patients were randomly selected for inclusion of the research.

Methods: 100 patients with chronic hepatitis C were included in this study that randomly selected. These patients were genotyped for HCV infection. Genotypes were determined from NS5B and genes of core envelop proteins. Studied population collected from Taleghani Hospital, Tehran. Genotyping of HCV was performed using RT- PCR which followed by nested-PCR and sequencing methods.

Results: The identified HCV genotypes included 1a (n=32), 1b (n=7) 2 (n=1), 3 (n=43), 4(n=1) and 6 (n=1). In other words, genotype 1 frequency was 54% which followed by genotype 3 with 43%. Frequency of genotypes 2, 4 and 6 are equal (1%).

Conclusions: The sequence of hepatitis C viruses may differ significantly from each other which cause to emergence of at least six determined genotypes. Results of the study were similar to other studies in Iranian population in which genotype 1a is predominant genotype and followed by 3a. Genotype 1b had lower epidemiology. The lowest distribution of HCV was related to 1b, 2 and 4 genotypes.

P120 HEPATITIS B VACCINATION COVERAGE AMONG DENTISTS IN IRAN: A SYSTEMATIC REVIEW AND META-ANALYSIS STUDY

Milad Azami[1], Kourosh Sayehmiri[2], Zahra Darvishi[3], Fatemeh Sayehmiri[4]

[1]*Student Research Committee, Ilam University of Medical Sciences, Ilam, Iran;*
[2]*Department of Biostatistics, Ilam University of Medical Sciences, Ilam, Iran;*
[3]*Ilam University of Medical Sciences, Ilam, Iran;*
[4]*Clinical Microbiology Research Center, Ilam University of Medical Sciences, Ilam, Iran*

Presenting Author: Milad Azami, Email: miladazami@medilam.ac.ir

ABSTRACT

Background: Hepatitis B is the most common cause of advanced liver disease in Iran. It is estimated that more than two billions of people in worldwide are infected with it and more than 35% of Iranians have been exposed to this disease. The transmission of blood-borne viruses is an occupational risk for dentists. According to various reports in the field of Hepatitis B vaccination coverage among dentists in Iran is provided and there is no overall estimate of them, this study was performed to investigate Hepatitis B vaccination coverage among dentists in Iran by systematic review and meta-analysis method.

Methods: All published papers in main national and international databases include: SID, Magiran, Iranmedex, Medlib, Scopus, Google Scholar, pubmed and Science Direct in no time limit to 2014 were searched independently by two researchers for some standard keyword. After evaluation of the quality specified inclusion and exclusion criteria, assessed data were extracted from eligible studies.

Results: 6 eligible papers including 3002 participants were entered into the overall Hepatitis B vaccination coverage in dentists (Including at least one dose) 94.2% (95%CI: 91.1-97.3) and Full vaccination coverage 77.2% (95%CI: 77.2-85.5) was estimated. The maximum and minimum reported of vaccination coverage in dentists from studies in Gilan (71.9%) and Tehran (100%), respectively.

Conclusion: Hepatitis B vaccination coverage among dentists in Iran was good and similar to other countries and implementation of vaccination programs in high-risk groups (dentists) was successful in the country.

P123 PREVALENCE OF HEPATITIS B SURFACE ANTIGEN POSITIVE IN PREGNANT WOMEN REFERRED TO BEHESHTI HOSPITAL OF KASHAN –ISFAHAN, 2012

Hasan Afzali[1], Mansooreh Momen-Heravi[1]

[1]*Infectious Disease, Kashan University of Medical Sciences, Kashan, Iran*

Presenting Author: Hasan Afzali, Email: hasanafsali@yahoo.com

ABSTRACT

Background: The transmission of the hepatitis B virus (HBV) is parenteral, sexual and perinatal. Prevention of vertical transmission of HBV is extremely important because HBV infection in early life usually results in a chronic carrier State. There has been much debate about Hepatitis B surface antigen (HBsAg) screening of pregnant women.

Objectives: The aim of this study was to determine the prevalence of HBsAg +among pregnant women attending to Beheshti hospital in Kashan 2012.

Materials and Methods: This descriptive study was carried out on 768 pregnant women that hospitalized in Beheshti hospital in Kashan in 2012. After obtain consent form, the questionnaires including demographic and HBV infection associated risk factors

were filled through interview and then 3 cc blood were taken from patients and HBsAg examined by ELISA method. These data were analyzed by SPSS software.

Results: 12(1.56%) out of 768 pregnant women were HBsAg+. The mean of age HBsAg+cases was 24.5±4 years old. Most of HBsAg+ cases (66.6%) were uneducated. 17.7% of pregnant women were not Iranian, which 7.4% of them was HBsAg+. There was no high-risk job, recent dentistry interruption and skin tattoo among HBsAg+cases.

Conclusion: 1.56% of pregnant women in this study were HBsAg+, which was higher than the previous studies. This increasing prevalence may be due to increasing non-Iranian immigration to our country. Control of migration and screening and vaccination of this group should be considered by health policy making.

P124 EPIDEMIOLOGICAL DISTRIBUTION, AND GENOTYPE CHARACTERIZATION OF HEPATITIS C VIRUS AMONG HIV PATIENTS IN KASHAN-IRAN

Hasan Afzali[1], Mansooreh Momen-Heravi[1]

[1]*Infectious Disease, Kashan University of Medical Sciences, Kashan, Iran*

Presenting Author: Mansooreh Momen-Heravi, Email: mansoreheravi@yahoo.com

ABSTRACT

Background: Due to shared transmission routes, hepatitis-C virus (HCV) infection is highly prevalent among people infected with human immunodeficiency virus (HIV). This investigation was designed to examine the epidemiology and describe the clinical manifestation in addition the HCV genotypes in coinfected HIV-infected patients in the city of Kashan, Iran.

Materials & Methods: This descriptive study was conducted in year 2013 in the city of Kashan. The population consisted of all the HIV infected referred to the behavioral counselling center and jail in Kashan. Demographic information and HCV, HIV-related risk behaviors were obtained through an interviewer–assisted questionnaire. After the participants completed a consent form to participate,10 cc of venous blood was collected. The serum samples were screened for HCV infection using enzyme-linked immunosorbent assay (ELISA). Following the positive result for HCV, RNA was performed by PCR amplification. HCV subtypes were determined by direct sequencing of amplicons. Data analysis was performed by SPSS: 16.0.

Results: The result of analysis indicated that 54(85%) out of the 63 HIV infected patients were all male HCV positive with less than high school education level. There was a significant association between the HCV infection and occupation (P<0.0001) and level of education (p<0/05). All of the HIV/HCV coinfected cases had history of illicit drug use; 92.6% had history of imprisonment and 40.7% had high risk sexual contacts. Overall, genotype 1 in 75.9% and genotype 3 in was found in 24.1% of HCV patients. 94.4% of HCV patients had subtype A. The mean of AST, ALT, TLC, and CD4 in HCV patients were 50.6, 58.5, 397.2 and 398.8, respectively. There was no clinical symptom of chronic Hepatitis-C.

Conclusion: The majority of HIV infected persons in the city of Kashan were HCV positive. Genotype 1 was the predominant type and with subtype A. Considering the high prevalence of HCV among the HIV infected persons and the impact of occupation, education, illicit drug use and imprisonment on the incident of both infection, health policy makers must introduce health programs and plans to reduce the prevalence of these infections.

P125 PREVALENCE OF HEPATITIS C IN INTRAVENOUS DRUG ABUSERS IN KASHAN

Mansooreh Momen-Heravi[1], Reza Razzaghi[1]

[1]*Infectious Disease, Kashan University of Medical Sciences, Kashan, Iran*

Presenting Author: Mansooreh Momen-Heravi, Email: mansoreheravi@yahoo.com

ABSTRACT

Introduction: Drug injection is a very important risk factor for viral hepatitis and human immunodeficiency virus (HIV) infection. The present study was performed to evaluate the prevalence of hepatitis C among injection drug users (IDUs) and to identify the related risk factors for these infections in this group.

Materials & Methods: This descriptive-analytical study was conducted in 2011 in kashan, Iran. The study population consisted of 300 IDUs in MMT, DIC and counselling centers. Demographic information and HCV related risk behaviors were obtained through an interviewer–assisted questionnaire. IDUs serum samples were screened HCV infection using enzyme-linked immunosorbent assay (ELISA). Data analyzed using Spss.

Results: Of the 300 IDUs,288(96%) were male .The majority of IDUs 127(42.3%) were in 30-39 age group with mean age 34.9±9.7.The majority of IDUs224(74.7%)

had more than 10 years history of addiction The most common age of onset addiction was 15-20 year 134(44.7%).The prevalence of HCVwas142(47.3%). It was found that there was a significant correlation between using shared syringe, age and times of prison and HCV infection.

Conclusion: There was high prevalence of HCV among IDU. High risk behaviors such as tattooing, unsafe sex, needle sharing are common so regular screening of IDU, education of personal Health about using sterile syringe, HBV vaccination and treatment of addiction and HCV infection is recommended.

P126 PREVALENCE OF INFECTIOUS DISEASE IN LIVER TRANSPLANT PATIENTS IN IMAM KHOMEINI HOSPITAL TEHRAN-IRAN

Alireza Sharif[1], Mansooreh Momen-Heravi[1]

[1]*Infectious Disease Department, Kashan University of Medical Sciences, Kashan, Iran*

Presenting Author: Alireza Sharif, Email: alirezasharif66@yahoo.com

ABSTRACT

Introduction: Infection is the most common complication after liver transplantation, affecting nearly 80% of patient. The precocious diagnosis and treatment of this complication and knowledge of physician about common infections and pathogens is concerned, so the aim of this study is evaluation of infections in liver transplant patients in Tehran Imam Khomeini hospital in 2001-2010.

Methods: This case series (retrospective & prospective) study was performed on 57 liver transplant patients in Tehran Imam Khomeini hospital. Information were gathered with the 5 part forms (general information of patient, information of infection after liver transplantation, information about before, after and during liver transplant surgery of patients. The data were analyzed by SPSS version 19 software using chi square test.

Results: Seventy-seven percent (77.2%) of patient have one or more episodes of infection. This study performed in a group of patients with different sex distribution (50.9%female, 49.1% male).Frequency of infections is higher in female but were not statistically significantly differences between two sex groups. Patients who were older than 40 years old have the higher infections than others but were not statistically significantly differences between three age groups. Also there were no correlation between CHILD –MELD Score, acute and chronic rejection, using antibiotic and immunosuppressive drugs at before liver transplantation with infections. Frequency of infections is lower in Patients have received Ampicillinsulbactam as prophylaxes treatment and were statistically significantly differences between three groups (p=0.005).

Conclusion: Orthotopic Liver Transplantation has developed into a safe and successful treatment for end-stage liver disease with satisfactory long-terms results. Infection is the most common complication after liver transplantation. Our experience with liver transplantation indicates comparable success rate to similar reports.

P127 THE FREQUENCY OF INFECTION OF HBV, HCV AND HIV IN IDU

Zarichehr Vakili[1], Mansooreh Momen-Heravi[2]

[1]*Pathology Department, Kashan University of Medical Sciences, Kashan, Iran;*
[2]*Infectious Disease Department, Kashan University of Medical Sciences, Kashan, Iran*

Presenting Author: Zarichehr Vakili, Email: z_vakili@yahoo.com

ABSTRACT

Introduction: Drug injection is responsible for numerous minor to life-threatening and fatal complications such as the transmission of human immunodeficiency virus (HIV), sexually transmitted diseases, and viral hepatitis. This paper has tried to offer a brief look at the epidemiology of drug abuse, while focusing on blood born infections seen in IDUs. The goal was to identify the common co morbidities.

Materials & Methods: The study was carried out using a descriptive cross sectional design. A questionnaire including points such as the patient's history of intravenous drug abuse, method of using the drug, in addition to related co-morbidities such as HIV and Hepatitis was distributed among 135 IDUs. Five different government facilities offering various medical and non medical services to addicts were used for the survey. In addition to the survey. Serological tests (ELISA Anti HCV, Anti HIV, HBs Ag) were taken to confirm the existence of blood borne diseases.

Results: A total of 135 cases between the ages of 15-57 were studied. Nearly half the study population (48.9%) was 20-30 years old. The majority of those surveyed were male, with only 1.5% being female. . opium was most frequently first drug used (58.5%), followed by cannabis (20.7%) and heroin (11.1%) . nearly 68.9% of the population began abusing drugs before the age of 20. 61.4% of the cases had a history of sharing needles Other results showed that 51.5% had an accompanying blood borne disease. Further anal-

ysis indicated a meaningful relationship (P< 0.001) between needle sharing and accompanying blood borne diseases. Of the 51.5% who had an accompanying blood borne disease, 17.1% were found to have either reactive ELISA of AntiHIV alone, or in combination with Hepatitis. In other words, it can be concluded that 8.1% of the total population had reactive ELISA of AntiHIV. Results also showed that 11.1% of the total population had HBs Ag positive while 47.4% had Positive ELISA Anti HCV.

Conclusion: Eliminating drug use is the surest way to control the complications associated with injection drug abuse, but this goal may not always be possible. Therefore the next best option is to adopt strategies to at least reduce the risks.

P143 A REVIEW IN DENTAL MANAGEMENT IN VIRAL HEPATITIS

Arghavan Tonkaboni[1], Roya Doosti[1], Laleh Radfar[1]

[1]*School of Dentistry, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Arghavan Tonkaboni, Email: a-tonkaboni@sina.tums.ac.ir

ABSTRACT

One of the problems that should be concerned in modern dentistry is transmission of certain infections which transmitted via saliva and blood. Hepatitis B and C are such as these viral infections. According to the last WHO news 1.4 million people die from viral hepatitis each year. More than 240 million people have chronic (long-term) liver infections. More than 780 000 people die every year due to the acute or chronic consequences of hepatitis B and 5000 to 350000 from Hepatitis C. Lack of knowledge in infection control principles is the point of view through this statistics. Knowing that some patients could be the carriers of these diseases, with no particular symptoms. Health care workers especially dentists should review the newest infection control principles. Moreover by prescribing certain drugs in dental office liver failure should be mentioned in this group. Transmissions of these viral infectious diseases via saliva and blood products are very fast and simple. The aim of this article is reviewing the dental considerations and controlling hepatitis complications in affected patients with scope of dentistry.

P144 AN INTEGRATED MAP OF HBV GENOME-WIDE VARIATION FROM THE WORLD POPULATION PERSPECTIVE

Guangdi Li[1], Samad Amini-Bavil-Olyaee[2], Philippe Lemey[1], Piet Maes[1], Marc Van Ranst[1], Mahmoudreza Pourkarim[1]

[1]*Rega Institute, KU Leuven, Leuven, Belgium;*
[2]*Department of Microbiology and Immunology, University of Southern California, Los Angeles, USA*

Presenting Author: Mahmoudreza Pourkarim, Email: pourkarim1@yahoo.com

ABSTRACT

Objectives: Hepatitis B virus (HBV) is one of the most significant public health problems worldwide. HBV has a high genomic heterogeneity because of the error-prone DNA polymerization. This level of HBV genomic diversity leads to the classification of at least 8 genotypes, 40 subgenotypes, which display different geographical locations, therapy responses and clinical outcomes. Additionally, various selective pressures as vaccine, hepatitis B immune globulin and antiviral therapy exert a great impact on HBV nucleotide and protein diversity. As a holistic picture of HBV genomic diversity remains unclear, this study aims to reveal the first evaluation of HBV genomic heterogeneity from the perspective of large-scale populations around the world.

Materials and Methods: We retrieved 4593 full-length genomes belonged to eight major HBV genotypes from the NCBI GenBank database existed until September 2014. Hyper mutated sequences were detected using the Los Alamos Hypermut Tool. HBV genotypes were determined using the NCBI Subtyping Tool and confirmed by phylogenetic analyses. Information on drug binding positions of FDA-approved HBV inhibitors and protein structures was retrieved from literature and the PDB repository.

Results: Our comprehensive analyses demonstrated that the lowest genome-wide genetic diversity within HBV genotypes (mean intra-genotypic distance) was 2.8%, while genetic diversity between genotypes (mean inter-genotypic distance) was dramatically jumped to 11.8%. Diversity patterns at protein level across HBV genotypes were consistently similar comprising Polymerase (3.3%), PreS1 (2.7%), PreS2 (5.16%), S (2.1%), PreCore (2.91%), Core (3.05%) and X (4.72%). Complete conservation across all genotypes was detected in 218 out of 2550 amino acid positions (8.6%), in which the highest level of conservation observed for polymerase C terminus region. Furthermore, our analyses showed that 3 out of 11 known drug binding sites were overall conserved, whereas all FDA-approved inhibitors were confronted with natural occurring polymorphisms in their binding sites, some of which correlate with HBV genotypes. Moreover, 12 out of 26 (46.2%) vaccine-targeted positions were fully conserved, however a few positions presented a high level of polymorphisms.

Conclusion: This first large-scale analysis of full-length HBV genome provides a detailed mapping of natural diversity across major HBV genotypes, and highlights the conserved regions in HBV genome.

P147 A TETRA-PRIMER AMPLIFICATION REFRACTORY MUTATION SYSTEM–POLYMERASE CHAIN REACTION FOR GENOTYPING OF RS8099917 & RS12979860 IL28B POLYMORPHISMS IN IRANIAN HCV PATIENTS

Ali Bahari[1], Mohammad Hashemi[2], Tahereh Fakharian[3], Gholam Reza Bahari[2], Abbas Esmail Zadeh[1], Hamid Reza Sima[1], Zahra Meshkat[4], Sina Gerayeli[5], Mitra Ahadi[6], MoosalReza Hosseini[6], Hooman Mosannan Mozaffari[1], Ali Reza Bakhshipour[7], Zohreh Bari[8]

[1]*Department of Gastroenterology and Liver Disease, Emam Reza hospital, Mashhad University of Medical Sciences, Mashhad, Iran;*
[2]*Cellular and Molecular Research Center, Zahedan University of Medical Sciences, Zahedan, Iran;*
[3]*Department of Gastroenterology and Liver Disease, Vali Asr hospital, Birjand University of Medical Sciences, Birjand, Iran;*
[4]*Department of Microbiology & Virology, Faculty of Medicine, Mashhad University of Medical Science, Mashhad, Iran;*
[5]*Department of Biology, Faculty of Sciences, Ferdowsi University of Mashhad, Mashhad, Iran;*
[6] *Department of Gastroenterology and Liver Disease, Ghaem hospital, Mashhad University of Medical Sciences, Mashhad, Iran;*
[7]*Department of Gastroenterology and Liver Disease, Ali-ebne- Abitaleb Hospital, Zahedan University of Medical Sciences, Zahedan, Iran;*
[8]*Department of Gasterology, Mazandaran University of Medical Science, Sari, Iran.*

Presenting Author: Tahereh Fakharian, Email: t.fakharian@gmail.com

ABSTRACT

Background: Genotyping of IL28B polymorphisms will aid clinical decision making for individualizing treatment of hepatitis C patients in the forthcoming era of direct acting antivirals. Also association of IL28B polymorphisms and other treatment response impacting factors is a conflicting matter.

Objectives: The aim of the present study was to design a simple tetra-primer amplification refractory mutation system–polymerase chain reaction (T-ARMS-PCR) for genotyping of the rs8099917 and rs12979860 IL28B gene polymorphisms. Furthermore, we identify the correlation of variables such as gender, serum ALT level, histology of liver and baseline viral load with these polymorphisms.

Materials and Methods: We efficiently designed a T-ARMS-PCR for detection of rs12979860 and rs8099917 IL28B gene polymorphisms. Using this method, we genotyped 148 hepatitis C patients. To ensure T-ARMS genotyping quality, we, regenotyped samples with the PCR- sequencing method.

Results: Results of genotyping of rs12979860 and rs8099917 by T-ARMS PCR method were 100% concordant with sequencing. Among these 148 patients with chronic hepatitis C, the frequency of the rs12979860 CT, TT and CC genotypes were 72.3%, 14.2% and 13.5% and the frequency of the rs8099917 TT, GT and GG genotypes were 58.1%, 38.5% and 3.4%, respectively. Low frequency (2.7%) of association of two unfavourable homozygot genotypes (TT rs12979860 / GG rs8099917) as well as 56.7% of association of 3 or 4 favourable alleles could explain good response of Iranians to HCV treatment. About correlation of polymorphisms with different variables, only high viral load showed a statistically significant correlation to unfavourable genotype of TT rs12979860 (p value = 0.03) and there was no correlation of serum ALT level, gender and histology of liver to IL28B genotypes.

Conclusion: we designed a simple, inexpensive, and reproducible T-ARMS-PCR for detection of rs8099917 and rs12979860 IL28B polymorphisms which can be used for routine assay. Considering similarity of rs8099917 frequencies results in different studies in Caucasian ethnicity, we suppose that rs8099917 polymorphisms could predict treatment responses better than rs12979860 in Iranian HCV patients. There was no linking of Il28B gene patterns with disease progression variables in except of baseline viral load in rs12979860.

P150 NO ASSOCIATION OF GENETIC VARIATION AT PD1.5 LOCI WITH SPONTANEOUSLY CLEARANCE OF HCV INFECTION

Jamal Sarvari[1], Razieh Dowran[1], Seyed Younes Hosseini[2], Nasrollah Erfani[3], Mohammad Reza Haghshenas[3], Mohammad Reza fattahi[2]

[1]*Department of Bacteriology and Virology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Gasterohepathology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[3]*Institute for Cancer Research, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Jamal Sarvari, Email: sarvarij@sums.ac.ir

ABSTRACT

Background: Hepatitis C virus (HCV) causes chronic infection in more than 50-80% of infected individuals. Several factors such as Programmed Death1 (PD1) polymorphism might affect the outcome of HCV infection. Accordingly, in this study we aimed to investigate the possible association between SNP in PD-1

gene at position +7785 C to T (PD-1.5 or 872) and outcome of HCV infection.

Materials and Methods: 162 chronic HCV infected individuals and 27 spontaneously clearance person were enrolled in this study. Spontaneous clearance was evaluated using ELISA and real-time PCR. DNA was extracted from whole blood using salting out method. SNP in PD1 gene was determined by PCR-RFLP method.

Results: The distribution of CC, CT and TT genotypes at position +7785 C/T in PD-1.5 gene were 42.5%, 43.2% and 14.1% in HCV chronic patients and 51.8%, 40.7% and 7.4% in spontaneously clearance subjects, respectively. Statistical analysis has not shown association in distribution of genotypes and alleles at this locus between two groups (P>0.05).

Conclusion: Our result revealed no association of PD-1.5 gene polymorphisms with spontaneous clearance of HCV infection. This might be related to the small number of spontaneous clearance group.

P154 SEROPREVALENCE OF HEPATITIS B AMONG PREGNANT WOMEN IN IRAN

Farhad Abbasi[1], Bahram Nasri Razin[2], Babak Ghavam[2], Hamid Reza Moradi[2]

[1]*Infectious Diseases Department, Bushehr University of Medical Sciences, Bushehr, Iran;*
[2]*Infectious Diseases Department, Shaheed Beheshti Medical University, Tehran, Iran*

Presenting Author: Farhad Abbasi, Email: f_abbasi55@yahoo.com

ABSTRACT

Background and Aims: Hepatitis B virus (HBV) infections occur worldwide, with the endemicity of infection varying among geographical areas. Infections acquired perinatally often become persistent and can progress to chronic liver diseases, including cirrhosis and hepatocellular carcinoma. In women, these viral infections can be responsible for transmission to newborn during delivery. Hepatitis B virus is transmitted by sexual contact in low prevalence areas and transmitted during perinatal period or early in childhood in moderate or high prevalence areas.

Methods: In this study we evaluated HBs-Ag positivity in 1000 pregnant women. HBs-Ag was checked for all pregnant women referring to Iran Blood Transfusion Organization and Mirza Kuchak Khan Hospital. All samples that were positive for HBs-Ag were evaluated for HBe-Ag, anti HBe-Ab, ALT, AST, ALP, GGT and bilirubin. Pregnant women who were vaccinated against hepatitis B were excluded and did not enter this study. According to HBs-Ag positivity prevalence of about 2% in population, based on previous studies, sample size was determined to be 1000 by confidence interval of 95%. Correlation of HBs-Ag positivity in pregnant women with age, education, number of pregnancy, history of blood transfusion, intravenous drug use, hospital admission and surgical procedure were evaluated.

Results: 1000 pregnant women were evaluated in this study. 17 women were HBs-Ag positive. Of these HBs- Ag positive patients 4 women were HBe-Ag positive and 6 had anti-HBe-Ab. Liver enzymes and bilirubin were check for women with positive HBs-Ag. Results were as: ALT = 20.8± 7.6 U/L, AST= 27.9±5.6 U/L, ALP= 201±114.7 IU/L, GGT= 13± 5.2, total bilirubin= 1.1±0.68. T-test determined that HBs-Ag positivity has no correlation with age in our study. Mann-Whitney nonparametric test showed that HBs-Ag positivity has no correlation with education in our study. We also find no relation between HBs-Ag positivity and history of hospital admission, surgical procedure, tattooing and abortion.

Conclusion: %1.7 pregnant women in our study were HBs-Ag positive. No correlation was found between HBs-Ag positivity in pregnant women with age, education, number of pregnancy, history of blood transfusion, intravenous drug use, hospital admission and surgical procedure.

P155 EVALUATION OF THE FREQUENCY OF HEPATITIS B AND HEPATITIS C IN MAJOR THALASSEMIC PATIENTS IN BUSHEHR, IRAN

Farhad Abbasi[1], Alireza Nikookar[1]

[1]*Infectious Diseases Department, Bushehr University of Medical Sciences, Bushehr, Iran*

Presenting Author: Farhad Abbasi, Email: f_abbasi55@yahoo.com

ABSTRACT

Background: Blood born diseases are important in thalassemic patients. Thalassemic patients has multiple blood transfusions and are at increased risk of acquiring blood born infection such as hepatitis B and hepatitis C.

Methods: in this study the frequency of hepatitis B and hepatitis C in major thalassemic patients in Bushehr was evaluated. All the major thalassemia patients were included in this study. HBs-Ag and HCV-Ab were checked for all the patients as screening tests. Among those that have positive results other

confirmatory test such as HCV PCR, HBV PCR, HBe-Ag and ALT were also checked. Data were analyzed using SPSS software.

Results: Among 126 major thalassemia patients, %57.8 were female and %41.3 were male. 14 patients had HBC-Ab positive. All of them had negative HCV PCR. One patient had positive HBs Ag. Supplementary tests showed that HBeAg, HBeAb and HBV PCR were positive. Treatment of HBV was started for him.

Conclusion: Blood born infections are important in major thalassemia because they receive recurrent blood transfusion. The frequency of hepatitis B and hepatitis C was low in our study. Screening tests needs to be confirmed by supplementary tests.

P158 LIVER HISTOPATHOLOGIC CHANGES IN HBEAG NEGATIVE, NORMAL ALT CHRONIC HEPATITIS B PATIENTS AND CORRELATION WITH VIRAL LOAD

Mina Asefzadeh[1], Elmira Ghoujeghi[1], Seyed Moayed Alavian[2], Behzad Bijani[1], Arash Miroliaee[3]

[1]*Department of Infectious Disease, Bu Ali Hospital, Qazvin, Iran;*
[2]*Middle East Liver Disease (MELD) Center, Tehran, Iran;*
[3]*Department of Internal Medicine, Velayat Hospital, Qazvin, Iran*

Presenting Author: Elmira Ghoujeghi, Email: e.ghoujeghi@gmail.com

ABSTRACT

Background: In HBeAg negative chronic hepatitis B patients with normal ALT, there are vague point in guidelines for decision to start treatment.

Objectives: To determine relation between viral load and liver histopathological changes in HBeAg negative chronic hepatitis B patients with normal ALT.

Materials and Methods: patients with a diagnosis of chronic hepatitis B with a negative test for HBeAg and serum ALT < 40 IU/L in the past year and viral load above 2000 IU/ml were enrolled. Liver biopsy was performed.

Results: Of total 87 patients, 31 (35.6%) patients had moderate to severe inflammation and 23 (26.4%) patients had significant fibrosis on liver biopsy. With increased viral load above 20,000, the frequency of significant fibrosis increased from 22% to 31%, but it was not statistically significant (OR=1.57, CI: 0.6-4.1, P= 0.355). Statistically significant association between age and hepatic fibrosis was reported (p-value<0.001). Cutoff value of age for predicting significant fibrosis was 38 years old, the sensitivity and specificity were 74.2% and 71.7% respectively. Cutoff value of age for predicting moderate to severe inflammation was 33.5 years old, the sensitivity and specificity were 74.3% and 62.5% respectively.

Conclusions: 26.4% of total HBeAg negative CHB patients with normal ALT had moderate to severe fibrosis on liver biopsy. There was no significant relation between viral load and liver fibrosis and inflammation. Age 38 years was a limit for significant liver fibrosis and age 33.5 years was a limit for moderate to severe inflammation. Age is the only predictor of significant fibrosis and inflammation in HBeAg negative chronic hepatitis B patients with normal ALT and using variables such as viral load should be more cautious in this regard.

P167 MUTUAL EFFECTS OF HCMV INFECTION AND IMMUNE SYSTEM IN LIVER FAILURES

Faezh Maleki[1], Alireza Ghanadan[2]

[1]*Molecular Genetic, Cancer Research Institute, Tehran University of Medical Sciences, Tehran, Iran;*
[2]*Pathology, Cancer Research Institute, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Faezeh Maleki, Email: maleki.virology@gmail.com

ABSTRACT

Hepatocytes and a broad spectrum of the cell types are permissive for human cytomegalovirus (HCMV). This virus is also one the main opportunistic pathogens in immunocompromised or immunonaiive individuals. Moreover, HCMV is a well-known immunomodulatory virus, and apparently this issue can be effective on the establishment of hepatic diseases. The aim of this meta-analysis study was determination of the roles of immune systems and HCMV infection in the development and progress of liver failures .A review of studies related three decades about pathogenesis of HCMV in liver was conducted. In addition, immunopathogenesis and immunomodulatory mechanisms of HCMV in different hosts were studied. Results of this systematic review showed that HCMV can be directly or indirectly involved in different liver failures in the hosts with a wide range of health statues or ages and the pathogenesis and outcome of these hepatic diseases depend on a conflict between immune system and HCMV infection. Furthermore, several reports have pointed out that HCMV can alter the process of liver diseases in coinfection with other viral hepathogens, mediated by changing the immune responses. This study eventually suggests more consideration for HCMV and underlines the necessity of protection against this prevalence virus.

P170 PREVALENCE OF HEPATITIS B GENOTYPES IN PATIENTS WITH HEPATITIS B IN LORESTAN PROVINCE (2010-2014)

Mohamadreza Nazer[1], Zia Obeidavi[2], Mahshid Garmsiri[2]

[1]*Department of Infectious Diseases, Hepatitis Research Center, Lorestan University of Medical Sciences, Khoramabad, Iran;*
[2]*Medical Student Research Committee, Lorestan University of Medical Sciences, Khoramabad, Iran*

Presenting Author: Mohamadreza Nazer, Email: ziaobd@gmail.com

ABSTRACT

Objectives: Hepatitis B virus (HBV) genotype distribution is still unclear in Lorestan province, where a high prevalence of HBV infection exists, although it is well known that HBV can be classified into six genotypes based on intergroup divergence. The aim of this study was to investigate the epidemiological distribution of HBV genotypes and to clarify further the genotype-related differences in the pathogenicity of HBV.

Methods: Out of all the patients admitted to the Infectious Disease Clinic in Khorramabad in a four year period (April 2010 to March 2014), 135 patients who met the inclusion criteria of the study were evaluated. The PCR method was used to examine the serums of the patients with hepatitis B in terms of the type of genotype.

Results: In this study, there were 90 (66.67%) males and 45 (33.33%) females with an average age of 36.00 ± 15.751 years (range 18–84), and the HBeAg positivity rate was 65.9% (89/ 135). We detected only genotypes/ serotype D1 in our patients and all of them except 4 individuals has had not resistant gene mutation to antiviral drug and from 4 pt, 2 person had HBV gene mutation for adefovir resistant and two others resistant to entecavir. We did not discover any YMDD resistant. The presumed mode of infection was known in 72patients (53.33%). Of these, 45.83% were presumed to have acquired HBV infection through maternal-infant, 20.83%sexual, 19.45% parenteral, and 13.89% other routes of transmission. There was not any association between the presumed mode of infection and HBV genotype (P>0.05).

Conclusion: Because all of our patients were HBV D/ D1 and has had the best response to antiviral therapy till peg interferon and no resistant mutation gene for lamivudine, thus can begin treatment especially in non pre core mutant patients that could not provide peg interferon because of poverty.

P171 CHRONIC HCV INFECTION AND STROKE: A REVIEW

Zia Obeidavi[1], Mahshid Garmsiri[1], Behnam Goudarzi[1], Nima Rahmati[2]

[1]*Medical Student, Research Committee, Lorestan University of Medical Sciences, Khoramabad, Iran;*
[2]*Medical Student, Research Committee, Shahed University, Tehran, Iran*

Presenting Author: Zia Obeidavi, Email: ziaobd@gmail.com

ABSTRACT

In the last 5 years, six papers were published concerning the association between HCV and stroke. In a large retrospective population-based study, Forssen et al showed an association between HCV infection and stroke (OR=1.76; 95%CI: 1.23-2.52). Similarly, another retrospective report published by Gutierrez et al in abstract form, showed a close association between HCV infection and stroke (OR=9.61; 95%CI: 2.51-35.78) in subjects enrolled from the NHANES cohort during 2005-2010. In contrast, in another retrospective study from the NHANES database, between 1999-2010, Younossi et al were not able to demonstrate an association between HCV infection and stroke. However, many confounding factors, such as gender, race, and hypertension, were significantly different between the HCV population and the control group. Therefore, heterogeneity may have generated unreliable. In a large prospective study conducted in Taiwan, utilizing the Taiwan National Health Insurance Research Database, Liao et al demonstrated a strict association between HCV infection and stroke (HR = 1.22; 95%CI: 1.13-1.40). Similarly, Hsu et al showed that HCV infection was a risk factor for stroke (HR = 1.23; 95%CI: 1.06-1.42) in a large retrospective study including Taiwan subjects from the Longitudinal Health Insurance database 2000. Of importance, these authors demonstrated that an interferon-based therapy reduced the risk of stroke in HCV patients. Another study conducted by Adinolfi LE et al showed that the prevalence of HCV was higher in cases with stroke than in the control group (26.8% vs 6.6%, P = 0.0001). Moreover, HCV patients with stroke were younger and had lower risk factors and higher inflammation indices than HCV-negative stroke patients. Multivariate analysis showed HCV infection to be an independent risk factor for stroke (OR = 2.04; 95%CI: 1.69-2.46, P = 0.0001). Taken collectively, these data suggest that HCV infection increases the risk of stroke. Moreover, in HCV patients, stroke occurs at younger age, irrespective of sex and in subjects with lower risk of stroke. Finally, HCV viral load appears to be associated with an increased risk of mortality in patients

with stroke. A meta-analysis of the studies which evaluated whether HCV infection was a risk factor for stroke has been conducted. The results suggested that HCV infection significantly increased the risk of stroke (OR = 1.97; 95%CI: 1.64-2.30). However, due to the relatively low number of studies performed, the authors suggest caution in the interpretation of the data and advocate further studies to confirm the results.

P172 NO ASSOCIATION OF IL-28B GENE POLYMORPHISM AT RS8099917 T/G WITH HCV INFECTION OUTCOME IN FARS PROVINCE, SOUTH OF IRAN: SPONTANEOUS CLEARANCE VERSUS CHRONIC INFECTION

Jamal Sarvari[1], Seyed Younes Hosseini[2], Mohamad Reza Fattahi[2], Neda Pirbonyeh[1], Razieh Dowran[1], Maryam Moeeni[2]

[1]*Department of Bacteriology and Virology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Gasterohepathology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Jamal Sarvari, Email: sarvarij@sums.ac.ir

ABSTRACT

Background: Following HCV infection, chronic infection occurs in 55-85% of individuals, generally within the initial 6 months. It has been reported that some polymorphisms in IL-28B gene might be influenced the chronicity of HCV infection

Objectives: We aim to investigation the frequency of genotype and allele of IL-28B gene at the rs8099917 T/G locis in HCV-infected patients and their association with disease outcome; Spontaneous clearance versus chronic infection

Methods: 187 patients with chronic hepatic C and 36subjects who spontaneously clear their infection were enrolled in the 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. PCR-RLFP methods on genomic DNA were used for determination of polymorphisms ofIL-28B gene atrs8099917 loci.

Results: Statistically, no different frequency of T allele (p=0.38) and TT and TG genotypes at rs8099917 T/G (p=0.46) were observed in those who clear their infection than those with chronic infection.

Conclusion: Our finding indicated that heterogeneity at and the rs8099917 T/G loci of IL-28B gene would not interfere with HCV infection outcome.

P174 A SURVEY OF TRANSFUSION REQUIREMENTS IN LIVER TRANSPLANTATION

Leila Kasraian[1], Sasan Nikeghbalian[2], Mohammad Hosein Karimi[2]

[1]*Blood Transfusion Research Centre, High Institute for Research and Education in Transfusion Medicine, Shiraz, Iran;*
[2]*Transplant Research Center, Shiraz University of Medical Science, Shiraz, Iran*

Presenting Author: Leila Kasraian, Email: lkasraian@yahoo.com

ABSTRACT

Background: Liver is an extremely vascular organ and extensive bleeding can occur during liver transplantation especially in patients with portal hypertension. The patients have been treated with blood products to correct metabolic and coagulation abnormalities.

Materials and Methods: This is a retrospective review 1198 liver transplantation patients in Namazi hospital, Shiraz, Iran from 2003-2013. A well designed questionnaire was used for collecting data. Multivariate analysis used for data analysis.

Results: The mean pack cell use was 2.67+3.5 FFP 2.06+3.8 platelet 1.6+3.8.The blood usage was more in old age and men. The blood requirement was related to the duration of operation, and type of surgery ($P<0.05$).The blood requirement was more in patients with low hemoglobin. Furthermore blood requirement was related to severity of disease and was more in patients with cirrhosis, encephalopathy, and jaundice ($P<0.05$).

Conclusion: Estimating of anticipated blood needs during liver transplantation can help us to plan programs for adequate blood supply and minimizing transfusion-associated complications.

P177 RELATIONSHIP BETWEEN HEPATITIS B VIRUS DNA LOAD IN THE LIVER AND LIVER HISTOLOGY IN PATIENT WITH CHRONIC HEPATITIS B

Tahmineh Biazar[1], Masomeh Bayani[1], Mohammad Reza Hassanjani Roushan[1], Mahmoud Sadegi[1], Yosef Yahyapour[2], Ramazan Rajabnia[2]

[1]*Infectious Disease Research Center, Babol University of Medical Sciences, Babol, Iran;*
[2]*Cellular and Molecular Biology Research Center, Babol University of Medical Sciences, Babol, Iran*

Presenting Author: Tahmineh Biazar, Email: dr.tbiazar@gmail.com

ABSTRACT

Background and Objective: Measurement of HBV DNA levels in the liver and its relation with liver damage and serum HBV DNA levels may guide us to the beginning and end of treatment. This study was conducted to evaluate the relationship between liver hepatitis B virus DNA with liver histology in patients with chronic hepatitis B.

Materials and Methods: This study was conducted on 30 patients with AntiHBe (+) chronic hepatitis B with liver enzyme>2 times of the upper limit of normal, and positive HBV DNA of any amount. The data was recorded.

Results: The mean age of the patients was 32.8± 10 years and 24 (80%) patients were males. ten patients (33.3%) of the subjects had viral load levels less than 20000 IU/ml. a significant correlation between liver viral load levels with Staging and Grading of liver damage were seen.

Conclusion: The results of the present study showed a stronger correlation between liver viral load and liver damage in patients with chronic hepatitis B.

P179 ASSESSMENT OF HCV GENOGYPE IN IV DRUG ABUSER IN MASHHAD 2011-2013, BY REAL TIME PCR , WITH TAQ MAN METHOD

Farshid Abedi[1], Asad Andalib Alshohada[2], Seyed Abdolrahim Rezaee[3]

[1]*Infectious Diseases, Birjand University of Medical Science, Birjand, Iran;*
[2]*Infectious Disease, Mashhad University of Medical Science, Mashhad, Iran;*
[3]*Immunology Department, Mashhad University of Medical Science, Mashhad, Iran*

Presenting Author: Farshid Abedi, Email: abedif@mums.ac.ir

ABSTRACT

Introduction: Hepatitis C is a major cause of chronic hepatitis and its complications including liver cirrhosis and hepatocellular carcinoma is of great importance and it is very important. To determine the line of treatment and response and duration of treatment is based on the genotype of the virus, so treatment for each genotype of the virus is different. However, from an epidemiological point of view, of the values of genotypes of this virus is different in different parts of the world. Also, over the years, with the passage of time, is determined whether the genotype of hepatitis C is variable or not according to the method of transmission and injection and blood transfusion, is largely parenteral ways of injecting drug users among high risk of the disease risk. Therefore, in this study we decided that various genotypes of hepatitis C virus in injecting drug users in Mashhad to investigate the charges.

Methods: This is a descriptive study based on the objective on which all those beginning of September 2011 to September 2013 to determine policy therapy to the group had gastroenterologist and infectious disease specialist and other coworkers for their genotyping. Hepatitis C virus have requested that 56 blood samples by poasen method is done. There were eligible to complete the questionnaire and the addiction was characterized by self-report.

Results: The patients were divided into 2 groups based on the genotype of the purpose of this study, each of the two groups, separately from comments on age, gender, educational level, comorbidity, history of blood transfusion and ethnicity, nationality, field experiment were conducted. Accordingly, the significant variable are discussed separately in two groups was observed.

Conclusion: According to the study , all patients except in one case, were HCV genotype I, III, had been reported in other patients were divided into two groups in the Bund genotype , genotype I , genotype III.

P185 STIGMA OUTCOMES IN PATIENTS WITH HEPATITIS C

Maryam Momeni[1], Fatemeh Hasan Doost[1]

[1]*Qazvin Nursing & Midwifery College, Qazvin University of Medical Sciences, Qazvin, Iran*

Presenting Author: Maryam Momeni, Email: momeni65@gmail.com

ABSTRACT

Background and Objective: Hepatitis C virus (HCV) remains a clinical and public health challenge worldwide. Stigma is an important facet of the social impact of many chronic diseases. Stigma has been described as a complex, subjectively experienced phenomenon. Knowledge of hepatitis C stigma is central to assisting people with hepatitis C self-manage their illness and reduces the disease burden.

Materials and Methods: A comprehensive electronic search was carried out using the keywords "hepatitis C", "stigma", "outcome". We searched review and original articles that were published on PubMed and Scopus database. There was no time period restriction.

Results: Findings revealed that HCV stigma attributes are subjective and variable. Stigma outcomes occur in various forms and contexts and may be consistent or change over time. Outcomes are including

(1)individual(person with HCV; healthcare practitioner) such as emotional responses: Distress, anxiety, fear, self-blame (shame); Problem-solving responses: Secrecy and avoiding help-seeking (barriers for receiving prevention and narrows sources of social support) , Resistance (disregarding stigma and refusal to accept blame), Image management(pre-emptive disclosure combined with teaching others to prevent the formation of negative personal judgments)and (2) Social: Financial consequences(change to employment, Personal relationships),Health care(Slow delivery of care, poor quality of care or refusal of services, as well as discrimination during services);(3) Health system (Research about transmission slow to be employed in health policy; Institutional discrimination evidenced in slow response to epidemic and release of funds for prevention and control).

Conclusion: The HCV stigma is dangerous and it presents major challenges not only for those with HCV, not only to the well-being of persons with HCV but also to those with whom they interact such as nurses, other healthcare practitioners, family and social networks, institutions and society. Research highlights raising and prioritizing the profile and understanding of stigma and its central role in patient decision making about “if and how“ to engage in HCV care. In literature was addressed to the role of trust in building and maintaining effective relationships between client, health professional, and health system. Developing genuine partnerships with people living with HCV and consulting them on the design and operation of health services may be a first step toward establishing, modifying, or reforming health services to better address stigma as a barrier to HCV and treatment.

P186 ASSESS OF KNOWLEDGE AND ATTITUDES FROM MILITARY PERSONNEL IN THE PREVENTION OF DRUG ABUSE

Zeinab Tabanejad[1], Abbas Ebadi[1]

[1]*Nursing Faculty, Baqiyatallah University of Medical Sciences, Tehran, Iran*

Presenting Author: Zeinab Tabanejad, Email: ztabanejad@yahoo.com

ABSTRACT

Background: Drug addiction is a major problem. These have been a personal issue - the focus of social scientists in various fields. In the present study, we were decided to Increase knowledge of the officers and soldiers in the prevention of addiction and provide a suitable model system.

Materials and Methods: This was a cross - sectional study was performed on 900 military personnel to random sampling - stratified by using a self-administered questionnaire in province of Sistan and Baluchestan. Method reliability was fulfilled (test-retest) in two-week interval by 15 personnel and correlation coefficients obtained from the two tests r =0.81. The internal reliability by using Cronbach's alpha was approved 0.78.

Results: The Suitable knowledge about prevention of drug abuse among the officers and soldiers was 45.6% and 25% that 94.8% of staff had a favorable attitude towards prevention of drug abuse. Between knowledge, age, education, work experience, degree status, Parents living conditions, Addiction relatives and between attitude and level of education, marital status, Parents living conditions, Addiction relatives, there was no significant relationship (P<0.05).

Conclusions: The knowledge of the staff towards prevention of drug addiction was not good knowledge. This show that the purpose and principles of training programs to enhance staff knowledge seems necessary. According to various studies to be effectiveness of the health belief model in changing attitudes, increase awareness for prevention and control of risk behaviors, including addiction is recommended.

P201 MOLECULAR PREVALENCE OF TRANSFUSION TRANSMITTED VIRUS IN BETA THALASSEMIA CHILDREN

Abdolreza Sotoodeh[1], Maasumeh Soltani[2]

[1]*Research Center for Social Determinants of Health, Jahrom University of Medical Sciences, Jahrom, Iran;*
[2]*Student Research Committee, Jahrom University of Medical Sciences, Jahrom, Iran*

Presenting Author: Abdolreza Sotoodeh, Email: sotoodehj2002@yahoo.com

ABSTRACT

Background: Recently a novel DNA virus transfusion transmitted (TT virus) has been identified in Japan and shown to be associated with elevated aminotransferase s levels after transfusion. However the exact role of TTV in pathogenesis of liver disease is yet to be established. The aim of this study was to determine the prevalence of TTV in thalassemia patients and its relationship with elevated alanine aminotransferase (ALT) and aspartate-aminotransferase (AST).

Methods: This cross-sectional analysis study was conducted on 452 thalassemia patients. Sera were collected from all of the patients, first ALT and AST

levels were determined. Then, after DNA extraction, TTV DNA was amplified and detected using semi-nested PCR.

Results: 160 of 452(35.40%) samples had TTV DNA detected by PCR. From 160 TTV DNA positive, 98(61.20%) were female and 62 (38.80%) of them were male(P=0.549).The mean ALT and AST values in TTV positive group were higher than in TTV negative group, and the difference was statistically significant (p<0.0001).

Conclusions: The result showed that the prevalence of TTV in thalassemia patients in Jahrom is less than other studies in Iran and the mean ALT and AST values in TTV positive individuals were about 2 times more than in TTV negative individuals.

P202 CLINICAL IMPORTANCE OF TT VIRUS INFECTION IN HAEMODIALYSIS PATIENTS, SOUTH OF IRAN

Abdolreza Sotoodeh[1], Aida Bahman[2]

[1]*Research Center for Social Determinants of Health, Jahrom University of Medical Sciences, Jahrom, Iran;*
[2]*Student Research Committee, Jahrom University of Medical Sciences, Jahrom, Iran*

Presenting Author: Abdolreza Sotoodeh, Email: sotoodehj2002@yahoo.com

ABSTRACT

Patients on hemodialysis are considered to be at risk of infection by blood-borne viruses and a prevalence of Transfusion transmitted infection has been reported in patients on hemodialysis in many countries. According to the lack of data about the prevalence of TTV in Jahrom (a city in southwest of Iran), this study was conducted to investigate the molecular prevalence of TTV viremia among hemodialysis patients in this south-west city of Iran. In this cross sectional study serum samples from HCV and HBV negative 711 patients on maintenance hemodialysis for molecular prevalence of TT virus in south of IRAN, April, 2013. Serum samples taken before dialysis from each subjects were tested for molecular and biochemical analysis. Some possible risk factors of TT virus infection including: age, gender, duration of hemodialysis treatment and serum aminotransferases (AST and ALT) levels were collected from each studied population. Data were analyzed by use of parametric and non-parametric analyses with SPSS for Windows. TTV infection was detected in 27.80% of the patients. In haemodialysis patients, no association was found between TTV infection and the demographic parameters (age, sex), but we found statistically significant difference were present between these groups for what concern time on haemodialysis therapy, ALT and AST levels. The prevalence of TTV infection among hemodialysis patients reported by other authors is similar to our or even higher. According to the finding of present study TTV is presented as one of probable agent of hepatitis in haemodialysis patients.

P203 HEPATITIS B VIRUS GENOTYPES IN SOUTH OF IRAN

Abdolreza Sotoodeh[1], Rahim Raoofi[1], Zahra Hasanati[2]

[1]*Zonoses Research Center, Jahrom University of Medical Sciences, Jahrom, Iran;*
[2]*Student Research Committee, Jahrom University of Medical Sciences, Jahrom, Iran*

Presenting Author: Abdolreza Sotoodeh, Email: sotoodehj2002@yahoo.com

ABSTRACT

Hepatitis B is a life-threatening liver infection caused by the hepatitis B virus (HBV) with eight A-H genotypes. HBV genotyping is importance for monitoring the infection, disease prediction and also for treatment. The aim of present research was to determine the predominant HBV genotype in people with HBV infection in Jahrom, southern city in Iran. This descriptive and cross sectional study was done on 45 patients with HBV infection (71% men, 29% women) in Jahrom, Iran. The HBV genotype was identified by Multiplex PCR method and compared with other variables. There was no relationship between gender, age, urban or rural life, source of infection and HBV genotypes. The predominant genotype in Jahrom was G, with frequency of 86.7%. There was no genotype B. The HBV genotype G is the most common genotype in Jahrom, Iran. It is suggested that more studies should be done in other areas by using specific primers for HBV genotyping.

P206 HOW NURSES WHO ARE OCCUPATIONALLY EXPOSED TO HCV INFECTION CAN HELP TO THE DIFFICULT-TO-TREAT HEPATITIS C POPULATION?

Nader Aghakhani[1]

[1]*Nursing, University of Medical Sciences, Urmia, Iran*

Presenting Author: Nader Aghakhani, Email: naderaghakhani2000@gmail.com

ABSTRACT

Hepatitis C is a blood borne viral disease that causes inflammation of the liver or liver cirrhosis at lend stages. Unfortunately, the number of treated HCV patients' needs to increase dramatically or the nurses will not be able to prevent new infections or reduce the burden of end-stage liver disease. They are occupationally exposed to this infection by accidental exposure to infected blood by needles and sharps. Precautions reduce the risk of exposure to disease and even a splash of blood from patients who are HCV positive is an occupational risk for them. Although educational programs, awareness campaigns and policy implementation do have an impact on the level of knowledge of these risks and compliance with universal precautions, a research has demonstrated that knowledge of inoculation injuries and associated issues remained inadequate. The best approach to prevent occupational blood borne HCV infection is the prevention of blood exposures and the development of improved engineering controls, work practices, and personal protective equipment. Nursing precautions incorporate the activities of clinical practice, education, advocacy, counselling, collaboration, community support, leadership, administration and research based on these key components: Promotion of health –nurses perform activities that include providing educational sessions for the general public, marginalized populations and other health care professionals, as well as promoting harm-reduction initiatives such as safe needle disposal. Prevention of illness – activities include immunization, education regarding the prevention of the spread of disease and the needle exchange program. Care, support and treatment – nurses educate patients and their families; provide emotional support and advocacy; counsel both before, during and after treatment on benefits, risks, side effects, coping strategies and adherence to treatment; interpret results; and liaison with the family, support groups and other health professionals (i.e., psychiatrist, ophthalmologist, social worker, etc.). Research – nurses are active in clinical trials (industry and/or pharmaceutical), monitoring adherence to treatment, their own nurse-initiated studies, quality of life and continually incorporate new research- and evidence-based findings into their practice.

P210 STUDY ON THE PRESENCE OF HCV RNA IN THALASSEMIC PATIENTS WITH HEPATITIS C AFTER TREATMENT

Tahereh Monoocherabadi[1], Zohreh Sharifi[2], Ghasem Hasan Nejad[2], Ehsan Saraf Kazerouni[1]

[1]*Hematology Department, Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;*
[2]*Virology Department, Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran*

Presenting Author: Tahereh Manoochehrabadi, Email: manoochehrabadit68@yahoo.com

ABSTRACT

Introduction: HCV is a single stranded RNA virus of the flaviviridae family that replicates by its negative strand. Anemia is major complication of thalassemic patients who needs transfusion repeatedly. This may lead to iron over load which is a negative factor in anti-viral therapy. The aim of this study was to investigate the presence of HCV RNA in Plasma of thalassemic patients with hepatitis C after antiviral treatment.

Methods: About 179 patients with thalassemia were analyzed for HCV infection in this study. Blood samples were collected in a sterile tube containing EDTA. Anti-HCV ELISA was performed on all samples. Then Viral RNA was extracted from plasma by the guanidium isothiocyonate method. The extracted RNA was amplified by RT-PCR method. The data were statistically analyzed using the SPSS software, version16 and compared using the Chi-square test.

Results: About 83% of patients were positive for anti-HCV ELISA test while 17% were negative. None of patients who achieving sustained virological response had positive results for HCV RNA in plasma samples after treatment. HCV RNA was detected in plasma samples 18%of thalassemic patients after antiviral treatment.

Conclusion: In this study, about 82% of thalassemic patients had clearance of HCV RNA and achieved to sustained virological response (SVR) after antiviral treatment.

P214 EVALUATION OF GENETIC POLYMORPHISM UPSTREAM AND DOWNSTREAM OF MIR-122 GENE AND THEIR CONTRIBUTION TO CHRONIC HEPATITIS B INFECTION

Galia Amirbozorgi[1], Maryam Lotfi[1], Mohammad Karimi Alivije[2], Farhang Babamahmoodi[3], Mahmoud Sadeghi-Haddad-Zavareh[4], Masomeh Bayani[4], Haleh Akhavan-Niaki[5], Mohsen Asouri[1], Sadegh Fattahi[1]

[1]*Cellular and Molecular, North Research Center, Pasteur Institute of Iran, Amol, Iran;*
[2]*Department of Infectious Diseases, Imam Reza Hospital, Amol, Iran;*
[3]*Department of Antimicrobial Resistance Research Center, Faculty of*

Medicine, Mazandaran University of Medical Sciences, Sari, Iran;
[4]Infectious Diseases and Tropical Medicine Research Center, Babol University of Medical Sciences, Babol, Iran;
[5]Department of Anatomy, Babol University of Medical Sciences, Babol, Iran

Presenting Author: Maryam Lotfi, Email: lotfi2545@yahoo.com

ABSTRACT

Background: Hepatitis B virus (HBV) is one of the major pathogens of liver diseases. Many studies have been done to identify roles of cellular miRNAs in viral life cycles. MiR-122 is a 22 nucleotide miRNA that expressed at high levels in hepatocytes. Although gene expression miR-122 and its role in hepatocarcinogenesis and the regulation of HBV infection has been widely studied, little is known regarding to polymorphism mir-122 gene and its role in HBV infection. The aim of the present study was to investigate the association between gene region as well as upstream and downstream of mir- 122 polymorphisms and hepatitis B.

Methods: 23 SNPs were selected in the gene region as well as a broader region including upstream and downstream of mir-122 gene. The 1042-bp PCR product was sequence using the ABI PRISM 3700 DNA analyzer.

Results: Out of 23 SNPs analyzed only one SNP (rs17669) was polymorphic in the study populations. The T and C allele frequencies were found to be 0.8125 and 0.1875 among the normal subjects, 0.7 and 0.3 among hepatitis subjects, respectively. The distribution of TT and CT genotypes in normal were 75% and 12.5 % respectively compared to 60 % and 20 % in hepatitis individual.

Conclusion: There was no difference in genotype frequencies between controls and hepatitis patients.

P216 GENOTYPE DISTRIBUTION OF HEPATITIS C AND HEPATITIS B VIRUS IN NORTH OF IRAN

Maryam Lotfi[1], Galia Amirbozorgi[1], Farhang Babamahmoodi[2], Mohammad Karimi Alivije[3], Mahmoud Sadeghi-Haddad- Zavareh[4], Masomeh Bayani[4], Haleh Akhavan-Niaki[5], Mohsen Asouri[1], Sadegh Fattahi[1]

[1]Cellular and Molecular, North Research Center, Pasteur Institute of Iran, Amol, Iran;
[2]Department of Antimicrobial Resistance Research Center, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran;
[3]Department of Infectious Disease, Imam Reza Hospital, Amol, Iran;
[4]Infectious Diseases and Tropical Medicine Research Center, Babol University of Medical Sciences, Babol, Iran;
[5]Department of Anatomy, Babol University of Medical Sciences, Babol, Iran

Presenting Author: Maryam Lotfi, Email: lotfi2545@yahoo.com

ABSTRACT

Background/Aim: Hepatitis C virus (HCV) and hepatitis B virus (HBV) are associated with chronic liver disease, cirrhosis of liver, and hepatocellular carcinoma. Approximately 2%and 5% of the world human population is estimated to be infected with HCV and HBV, respectively. Based on the high level of genome heterogeneity, HCV has been classified into six genotypes and HBV has been classified into eight (A–H) genotypes. The distribution of HCV and HBV genotypes may guide us in determining disease burden, prognosis and antiviral responses. So, it is important to know the epidemiology as well as genotypes of HCV and HBV in each population.

Materials and Methods: This cross-sectional study was conducted on patients with HCV and HBV infections referred to the Amol Research Center of Pasteur institute during the year 2014. HCV-positive samples were selected for HCV genotyping using genotype specific primers and probe, while HBV genotypes were determined using restriction fragment length polymorphism (RFLP) method.

Results: Of 26 patients positive for HCV, 18 (69.2%) and 8 (30.7%) had genotypes 1 and 3, respectively. Among twenty PCR positive samples only genotype D were identified in local population with 14 cases (70%), while no result was obtained in other four samples.

Conclusion: This study indicated that predominant genotype of HBV and HCV in north of Iran is genotype D and genotypes 1, respectively.

P218 THE EFFECTS OF SINGLE NUCLEOTIDE POLYMORPHISM OF IL28B GENE (RS10853728) ON TREATMENT RESPONSE TO PEGYLATED INTERFERON/RIBAVIRIN PATIENTS WITH HEPATITIS C IN IRAN

Mahsa Zamanian[1], Golnaz Asaadi Tehrani[1], Zohre Sharifi[2]

[1]Department of Genetic, Biology Research Center, Zanjan Branch, Islamic Azad University, Zanjan, Iran;
[2]IBTO, Iranian Blood Transfusion Organization Research Center,Tehran, Iran

Presenting Author: Mahsa Zamanian, Email: mahsa_emad@yahoo.com

ABSTRACT

Background and Purpose: The standard of care treatment for infected patients with HCV is based on a combination of pegylated interferon alpha and ribavirin. Recently, the rs10853728 SNP polymorphism, located upstream of the interleukin 28B gene, was shown to be strongly associated with response to

anti-HCV therapy. This study investigated the distribution of the (G/C) polymorphism with sustained virologic response (SVR) to chronic Hepatitis C virus infection among Iranian population.

Materials and Methods: This cross-sectional study was performed in 75 blood samples including 50 SVR positive and 25 negative samples from individuals suffering from chronic hepatitis C. DNA was extracted from the samples and the frequency of the polymorphism was analyzed using PCR-ARMS method. Finally, the products were detected on agarose gel.

Results: In the analysis of the data for G/C polymorphism, the GG genotype was identified in 19 patients of whom18 (39.4%) achieved SVR, while the GC heterozygous was found in 55 patients and SVR was achieved in 32 (59.2%). Finally, the CC was detected in 1 patients and only one (1.4%) responded to treatment.

Conclusion: Patients with G allele had significantly higher SVR rate than those with C allele. These data suggest that genotype detection of rs10853728 SNP may be useful as an important predictive biomarker for SVR in patients infected with HCV. However, further studies with more samples lead to more validated results.

P222 COMPARING ANTI HEPATITIS B ANTIBODY LEVEL IN OBESE WITH NON-OBESE CASES

Ali Kabir[1], Motahareh Jafari[2], Somayye Mokhber[2], Mohammad Vaziri[2], Seyed Moayed Alavian[3]

[1]*Epidemiology Department, Shahid Beheshti University of Medical Sciences, Tehran, Iran;*
[2]*Surgery Unit, Iran University of Medical Sciences, Tehran, Iran;*
[3]*Gastroenterology and Hepatology Department, Baqiyatallah University of Medical Sciences, Tehran, Iran*

Presenting Author: Ali Kabir, Email: aikabir@yahoo.com

ABSTRACT

Background: Iran is among countries with intermediate prevalence of hepatitis B virus (HBV). Vaccination is a very suitable strategy for preventing HBV infection. High enough level of anti-HBs antibody is necessary to assure preventive effect of vaccination. Different hypothesis has been introduced about the response to HB vaccination based on AMI.

Aims: Considering the prevalence of HBV and increasing trend of obesity in Ira and specifically in youths, we designed this study to compare the vaccine efficacy in obese and non-obese cases.

Methods: In this retrospective cohort study, there were 243 obese and 91 non-obese which had our eligibility criteria. Cases were from a referral clinic for obesity and some other cases and all controls were from a referral hepatology clinic, both in Tehran, Iran. Vaccination history, comorbidities and HBV profile were evaluated in both groups.

Results: Obese were slightly older (43.1 vs. 39.7, P=0.047); however, sex was not different in two groups (female percentage: 62.1% vs. 59.3, P=0.640). Obese had lower liver diseases (67.1% vs 100%, P<0.001), and immunosuppressive medication (11.1% vs. 38.5, P<0.001); but, higher family history of liver diseases (12.1% vs 4.4%, P=0.036), and HB vaccination history (73.3% vs. 52.2%, P=0.005). Mean±SD of anti-HBs titer in obese was significantly lower than controls (132.7±247.7 vs. 279.4±393.7, P=0.008). Male sex (P=0.01), using immunosuppressive medication (P=0.013), presence of liver disease (P < 0.001) and higher numbers of vaccination (P < 0.001) were significantly associated with higher level of anti-HBs antibody titer. With increasing BMI, level of anti-HBs antibody titer decreased significantly (r=-0.364, P<0.001). Analysis of covariance showed that among all related variables with significant association with anti-HBs antibody titer, only presence of liver disease (P<0.001) and using immunosuppressive medication (P=0.019) are independent predictors of determining level of anti-HBs antibody titer.

Conclusions: Level of anti-HBs antibody titer is lower in obese than controls; however, presence of liver disease can be an important factor that significantly affecting on this association. So, level of anti-HBs antibody titer in obese cases without liver disease is lower and we should hire useful strategy, maybe using longer needles for vaccination, in these cases.

P224 DEMOGRAPHIC SURVEY OF HDV IN COMPARISON WITH HBV AMONG KHUZESTAN PROVINCE

Pezhman Alavinejad[1], Eskandar Hajiani[1], Abdol Rahim Masjedizadeh[1], Seyed Jalal Hashemi[1], Ali Akbar Shayesteh[1], Samaneh Yazdi Baghbanzadeh[1]

[1]*GI Department, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran*

Presenting Author: Pezhman Alavinejad, Email: pezhmanalavinejad@gmail.com

ABSTRACT

Introduction: To evaluate the demographic characters of HDV in Khuzestan province and determine multiple aspects of this disorder.

Methods: By evaluating files of hepatitis patients

among archive of Hepatology clinics in Jundishapur University and also records of gastroenterology offices in center of province to determine a relative prevalence of HDV and clarify differences in pattern of involvement and presentation if any at all.

Findings: Overall from 557 hepatitis B patients (348 male, 209 female), 41 cases (7.3%, 35 male, 6 female) had positive HDV serology. Average age of HDV patients was 53.4 (range 26 to 78) while this figure for HBV patients was 42.5 (range 9 to 88) (P = 0.68). Average score of liver stiffness measurement among HDV patients was 14.58 KPa (5.1 to 59.3) revealed a higher score in comparison with HBV patients (mean 6.34 KPa, range 0.1 to 46). Likewise the average level of serum transaminases were higher in HDV patients (mean ALT 92.4, mean AST 96.5) in comparison with HBV patients (mean ALT 50.2, mean AST 45.1) (P = 0.01). 14 HDV patients (34.1%) evolved to liver cirrhosis in comparison with 7.3% (38 cases) among pure HBV infection.

Conclusions: Concomitant involvement of HDV among HBV patients is a more aggressive condition which could rapidly evolve to liver cirrhosis and end stage liver disease so warrants close observation of these patients.

P225 VIRAL HEPATITIS: AEROMEDICAL CONCERNS AND WAIVER CONSIDERATIONS ON MILITARY AVIATORS

Ahmad Ebadi[1], Reza Eslami[2], Mahmood Momenzadeh[2]

[1]*Research Center of Defense Medicine, Chamran Hospital, Tehran, Iran;*
[2]*AJA University of Medical Science, Faculty of Aerospace & diving Medicine, Tehran, Iran*

Presenting Author: Ahmad Ebadi, Email: gasabeh47@gmail.com

ABSTRACT

Background: The most common infectious agents of the liver that the flight surgeon likely will encounter are viral. Hepatitis A, B, C, D, E and G have been described. Acute viral hepatitis is a spectrum of clinical disease ranging from asymptomatic infections, marked only by a rise in transaminase levels, to fulminant hepatic necrosis and failure. Symptoms during the acute phase of a viral hepatitis episode may include anorexia, nausea, vomiting, fatigue, malaise, arthralgias, myalgias, headache, jaundice, abdominal discomfort, and constitutional symptoms often described as a flulike illness that all can cause flight incapacitation.

Methods: We reviewed books, magazines, articles, guidelines and reliable websites related to the title for five years period of 2010 to 2014.

Results: Aviators with acute hepatitis are unfit to fly due to the likelihood of unacceptable symptoms, as are those with chronic hepatitis who are either undergoing drug treatment or who have demonstrated functional impairment due to their chronic liver disease. However, aviators who have fully recovered from an episode of acute viral hepatitis, as demonstrated by being asymptomatic with liver function tests (LFTs) within the standard reference range and negative viral markers, may be returned to flying status without requiring a waiver. Aviators with chronic viral hepatitis may experience many years without functional impairment before the onset, if at all, of aeromedically significant complications. Therefore, individuals may be considered for a waiver if they are off disqualifying medications, demonstrate normal hepatic functional capacity and have no significant symptoms of hepatic decompensation or extrahepatic manifestations of chronic hepatitis.

Conclusions: Drug therapy is not compatible with continuation on flying duties. However, waivers may be considered if treatment of hepatitis B with interferon-alfa and lamivudine leads to improvement of HBV infection, resolution of HbsAg and/or HBeAg, appearance of anti- HbsAg and/or anti-HbeAg, reduction in liver enzymes, and providing the member remains asymptomatic. Also, waivers may be considered if treatment of hepatitis C with interferonalfa and ribavirin leads to improvement of HCV infection, negative HCV RNA by PCR, reduction in liver enzymes, and providing the member remains asymptomatic.

P226 REAL-LIFE PRACTICE IN THE MANAGEMENT OF CHRONIC HEPATITIS C; A SINGLE-CENTER REPORT FROM THE COMPREHENSIVE HEPATITIS REGISTRY (CHR), ISFAHAN, IRAN

Behrooz Ataei[1], Peyman Adibi[2], Hoda Rouhani-Najafabadi[3]

[1]*Infectious Diseases and Tropical Medicine Research Center, Isfahan University of Medical Sciences, Isfahan, Iran;*
[2]*Integrative Functional Gastroenterology Research Center, Isfahan University of Medical Sciences, Isfahan, Iran;*
[3]*Behphar Scientific Committee, Behphar group, Tehran, Iran*

Presenting Author: Behrooz Ataei, Email: ataei@med.mui.ac.ir

ABSTRACT

Background: The combination of weight-based pegylated interferon alfa-2b (PegIntron) and ribavirin (Rebetol) is shown to result in sustained virological response (SVR) in 40-50% and 70-80% of genotype

(GT) 1 and GT 2, 3 chronic hepatitis C (CHC) patients, respectively. Local reports on safety and efficacy of the above regimen are however scant.

Patients and Methods: The present non-randomized, clinical trial was conducted on non-cirrhotic CHC patients who referred to the Seddigheh Tahereh Hepatitis Clinic, Isfahan in 2013-2015 and treated with PegIntron plus Rebetol as per the recommended protocol. Patients' data were recorded in our electronic database (comprehensive hepatitis registry-CHR).

Results: The study population comprised 72 patients (93.2% male) with the mean age of 37 years. GT 3a and 1a were reported in 62.5% and 37.5% of cases, and 88.8% of patients were treatment naïve. Our findings demonstrated the overall SVR rate was 75.1% while 9.7%, 2.7% and 12.5% of patients were non-responders, breakthroughs and relapsers, respectively. SVR was achieved in 64.96% of GT 1 and 84% of GT 3 patients. Safety findings were compatible with earlier reports. The predictability of response (PoR) for RVR was 90% and 100% in GT1 and GT3 patients, respectively. EVR achievement could predict SVR in 64.7% (GT1) and 88.57% (GT3) of patients.

Conclusions: A considerably high SVR and favorable PoR for RVR and EVR, as well as the acceptable safety suggested that the combination regimen of PegIntron and Rebetol is efficient and tolerable in our current practice of hepatitis C treatment.

P234 MOLECULAR CHARACTERIZATION OF THE TRANSFUSION TRANSMITTED VIRUS (TTV) INFECTION AMONG CHRONIC HBV PATIENTS IN GOLESTAN PROVINCE; IRAN

Sareh Zhand[1], Alijan Tabarraei[1], Ghassem Rostamian[2], Razieh Azizi[3], Abdolvahab Moradi[1]
[1]*Department of Microbiology, Golestan University of Medical Sciences, Gorgan, Iran;*
[2]*Department of Medicine, Iran University of Medical Sciences, Tehran, Iran;*
[3]*Department of Molecular Medicine, Golestan University of Medical Sciences, Gorgan, Iran*

Presenting Author: Sareh Zhand, Email: sa_zh2006@yahoo.com

ABSTRACT

Introduction and Aims: Transfusion Transmitted virus (TTV) is a member of the family syrkoviridae and genus anellovirus. Its genome consists of a single-stranded DNA molecule. The virus can be transmitted through blood transfusions and blood products. Co-infection TTV and HBV or TTV and HCV typically occurs. Because these viruses share similar transmission roots (through blood).In the infected person with the virus DNA levels in serum and liver tissue from 10 to 100 times higher than that on the basis of a known virus Hepatotropic. Studies show that the sequence of TTV in patients with chronic hepatitis B or fulminant has been found in some areas. Studies show that the sequence of TTV in patients with chronic hepatitis B or fulminant has been found in some areas. The purpose of this study was to determine the prevalence of TTV in patients with chronic hepatitis B in the Golestan province Iran.

Methods and Materials: The study was conducted on 271 patients with chronic hepatitis B. TTV DNA isolated using High Pure Viral Nucleic Acid Kit (Roche, Hamburg, Germany). The qualitative PCR using specific primers of N22 region from ORF1 of TTV was performed. Statistical analysis performed using SPSS 16 software.

Results: The results of PCR analysis showed that among 271 patients with chronic hepatitis B 20 patients (7.38%) were infected with TTV. The mean age of patients with chronic hepatitis B that infected with TTV was 38.5% of the 72% were men and women were 28%.

Conclusions: TTV prevalence in patients with chronic hepatitis B in Golestan province, confirms the findings of similar studies in Iran and other countries.

P238 HEPATITIS E VIRUS ANTIBODY AND RNA PREVALENCE IN THALASSEMIC PATIENTS WITH HEPATITIS C INFECTION

Azadeh Dalvand[1], Zohre Sharifi[2], Seyed Masoud Hosseini[3]

[1]*Dept. of Microbiology, Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;*
[2]*Faculty of Biological Sciences, Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;*
[3]*Dept. of Microbiology, Faculty of Biological Sciences, Shahid Beheshti University, Tehran, Iran*

Presenting Author: Azadeh Dalvand, Email: nitella89@gmail.com

ABSTRACT

Background and Aims: Hepatitis E virus (HEV) is the causative agent of self-limited acute viral hepatitis in developing countries. HEV is a food-borne and water-borne origin that is transmitted by the fecal-oral route. Thalassemia disease is a genetic disorder of globin chain production that requires regular blood transfusion in patients. It has proved that HCV is the major virus of transfusion associated hepatitis transmission in this patients. Due to the blood transfusion in thalassemic patients, both iron overload and HCV infection, lead to the other infection viral

hepatitis especially HEV. In the present study, we evaluated seroprevalence of HEV antibodies and HEV RNA in thalassemic patients with HCV infection.

Materials and Methods: In this study, 120 thalassemic patients serum samples (78 Females and 42 Males) from Tehran province in 2014 used, which were collected and stored in IBTO (Iran Blood Transfusion Organization). All samples were tested for anti-HEV Ab and anti-HCV Ab using ELISA (Dia. Pro Italy). Samples which were found positive ELISA, assayed by Nested RT-PCR in order to detect HEV RNA. Then, negative samples from anti-HEV Ab were pooled for testing with Nested RT-PCR.

Results: The mean age of patients was 27.95 with the range of 15 – 48years old and the distribution of HCV was the same across categories of HEV. The results of ELISA showed that 2.5% (3 out of 120) were positive for anti-HEV Ab. Only 4.16% (5 out of 120) of samples were positive for HEV RNA. Overall seroprevalence of HEV infection in these patients was 2.5% (95% CI: 0.54 – 7.37).

Conclusions: This study demonstrated that seroprevalence of anti-HEV Ab was similar to healthy Iranian population and there is no significant association between HEV frequency and sex.

P240 NATURAL PRODUCTS AND CHRONIC HEPATITIS C VIRUS: SYSTEMATIC REVIEW

Mohammadreza Noras[1], Seyyd Musa al-Reza Hosseini[2], Said Zibaee[3], Mahdi Yousefi1, Ali Taghipour[4]

[1]*Persian Traditional Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;*
[2]*Gastroenterology, Mashhad University of Medical Sciences, Mashhad, Iran;*
[3]*Microbiology, Razi Vaccine and Serum Research Institute of Mashhad, Mashhad, Iran; 4Epidemiology & Research Methodology, Mashhad University of Medical Sciences, Mashhad, Iran*

Presenting Author: Mohammadreza Noras, Email: norasmr901@mums.ac.ir

ABSTRACT

Background and Aims: According to the World Health Organization (WHO), 70–80%of the world's population uses CAM modalities. Recent reports about natural compounds highlight their antiviral activity against HCV. This systematic review evaluates the effects of herbal medicines for treating hepatitis C infection.

Materials and Methods: For this purpose, electronic databases including PubMed, Scopus, and Cochrane library were searched to obtain studies giving any in vitro, in vivo, or human evidence of the efficacy of medicinal herbs in the treatment of hepatitis C.

Results: Ten different herbal medicines were tested in hepatitis C. The present systematic review found no significant antiviral effect of the herbal medicines when compared with placebo, but the data suggest that some herbal medicines in combination with interferon and ribavirin may have effects on the clearance of HCV RNA and on normalization of liver enzymes. However, there is no strong evidence for any efficacy of these medicinal herbs for chronic hepatitis C due to the fact that most positive effects came from clinical trials with low methodological quality.

Conclusions: There is currently insufficient evidence for treating HCV infections with medicinal herbs. In patients with HCV infection, it is necessary to have information on clinical and/or histological stage of the liver disease, the presence or absence of cirrhosis, the genotype of HCV, and other well proven prognostic indicators also when assessing the efficacy of medicinal herbs. Medicinal herbs for hepatitis C virus infection should not be used outside well-designed, randomized clinical trials.

P241 EFFECT OF LACTOFERRIN IN PATIENTS WITH CHRONIC HEPATITIS C: SYSTEMATIC REVIEW

Mohammadreza Noras[1], Seyyd Musa al-Reza Hosseini[2], said zibaee[3], Mahdi Yousefi[1], Ali Taghipour[4]

[1]*Persian Traditional Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;*
[2]*Gastroenterology, Mashhad University of Medical Sciences, Mashhad, Iran;*
[3]*Microbiology, Razi Vaccine and Serum Research Institute of Mashhad, Iran;*
[4]*Epidemiology & Research Methodology, Mashhad University of Medical Sciences, Mashhad, Iran*

Presenting Author: Mohammadreza Noras, Email: norasmr901@mums.ac.ir

ABSTRACT

Background and Aims: Many patients use natural products, including those who are not eligible for IFN/ribavirin, cannot afford treatment, or fail to respond to IFN. Currently Human, Bovine and Camel lactoferrin (bLf, hLfand cLf) is one of the primary biopharmaceutical drug candidates against HCV infection. This review discusses the biological properties of the lactoferrin. We studied the antiviral activity of lactoferrin against hepatitis C virus by Systematic Review.

Materials and Methods: For this Systematic Review, electronic databases including PubMed, Scopus, and

Cochrane library were searched to obtain studies giving any in vitro, in vivo, or human evidence of the efficacy of lactoferrin in the treatment of hepatitis C. Data were collected for the years 1990 to 2013. Out of the 400 records found in the mentioned resources, 22 related studies were included in the final analysis.

Results: Both bLf and hLf effectively prevented human hepatitis C virus (HCV) infection in cultured human hepatocytes (PH5CH8), bLf being the most active. Further studies demonstrated that bLf inhibited HCV entry into the cells by interacting with viral particles immediately after mixing of bLf and HCV inoculum. The first pilot study of Tanaka and co-workers shown excellent tolerance and potential anti-HCV activity of bLf. In a study the effects of long-term oral administration of bLf on serum parameters in patients with chronic hepatitis C have been analyzed and results obtained suggested that oral administration of lactoferrin induced a Th1-cytokine dominant environment in the peripheral blood so favouring the eradication of HCV by a combined interferon therapy. The clinical trial patients with chronic hepatitis C randomly received either oral bLf daily for 12 weeks, or an oral placebo. There was no significant difference in viral response rates between the two groups, indicating any significant bLf efficacy in patients with chronic hepatitis C. An interesting observational study has been reported on patients feed with camel milk which contains lactoferrin. In in vitro model, purified camel lactoferrin interacts with HCV, thus leading to a complete virus entry inhibition. Our results suggest that the cLf may be one of the camel milk components having antiviral activity.

Conclusions: Several laboratory and human studies have been performed to evaluate these lactoferrin, but many of these studies are small, uncontrolled and have other important design flaws.Further research is needed on the effectiveness of these natural products for treatment of chronic HCV, including their preparation and standardization.

P245 MOLECULAR AND SEROLOGICAL DETECTION OF HEPATITS E VIRUS IN THALASSEMIC PATIENTS

Najmeh Dalvand[1], Zohre Sharifi[2], Seyed Masoud Hosseini[3]

[1]*Dept. of Microbiology, Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;*
[2]*Faculty of Biological Sciences, Blood Transfusion Research Center, High Institute for Research and Education in Transfusion Medicine, Tehran, Iran;*
[3]*Dept. of Microbiology, Faculty of Biological Sciences Shahid Beheshti University, Tehran, Iran*

Presenting Author: Najmeh Dalvand, Email: n.nanite.d@gmail.com

ABSTRACT

Background and Aims: Hepatitis E virus (HEV) is an emerging infection in developed countries where it can lead to severe hepatic illnesses. HEV infection is usually a self-limiting disease with typical symptoms of acute viral hepatitis. Throughout four modes of HEV transmission, the most common mode and also responsible for the majority of the HEV infection outbreak is the fecal-oral route and usually by consumption of contaminated water. The thalassemic patients need regular blood transfusion as the main treatment. These patients suffer from iron overload and liver-related issues. So, one of the probable route of HEV transmission is from blood transfusion from infected donors. We conducted this study to detect HEV antibody, HEV RNA and HEV genotypes among thalassemic patients.

Materials and Methods: This study was conducted on 110 thalassemic patients from IBTO (Iran Blood Transfusion Organization) Tehran province. Their serum samples were tested for the presence of Anti-HEV Ab by ELISA (Dia. Pro Italy). We focused on HEV ELISA positive samples and perform Nested RT-PCR. Then, negative samples were pooled in order to detection HEV RNA by Nested RTPCR method.

Results: The results of this study demonstrated that the seroprevalence of HEV infection was 5.88% (95% Cl: 1.63-14.38) in thalassemic patients. The mean age of patients was 28.05 (8 – 69). Among five positive ELISA samples only in one sample HEV RNA was detected.

Conclusions: The overall results of current study confirm the seroprevalence of HEV infection among thalassemic patients older than 27 years old. There is no significant association between HEV infection and sex.

P249 INVESTIGATION OF THE ASSOCIATION BETWEEN INTERLEUKIN 17 (RS2397084 AND RS763780) GENE POLYMORPHISMS AND CHRONIC HEPATITIS C VIRUS INFECTION

Hamideh Tayefi[1], Seyed Reza Mohebi[1], Pedram Azimzadeh[1], Mahsa Khanyaghma[1]

[1]*Gastroenterology and liver Diseases Research Center, Shahid Behehsti University of Medical Sciences, Tehran, Iran*

Presenting Author: Hamideh Tayefi, Email: tayefi.n@gmail.com

ABSTRACT

Background: The Interleukin-17 (IL-17) family of cytokines has been reported to be involved in many immune processes, most particularly in inducing pro-inflammatory responses. Cytokine genes polymorphisms may be affect the expression and function of cytokines. Hepatitis C virus (HCV) infection becomes an important public health problem. HCV morbidity and mortality is related to several viral and host factors. This study was investigated the association between Single Nucleotide Polymorphisms (SNP) of IL-17 (rs2397084 and rs763780) genes and susceptibility to chronic HCV infectious.

Methods: A total of 120 chronic patients as a case group and 120 healthy individuals were studied for differentiation between genotype and allele frequencies. Polymerase Chain Reaction Restriction Fragment Length Polymorphism (PCR-RFLP) by extracted DNA from samples performed and results were confirmed with sequencing for 5% of samples.

Results: Statistically genotype frequencies of rs763780 and rs2397084 did not show any significant difference between patients and controls groups. Distribution of genotypes for rs2397084 were 85.7% TT, 12.6% TC, 1.7% CC in chronic, 78.1% TT, 20.2% TC, 1.7% CC in control (Pvalue = 0.288). In another SNP rs763780, 85.7% TT, 11.8% TC, 2.5% CC in chronic, 89.9% TT, 10.1% TC, 0.0% CC in control (Pvalue = 0.195).

Conclusions: Genotypes differences of IL-17 rs763780 and rs2397084 might not be affected progression of chronicity in HCV infection.

P251 PREVALENCE OF HAV, HBV AND HCV SEROLOGICAL MARKERS IN LEAN VERSUS OBESE PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE

Behnam Honarvar[1], Kamran Bagheri Lankarani[1]

[1]*Shiraz University of Medical Sciences, Health Policy Research Center (HPRC), Shiraz, Iran*

Presenting Author: Behnam Honarvar, Email: honarvarbh32@yahoo.com

ABSTRACT

Introduction: Non-alcoholic fatty liver disease (NAFLD) shows an increasing trend among population of Iran in recent years. Evidences reveal that obese patients are more prone to NAFLD, but data about lean NAFLD patients are limited. We measured Hepatitis A, B and C markers in these two group of patients.

Methods: 819 people were selected through a multistage cluster randomized sampling in Shiraz. Detection of HAV, HBV and HCV markers and liver sonography were done for all of these group. Data were analyzed in SPSS.

Results: Mean age of participants was 43±14 years (range from 18-88 years). 479 (58.4%) were female compared to 340(41.5%) males. 50(6.1%), 455(55.5%) and 245(30%) were illiterate, up to diploma and university educated respectively. 340(41.5%) were belonged to lean BMI (BMI<25) and 479 (58.4%) were belonged to Obese BMI (BMI≥25) groups. Moreover, 176(21.5%) were labeled as NAFLD group. Obese NAFLD (147; 17.9%) were 5 times more prevalent compared to Lean NAFLD cases (29; 3.5%). None of the both groups showed Anti HCV Ab and HBS Ag markers, while Anti HBcAb was positive in 1(3.4%) of Lean NAFLD and 4(2.7%) of Obese NAFLD patients. These measures for Anti HAV Ab were as 13 (44.8%) and 55(37.4%) in both groups respectively.

Conclusions: Lean NAFLD patients are 5 times lesser common than Obese NAFLD cases and Hepatitis viral markers show a close prevalence in both groups. However, to clear more analytical association between these parameters a larger population study is needed.

P255 THE CONCEPT OF HEPATITIS IN MEDIEVAL IRANIAN MEDICINE

Mohammadreza Noras[1], Seyyd Musa al-Reza Hosseini[2], Said Zibaee[3], Mahdi Yousefi[1], Ali Taghipour[4]

[1]*Persian Traditional Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;*
[2]*Gastroenterology, Mashhad University of Medical Sciences, Mashhad, Iran;*
[3]*Microbiology Department, Razi Vaccine and Serum Research Institute of Mashhd, Mashhad, Iran;*
[4]*Epidemiology & Research Methodology, Mashhad University of Medical Sciences, Mashhad, Iran*

Presenting Author: Mohammadreza Noras, Email: norasmr901@mums.ac.ir

ABSTRACT

Background: hepatitis significantly decrease quality of life, and despite various treatments still uncontrolled especially in cute illness. The viewpoints of Avicenna and Persian physicians about hepatitis can be a topic of research for future articles. In this article, we aim to investigate the theories and clinical experiences of Rhazes, Avicenna and some other Persian physicians by juxtaposing their viewpoints against contemporary scientific studies in the field of hepatitis.

Materials and Methods: We reviewed the Canon of Medicine and other reference textbooks of ITM in

experts' view such as Kamel-al-Sanaeh, Al-Havi and Zakhireh-kharazmshahi and searched PubMed, Scopus and Science Iranian Database (SID), in November - December 2014 with keywords.

Results: The Definitions of hepatitis and related terms, Etiology, Symptoms and signs of diseases that cause hepatitis, Physiopathology, treatments, as an example of ITM concepts using about hepatitis in new problem hepatitis and liver disease have been offered with remarkable precision in this work. Different factors can induce these problems with direct or indirect change in quantity and quality of humors in body systems or liver. Treatments are based on life style modifications and correction of humors. ITM have medicinal drug for hepatitis. For example, camel milk may be effective on hepatic B and C.

Conclusions: In ITM almost major parts of diseases originate from abnormality in either quantity or quality of humors. Gold approach to managing of hepatitis is lifestyle modification with attention to responsible humors. Some therapeutic protocols in ITM may be applicable today. Perhaps redefining the diseases, update expression of these concepts and approaches can open a new line for complementary and alternative treatments of hepatitis. Studies on causes of hepatitis and its symptoms based on Avicenna's view could open the new way to control and treat hepatitis and reduce burden of this highly prevalent disease in society subsequently.

P256 KNOWLEDGE OF UNIVERSAL PRECAUTIONS TOWARD HBV AND HCV AMONG HEALTH CARE WORKERS AT THE UNIVERSITY TEACHING HOSPITALS IN GUILAN, IRAN

Farahnaz Joukar[1], Fariborz Mansour-Ghanaei[1], Mohammad Reza Naghipour[1], Mehrnaz Asgharnezhad[1]

[1]*Gastrointestinal & Liver Diseases Research Center (GLDRC), Guilan University of Medical Sciences, Rasht, Iran*

Presenting Author: Farahnaz Joukar, Email: farajov@gmail.com

ABSTRACT

Purpose: Health care workers (HCWs) represent high risk population for viral hepatitis infection. This study sought to assess the knowledge of HCWs regarding hepatitis B (HBV) and hepatitis C (HCV) infection.

Methods: In a multi-center cross sectional study, all HCWs from eight University hospitals were invited to participate in the study and to fill in a self-administered questionnaire.

Results: A high proportion of the study participants (55.4% and 52.9%) had unsatisfactory knowledge about HBV and HCV. Mean knowledge score toward HBV was significantly higher among more educated staff, p <0.001 and vaccinated personnel, P=0.02. Majority of responders answered correctly to transmission questions toward HBV and HCV (90%, 80%, respectively). There was statistically significant difference in only transmission domain score between various hospitals (p<0.05). The highest scores were related to surgical hospital (7.5±1.4).

Conclusions: Although more than ninety percent of our participants were educated about HBV and HCV, knowledge about nature of disease, prevention, treatment and vaccine availability was unsatisfactory. Continuous training program toward viral infection is a matter of necessity.

P258 ACCURACY OF FIBROSCAN PERFORMANCE IN EVALUATION OF LIVER FIBROSIS AMONG PATIENTS WITH NASH

Masoudreza Sohrabi[1], Farhad Zamani[1], Hossein Ajdarkosh[1], Mahmood Khonsari[1], Naser Rakhshani[1]

[1]*Heaptogastroenterology, GastroIntestinal and liver Disease Research Centre (GILDRC), Tehran, Iran*

Presenting Author: Masoudreza Sohrabi, Email: sohrab_r@yahoo.com

ABSTRACT

Background: Actually the NAFLD can be considered as a major health issue in all societies including Iran. However, the correct estimation of evaluation of liver fibrosis remains an obstacle.

Aim: To evaluate the accuracy of Fibroscan with the results of Liver Biopsy among patients with NASH.

Method: Between Nov 2013- Jan 2015, from patients with NAFLD, who refers to Firoozgar's hepatitis clinic that had elevated liver enzymes as well as ultrasonography exam revealed fatty liver along with negative for other acute or chronic liver diseases were invited to do Liver Biopsy and Liver Fibroscan (Metavir scoring system) in our hospital .The interval time between these exams was1-5 days. The liver specimens were evaluated by a GI - expert pathologist.

Results: Sixty patients were involved in our study. The cut off point for F1-4 in our study were 7.5, 10.5, 14.0 and 18.0 respectively. The sensitivity and specify of Fibroscan according to liver biopsy were 90,89,80,97 percents and 75,81,70,95 percents respectively.

Conclusions: Fibroscan can be considered as easy and reliable tools for first step of evaluation of pa-

tients with NAFLD. It seems that the cut off points for Fibroscan scoring needs revision.

P262 PROFOUND ANTI-FIBROTIC AND ANTI-PROLIFERATIVE EFFECTS OF SILLIBIN A ON ACTIVATED HUMAN HEPATIC STELLATE CELL

Seyed Younes Hosseini[1], Maryam Ghayour[2], Fathollah Kalantar[3], Khashayar Shahin[4], Zahra Amirghofran[1], Masoumeh Rajabibazl[5], Mohammad-Reza Fattahi[1], Maryam Moini[1]

[1]*Gastroenterohepatology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Departement of Clinical Biochemistry, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran;*
[3]*Shiraz University of Medical Sciences, Shiraz, Iran;*
[4]*Department of Immunology, Shiraz University of Medical Sciences, Shiraz, Iran;*
[5]*Medicinal and Natural Products Chemistry Research Center, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Shiraz, Iran*

Presenting Author: Seyed Younes Hosseini, Email: yovirus2002@yahoo.com

ABSTRACT

Objectives: As the most important cells in liver fibrogenesis, hepatic stellate cells (HSCs) are the major target of current fibrosis therapy. In this study the anti-fibrotic and anti-proliferative role of silybin-A component was evaluated on activated LX-2 stellate cell.

Methods: The possible cytotoxic effect of silybin A on normal LX-2 cells was evaluated to find the optimal dose of treatment. The HSCs were then treated with compound before (in prophylactic) and after (in therapeutic manner) activation by TGF-β. After 48 hours the anti-proliferative effect of silybin-A on activated LX-2 cell were measured by MTT assay. The harvested cells were introduced into real-time PCR to determine the gene expression levels of TIMP-1, COL1A1 and MMP-2 as fibrotic factors. Furthermore, TGF-β production was measured by ELISA assay on culture supernatants.

Results: MTT assay results indicated that silybin A has significant anti-proliferative effect when applied in both therapeutic and prophylactic manner on activated cells ($P<0.01$). Real-time measurement of fibrotic genes beside TGF-β production also indicated that it had also down regulatory effects when evaluated in both therapeutic and prophylactic manner.

Conclusions: In our study, silybin A demonstrated profound anti-fibrotic and anti-proliferative effects on activated LX-2 cells that would be encouraging for its further applications in fibrosis treatment.

P266 STUDY TO DETERMINE THE INCIDENCE OF NEEDLE STICK AND ANTI-HEPATITIS B LEVEL ANTIBODY AND THE ANTIGEN SOURCE OF EXPOSURE IN HEALTH WORKERS ONE OF HOSPITAL AFFILIATED WITH THE UNIVERSITY OF MEDICAL SCIENCES OF URMIA IN 1392

Mahnaz Mohammadpouri[1], Zhaleh Zeinali[1], Fatemeh Hoseinzade[1], Iran Khalili[1], Fatemeh Allahveisi[1], Shiva Ghanbari[1], Parvin Mohammadpouri[2]

[1]*Urmia Medical Science University, Urmia, Iran;*
[2]*Prevention Department Welfare Organization of West Azarbayjan, Urmia, Iran*

Presenting Author: Mahnaz Mohammadpouri, Email: mohamadpouri.m@gmail.com

ABSTRACT

Introduction: Acute hepatitis B infection and its chronic complications are the world's major health problems. In the United States, prevalence of hepatitis B in medical staffs is 0/4-1/6%.One of the most common route of transmission of hepatitis B virus in the hospitals is injuries caused by needles that contaminated with the positive hepatitis B antigen S patient's blood. One of the prevention ways is immunization by vaccination against these diseases. The purpose of this study is determination the incidence of needle stick and anti-hepatitis B level antibody and the antigen source of exposure in health workers of hospital affiliated with the University of Medical Sciences in 1392.

Method: This cross-sectional study which is surveyed on 524 health workers of affiliated with the University of Medical Sciences in 1392. For this purpose, a questionnaire was completed for staff needle stick blood samples for hepatitis B level antibody and blood samples from patients (source address) of the HBS Ag were studied. Antibody titer above 10 Iu/ml was considered as a positive result. Data were analyzed using descriptive statistics.

Results: The results showed that the total number of 524 medical personnel 45 person (58/8 percent) have suffered needle stick. The highest incidence of needle stick in terms of gender in women with 88/88 percent in the age group 31-40 years with 51/11 percent, in terms of jobs in nursing with 31.11 percent, in terms of workplace women operating room with 42/22% and in terms of shift work with 40%had occurred. About 4.44 percent of personnel had no vaccinated, antibody titer level was 91.11 percent of injured personnel above 10 Iu/ml and 8.88 below 10 Iu/ml was reported. 6.66 percent of patients (contamination source) were HBS Ag positive.

Conclusions: Due to vulnerability of health workers to the high prevalence of contamination, hepatitis B vaccination health workers and the urgent intervention on measures of PEP (Post Exposure Prophylaxis) will reduce the risk of infection.

P271 SURVEY ON FREQUENCY OF D HEPATITIS IN PATIENTS WITH B HEPATITIS REFERRED TO GASTROINTESTINAL AND LIVER DISEASE RESEARCH CENTER IN GUILAN

Fariborz Mansour-Ghanaei[1], Farahnaz Joukar[1], Maher Kordy[1], Mehrnaz Asgharnezhad[1]

1Gastrointestinal & Liver Diseases Research Center (GLDRC), Guilan University of Medical Sciences, Rasht, Iran

Presenting Author: Fariborz Mansour-Ghanaei, Email: ghanaie@yahoo.com

ABSTRACT

Background: Hepatitis D caused by RNA virus in patients which infected by hepatitis B. Different prevalence were reported in regional studies in Iran and it was between 2 till 17.3 percent of infected patients by hepatitis B. unfortunately, no data about the epidemiology of this disease exist for Guilan province so the aim of this study was to determine the epidemic of this issue in Guilan.

Methods: It is descriptive cross sectional study. All the patients diagnosed as a hepatitis B are included for this study. Background data such as age, sex, job, educational level, status, duration of hepatitis B Ag positive, etc. recorded. To determine the hepatitis D infection, about 5 cc blood samples was taken from all included patients and checked by Diapro kit. All data analysis by SPSS software.

Results: The prevalence of HDV in Guilan province was 0.5% of patients with hepatitis B. the only man infected by HDV was over 40 and divorced. He had dentistry, Endoscopy procedure, unsafe sex, tattoo and phlebotomy as a risk factor of hepatitis B.

Conclusions: The prevalence of Hepatitis D in Guilan was lesser that other region of Iran.

P272 PUBLIC PREFERENCES FOR ALLOCATION OF DONATED LIVERS FOR TRANSPLANTATION: A CONJOINT ANALYSIS

Ahmad Danesh[1], Ali Jafarian[2], Fariba Asghari[3], Akbar Fotouhi[4], Hojjat Zeraati[4], Kamran Yazdani[4], Saharnaz Nedjat[5], Mohammad-Ali Mansournia[4]

[1] Health and Community Medicine, Golestan University of Medical Sciences, School of Medicine, Gorgan, Iran;

[2] Hepatobiliary and Liver Transplantation Research Centre (Imam Khomeini Hospital), Tehran University of Medical Sciences, School of Medicine, Tehran, Iran;

[3]Medical Ethics and History of Medicine Research Centre, Tehran University of Medical Sciences, Tehran, Iran;

[4]Department of Epidemiology and Biostatistics, Tehran University of Medical Sciences, School of Public Health, Tehran, Iran;

[5] Department of Epidemiology and Biostatistics, Tehran University of Medical Sciences, School of Public Health, Knowledge Utilization Research Center (KURC), Tehran, Iran

Presenting Author: Ahmad Danesh, Email: addanesh@yahoo.com

ABSTRACT

Introduction: Despite the fact that the criteria for allocation of donated livers have been laid down for their fair and equitable distribution, these criteria may not help to select a potential recipient from those with the same medical requirements. This study tends to use conjoint analysis method to determine the importance of certain non-medical factors from the public's point of view which can be utilized to prioritize the patients with the same medical requirements.

Methods: A sample of 899 randomly selected persons from Tehran residents filled a questionnaire where in each question the respondents had to choose one out of two hypothetical patients as the recipients of a donor liver considering their expressed characteristics. The collected data were analyzed by means of conjoint analysis method, and the importance of each characteristic was determined in percentage taking into account its contribution to the total characteristics.

Results: According to the respondents the important criteria for allocation of donated livers included younger age, being married or breadwinner of the family, more than 3-year survival after transplantation, and having no role in causing the illness. Among these criteria, financial ability to pay post-operation costs has the least value on the selection. There was no difference between the subgroups (age, gender, education level, and marital status of the respondents) in regard to the importance attached to these criteria.

Conclusion: The findings of this study indicate that the public values certain social and individual factors in case of multiple potential recipients with equal medical need for liver transplant. Young age and being breadwinner of the family are the most important non-medical criteria that are considered for liver graft allocation.

P273 HEPATITIS B SURFACE ANTIGEN (HBSAG) PREVALENCE AMONG URBAN PREGNANT WOMEN VACCINATED AT BIRTH

Masomeh Bayani[1], Tahmineh Biazar[1], Mohammadreza Hasanjani Roushan[1], Mostafa Javanian[1], Mahmoud Sadeghi[1], Mehran Shokri[1]

[1]*Rohani Hospital, Medical University of Babol, Babol, Iran*

Presenting Author: Tahmineh Biazar, Email: dr.tbiazar@gmail.com

ABSTRACT

Objective: The most common route of transmission of Hepatitis B virus (HBV) in Iran is vertical. National program of HBV vaccination began in 1993 in Iran. This study perform to measure the prevalence of HBsAg positivity in pregnant women who born in 1993-1999 and were vaccinated at same time.

Methods: We study the mothers who was born in 1993-1999 at urban area of Babol and vaccinated at this time and were pregnant in 2007-2013 and check HBsAg for them.

Results: We included 1065 pregnant women in this study 2 women (0.18%) were HBsAg positive and one of them had family history of HBsAg positivity.

Conclusions: The study result indicated that routine infant immunization of HBV in Iran induced long term protection against HBV and was very efficacious in reducing chronic HBV infection rate in vaccinated young adults.

P275 VIRAL HEPATITIS: THE MOST COMMON INDICATION FOR LIVER TRANSPLANT IN MASHHAD

Mohsen Aliakbarian[1], Kambiz Akhavan Rezayat[2], Mohammad Naser Toutouni[2], Musalreza Hosseini[2], Soheila Ebrahim Nia Milani[2]

[1]*Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;*
[2]*Montaserieh Organ Transplant Center, Mashhad University of Medical Sciences, Mashhad, Iran*

Presenting Author: Kambiz Akhavan Rezayat, Email: akhavanrk@mums.ac.ir

ABSTRACT

Background: Viral hepatitis is one of the most common etiologies of end stage liver disease. Like most countries, viral hepatitis B and C are estimated to be the most common indications of liver transplant in IRAN. The only therapeutic option for many of such patients is liver transplantation.

Objective: To present our 2-year experience of liver transplant in Montaserieh Hospital, Mashhad, northeastern Iran.

Methods: From June 2014 to March 2015, 34 patients underwent orthotopic liver transplantation in our center. The data including demographics, indications for transplantation, MELD scores, postoperative complications and their management were collected.

Results: Patients (18 women and 16 men) aged between 18 and 62 years. Indications for liver transplantation included HBV infection (n=12), autoimmune hepatitis (n=8), HCV infection (n=6), cryptogenic cirrhosis (n=5), and Wilson's disease (3). MELD score of patients ranged from 16 to 40. All patients received tacrolimus, mycophenolate mofetil and corticosteroid, postoperatively. One patient died of pulmonary infection and multiple organ failure. The other patient expired possibly due to pulmonary emboli. 32 patients are well doing and have excellent liver functions. HCV recurrence occurred in one patient who was successfully treated with antiviral drugs and Interferon. No vascular and biliary complication was seen in the patients.

Conclusions: We had successful results in our experience of orthotopic liver transplant. 53% of our transplanted patients were known cases of hepatitis B or hepatitis C induced cirrhosis.

P276 EPIDEMIOLOGY OF VIRAL HEPATITIS IN NORTH OF IRAN; A POPULATION BASED STUDY

Masoudreza Sohrabi[1], Mahmood Khonsari[2], Nima Motamed[3], Hossein Ajdarkosh[2], Masoumeh Maadi[4]

[1]*Heptogastroenterology, GastroIntestinal and Liver Disease Research Centre (GILDRC), IUMS, Tehran, Iran;*
[2]*Hepatogastroenterology, GastroIntestinal and Liver Disease Research Centre (GILDRC), IUMS, Tehran, Iran;*
[3]*Social Med, Zanjan University of Medical Sciences, Zanjan, Iran;*
[4]*Hepatogastroenterology, GastroIntestinal and Liver Disease Research Centre (GILDRC), IUMS; Haraz Branch, Tehran, Iran*

Presenting Author: Masoudreza Sohrabi, Email: sohrab_r@yahoo.com

ABSTRACT

Background: Viral hepatitis is a major health problem in different countries. However there is a lack of enough information about viral hepatitis in all parts of Iran.

Aim: To determine the prevalence of viral hepatitis in central north of Iran.

Method: 6145 individuals from urban and rural areas of Amol of both genders and of different ages were involved. HBV markers were checked for all subjects. Also anti-hepatitis C antibody was measured. The positive results for HCV-Ab were confirmed by Recombinant Immuno Blot Assay (RIBA) and quantitative HCV-RNA polymerase chain reaction (PCR)

tests. Potential risk factors of HBV&HCV transmission were recorded.

Results: The mean age of participants was 42.70±17.10. Of these participants, 57.2% (n=3483) were male. Anti-HCV antibody was positive in 12 individuals of which 5 were RIBA positive. Three of these subjects were PCR positive. The prevalence of HCV was more predominant among males than females. The prevalence of HBsAg, HBsAb, HBcAb were estimated as 0.9%, 30.7% and 10.5% respectively.

Conclusions: Despite increased prevalence of hepatitis C infection, the present study shows that the rate of HCV infection in this region is lower than previously reported. In regard of HBV infection; our result revealed a lower HBs-Ag rate in this study compared with other geographic locations in Iran

P279 ANTI-HEPATITIS E ANTIBODY IN HEMODIALYSIS PATIENTS IN ISFAHAN, IRAN: PREVALENCE AND RISK FACTORS

Omid Pirhaji[1], Behrooz Ataie[1], Seyed Moayed Alavian[2]

[1]*Infectious Diseases and Tropical Medicine Research Center, Isfahan University of Medical Sciences, Isfahan, Iran;*
[2]*Baqiyatallah Research Center for Gastroenterology and Liver Disease, Tehran, Iran*

Presenting Author: Behrooz Ataei, Email: ataei@med.mui.ac.ir

ABSTRACT

Background: Many studies have been performed regarding the prevalence of hepatitis E on general population, but there is a controversial evidences for increased risk of the infection in patients on maintenance hemodialysis (HD). The primary end point of the present study was to determine if the prevalence of anti-HEV IgG, in patients with maintenance HD is higher than normal population in Isfahan.

Methods: In a case-control study performed in Isfahan in June 2012, we compared the seroprevalence of Hepatitis E Virus (HEV) among 274 patients on maintenance HD and 275 otherwise healthy individuals. The patients were recruited from three HD centers in Isfahan. Anti-HEV IgG was detected by Diapro HEV enzyme immunoassay (ELISA) kit. Demographic and clinical information (sex, age, blood transfusion history, HD duration, start age of HD, and evidence of hepatitis B and hepatitis C infections) were obtained from the medical records of HD patients.

Results: Anti-HEV IgG was detected in 27(9.9%) of the controls and 78(28.3%) of the patients which were significantly different. (P<0.05) Furthermore, there was a significant association between positive anti-HEV antibody, HD duration and blood transfusion history in HD patients.

Conclusions: Considering the results, it seems necessary to conduct prospective studies in order to identify factors responsible for high seroprevalence of HEV in Isfahan HD units.

P287 SEROPREVALENCE OF HEPATITIS A VIRUS AND HEPATITIS E VIRUS IN KHUZESTAN PROVINCE, SOUTHWEST IRAN: A SYSTEMATIC REVIEW

Amir Pouremamali[1], Manoochehr Makavndi[2], Farhad Pouremamali[3]

[1]*School of Medicine, JundiShapur University of Medical Sciences, Ahvaz, Iran;*
[2]*JundiShapur University of Medical Sciences, Ahvaz, Iran;*
[3]*School of Medicine, Faculty of Health, Tabriz University of Medical Sciences, Tabriz, Iran*

Presenting Author: Amir Pouremamali, Email: pooremamali@gmail.com

ABSTRACT

Background: Hepatitis A virus (HAV) and hepatitis E virus (HEV) are considered as one of the most common causes of particular hepatitis in developing countries. HAV and HEV, are transmitted via the fecal-oral route and result in sporadic and epidemic forms of acute hepatitis. HAV infection is a common infection responsible for about 1.4 million new infections worldwide each year.

Materials and Methods: Meta-analysis and survey data analysis of all national and international papers, (published).This study was a cross-sectional study which was conducted on blood samples in Blood donors, drug addicts and school-age children which were conducted in Khuzestan. Using ELISA method to detect anti-HAV IgM and anti-HEV IgG in viral hepatitis patients with different clinical types.

Results: All studies showed: prevalence of HEV in the blood donors was found to be 11.5% (46/400). All patients were negative for anti-HIV, anti-HBV, and anti-HCV antibodies. The data indicate that 14.6% (38/260) of HEV positive subjects were male, compared to 5.7% (8/140) of females.228 cases Of Drug Addicts, 35 (13.5%) were HEV-IgG positive. Anti-HEV antibodies were detected in 48 children (8.5%; 95% CI, 6.3-11.1). The seroprevalence of HEV was not statistically different between males and females or between different age groups. The prevalence of HAV was estimated between 77% - 92%.

Conclusions: HAV and HEV infection is very common in viral hepatitis patients. These data will be essential for planning of future vaccination strategies

and for better sanitation programme in this part of the country.

P293 PREVALENCE AND RISK FACTORS OF HEPATITIS C INFECTION IN BIRJAND

Azadeh Ebrahimzadeh[1], Zohreh Azarkar[1], Masood Ziaee[1], Gholam Reza Sharifzadeh[1], Bita Bijari[1]

[1]*Hepatitis Research Center, Birjand University of Medical Sciences, Birjand, Iran*

Presenting Author: Azadeh Ebrahimzadeh, Email: mr14436@yahoo.com

ABSTRACT

Background: Hepatitis C is an important global concern with a frequency of 3%, that is, 170 million of the population have HCV-Ab. 50% of Hepatitis C infections and 80% of blood transmitted infections are chronic. In 20% of cases, Hepatitis C occurs as an acute infection and in the other 80% cases, it becomes chronic. In chronic patients, risk of cirrhosis is up to 44% along with 13% risk of HCC and 14% risk of mortality. As there is no vaccine for the virus yet and most of the cases are asymptomatic, attention to the epidemiology of the disease in the population is so important.

Aim: The aim of this study is to determine the prevalence and risk factors of Hepatitis C in Birjand city.

Patients and Methods: In this descriptive-analytical study, 5,235 people who live in Birjand city were selected and after gaining permission for the study, a form was signed for each patient. Prevalence of Hepatitis C was determined by ELISA test after which positive cases underwent PCR and genotyping for confirmation tests.

Results: The mean age of participants was 39.7±14.4. Of them, 52.2% were female and 29.9% had university degree. Prevalence of HCV-Ab positive was about 0.2% with ELISA of which 0.14% of them were confirmed by PCR. Positive HCV-Ab had no significant relationship with age, sex, and education (P>0.05). Also, there was no significant relationship with risk factors such as endoscopy, blood transfusion, surgery, hospitalization, phlebotomy, and alcohol drinking (P>0.05). Prevalence of HCV-Ab in IV-drugs abusers was 200 times more than non-addict people. Also, prevalence of HCV-Ab in non-IV-drugs abuser addicts was 9.3 times more than non-addict patients. Prevalence of HCV-Ab in patients with illicit sexual activities was 13.3 times more and in patients with familial history of Hepatitis C infection was 26.3 times more than patients with no familial history (P<0.001).

Conclusions: In this study, prevalence of Hepatitis C was 0.2% which is lower than its average prevalence in Iran (1%). Prevalence of Hepatitis C had a significant relationship with IV-drugs abusing.

P297 THE FREQUENCY OF AFP, CA15-3, CA125 AND CA19-9 IN PATIENTS WITH HEPATITIS B AND C

Sara Yeganeh Amirkandeh[1]

[1]*Microbiology, Lahijan Azad University, Rasht, Iran*

Presenting Author: Sara Yeganeh Amirkandeh, Email: yeganeh_sara6@yahoo.com

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 markers AFP, CA15-3, CA125 and CA19-9 in patients with hepatitis B and C who refer to Guilan liver and digestive Disease Research Center.

Methods: This descriptive cross sectional study performed from October 2012 to October 2014.The study on serum samples from 129 patients with hepatitis B and C at Guilan Liver and Digestive Disease Research Center has been conducted from October 2012to October 2014 in terms of listed tumor markers via Elisa method. Analysis of data collected in the questionnaire was analyzed using SPSS (Statistical Package for Social Sciences) v.16 with Fisher Test.

Results: The findings showed that no increases in serum levels of tumor marker CA19-9 has been seen in patients with hepatitis (P> 0.05).In patients with hepatitis B, increasing in the tumor marker CA125 were observed (P = 0.03).In patients with hepatitis C, there was an increasing at levels of tumor marker AFP (P= 0.03). Also in this study no elevation in serum levels of tumor marker CA15-3 was observed (P>0.05).

Conclusions: The study showed that the tumor marker AFP and tumor markerCA125was high respectively in hepatitis C and hepatitis B, but this increasing is not for malignancy, but further studying seemed to be necessary because of low size of samples to find the reasons of the increasing.

P298 DETERMINATION OF HEPATITIS E VIRUS SEROPREVALENCE AMONG BLOOD DONORS IN SOUTH OF IRAN (BUSHEHR)

Gholamreza Khamisipour[1], Behrooz Naeimi[2], Ali Akbar

Pourfatolah[3], Farnaz Mazloom Kalimani[4], Alirez Mankhian[5], Samad Akbarzadeh[6], Gholamreza Hajiani[5], Faramarz Kooshesh[7], Masoud Azimzadeh[8]

[1]*Hematology, Bushehr University of Medical Sciences, Bushehr, Iran;*
[2]*Mirobiology, Bushehr University of Medical Sciences, Bushehr, Iran;*
[3]*Immunology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran;*
[4]*Medicine, Bushehr University of Medical Sciences, Bushehr, Iran;*
[5]*Quality Control, Bushehr Blood Transfusion Center, Bushehr, Iran;*
[6]*Biochemistry, Bushehr University of Medical Sciences, Bushehr, Iran;*
[7]*Surgical Technology, Bushehr University of Medical Sciences, Bushehr, Iran;*
[8]*Microbiology, Bushehr University of Medical Sciences, Bushehr, Iran*

Presenting Author: *Gholamreza Khamisipour, Email: ghr.khamisi@gmail.com*

ABSTRACT

Background: Although so far several studies have determined HEV prevalence in some parts of Iran but still no data exist regarding HEV seroprevalence in Bushehr province as the southernmost point in Iran.

Objectives: The aim of this study was to evaluate the seroprevalence of anti-HEV IgG among the blood donors in Bushehr.

Materials and Methods: 628 blood donor samples were collected from September to October 2013 after informed written consent and analyzed for the presence of anti-HEV IgG using commercial HEV ELISA kit. All samples were tested by two Elisa kits and evaluated for liver function test.

Results: Overall, 105 blood samples (16.7%) were positive for HEV-specific-IgG antibodies, while 523 donors (83.8%) were negative. The presence of anti-HEV IgG was not associated with gender; however, it was correlated with age. It is indicated that the anti-HEV prevalence is increased by age, and there is a significant difference between the age groups regarding HEV seropositivity.

Conclusions: high HEV seroprevalence (16.7%) was observed among blood donors in Bushehr Province of Iran. It appears exposure to HEV increase given the age; although, more peoples should be examined.

P300 WILSON DISEASE

Hassan Dastsooz[1], Majid Fardaei[2]

[1]*Comprehensive Medical Genetics Center, Shiraz University of Medical Sciences, Shiraz, Iran;*
[2]*Medical School, Shiraz University of Medical Sciences, Shiraz, Iran*

Presenting Author: Hassan Dastsooz, Email: genetichf@gmail.com

ABSTRACT

Wilson disease (WD)—one of the rare autosomal recessive disorder of copper metabolism in young individual, affecting 1/30000 to 1/100000 individuals—is a clinically but not genetically heterogeneous and a recessively inherited disorder with a pattern of multisystemic clinical features affecting the liver, the brain, the heart, the eye, and the kidney. In 1912, Wilson disease was first described by S.A.K. Wilson as “progressive lenticular degeneration” which was showed neurological and chronic liver disease. The disease is actually a disorder of copper metabolism. In 1993, the ATP7B gene (OMIM 277900) was found. This gene codes for a copper transporting P-type ATPase (ATP7B) and several functional domains ATP7B was described for that including: six copper binding domains, a transduction domain, a cation channel and phosphorylation domain, an ATP-binding domain, and 8 hydrophobic transmembrane sequences. Wilson disease results from different mutations in ATP7B gene on chromosome 13q14.3. Until now, more than 500 mutations of Wilson disease gene have been found, in which the most common mutations are R778L missense mutation (in Asia) and H1069Q missense mutation (in Europe).some mutation reports in Iran show that H1069Q mutation was also more common than R778L missense mutation. Many treatments are available for WD such as D-Penicillamine, Trientine, Zinc, Tetrathiomolybdate and liver transplantation. In order to diagnose WD, a combination of biochemical tests and clinical features are required. However, the best approach for diagnosis and confirmation of WD is molecular genetics, especially direct DNA sequencing. This review will focus on the clinical features, diagnosis and management of WD.

P301 IDENTIFICATION OF CONSERVED AMINO ACIDS ACROSS WILSON DISEASE GENE: USEFUL APPROACH BEFORE MUTATION DETECTION ANALYSIS

Hassan Dastsooz[1], Majid Fardaei[1]

[1]*Comprehensive Medical Genetics Center, Shiraz University of Medical Sciences, Shiraz, Iran*
Presenting Author: Hassan Dastsooz, Email: genetichf@gmail.com

ABSTRACT

P1B-ATPases1 are a subgroup of cation transporting P-ATPases in which have key roles in heavy metals transportation, including Cu+ ,Cu2+, Zn2+, and Co2+, across cells membranes. This family has been identified in wide range of prokaryotic and eukaryotic. Human copper p-type ATPase 2 (ATP7B) is a large membrane copper transporter protein and has several domains conserved in numerous eukaryotes and

prokaryotes including six copper binding domains, an ATP-binding domain which contains phosphorylation domain (P domain), the nucleotide-binding domain (N-domain), a transduction domain, and 8 transmembrane domains (TM1–8). These domains are essential for optimal folding and function of the protein. ATP7B has several conserved sequence motifs, for example TGES/A, DKTG, TGDN, AMXGDGNVD, located in two cytosolic loops which were shown to be essential for ATP binding and hydrolysis. In all Cu-ATPase, the residues of within the large cytoplasmic loop containing the ATP binding domain (SEHPL sequence) are highly conserved. In ATP7B protein, one of these residues is H1069 which is the site of the most common mutation (H1069Q) in patients with Wilson's disease. Several ATP7B mutations causing Wilson disease have been reported within or very close to all conserved domains, indicating the key role of these regions for the ATP7B activity. The purpose of this study was to identify conserved nucleotides across whole ATP7B gene using bioinformatics programs such as CLC Main Workbench 5 software, CLUSTAL and so on. We compared human ATP7B protein sequence with all P1B-ATPases1 from the wide range of prokaryotic and eukaryotic. Result showed that many amino acids were consensus across the ATP7B protein with different conservation and it must be considered before mutation detection analysis. With such this bioinformatics analysis, notable information can be achieved to screen mutation initially for these conserved amino acids of different ATP7B exons and also it can be useful to reduce the time and cost of mutation detection analysis.

P306 PREVALENCE OF NON-ALCOHOLIC FATTY LIVER DISEASE IN MORBIDLY OBESE PATIENTS UNDERGOING SLEEVE BARIATRIC SURGERY IN IRAN AND ASSOCIATION WITH OTHER COMORBID CONDITIONS

Hamidreza Karimi-Sari[1], Seyed Morteza Mousavi-Naeini[2], Mahdi Ramezani-Binabaj[3], Shahriar Najafizadeh-Sari1, Mohammad Hosein Mir Jalili[1], Fardin Dolatimehr[1]

[1]*Students' Research Committee, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[2]*Department of Surgery, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[3]*Faculty of Medicine, Baqiyatallah University of Medical Sciences, Tehran, Iran*

Presenting Author: Shahriar Najafizadeh-Sari, Email: dr.karimih@yahoo.com

ABSTRACT

Background: Nonalcoholic fatty liver disease (NAFLD) is one of the most common causes of chronic liver disease including simple steatosis to nonalcoholic steatohepatitis (NASH). NASH could progress to cirrhosis and liver cancer. The prevalence of NAFLD is increasing by increasing the prevalence of obesity.

Objectives: This study was designed to determine the prevalence of NASH in morbidly obese patients undergoing sleeve bariatric surgery and its correlation with other comorbidities.

Patients and Methods: In this analytical cross-sectional study, 114 morbidly obese patients undergoing sleeve gastrectomy were selected. Liver ultrasonography was performed for all patients before surgery and NAFLD existence and its grade was determined by hyperechoic texture and fatty infiltration. The liver enzymes and lipid profile were also measured. Prevalence of NAFLD in these patients and its correlation with other comorbid conditions (e.g. diabetes mellitus, hyperlipidemia, hypertension, hypothyroidism and ischemic heart disease) were evaluated by SPSS v.21 software.

Results: One hundred fourteen patients with a mean age of 33.96 ± 9.92 years and mean BMI of 43.61 ± 5.77 kg/m2 were enrolled (48 males and 66 females). The prevalence of NAFLD was 16.7%. NAFLD existence was associated with systolic blood pressure, hyperlipidemia, hemoglobin, hematocrit, triglyceride, alanine aminotransferase, aspartate aminotransferase, alkaline phosphatase and potassium ($P < 0.05$).

Conclusions: According to high prevalence of NAFLD in morbidly obese patients undergoing sleeve gastrectomy in Iran, we suggest using gold standard diagnostic method to determine the exact NAFLD prevalence and evaluation of impact of sleeve surgery on NAFLD in short and long term follow-up periods.

P309 HEMATOLOGIC CHANGES FOLLOWING TREATMENT OF CHRONIC HCV INFECTION WITH INTERFERON BASED REGIMEN: A COMMON BUT SAFE SIDE EFFECT

Zahra Ahmadinejad[1], Zahra Abdi Layaee[1], Rizan Mohamady[1]

[1]*Department of Infectious Diseases, Imam Khomeini Complex Hospital, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Zahra Ahmadinejad, Email: ahmadiz@tums.ac.ir

ABSTRACT

Introduction & Objective: Hepatitis C is one of the causes of liver disease that is very important because unlike other forms of viral hepatitis infection does not improve spontaneously and usually

lead to chronic infection and progresses to cirrhosis and liver cancer, and the patient will require a liver transplant. Although during the last decade, great progress has been made in the treatment of hepatitis C and current treatment Include a combination of Pegylated INFa and oral Ribavirin result in a high response rate (> 50%). However, this treatment has been shown to be associated with various side effects. One of the most common side effects are hematologic changes which may lead to treatment discontinuation or dose reduction with probable negative effect on virus eradication and sustained virological response. In this study we evaluated the hematologic changes in patients with chronic HCV infection treated with Interferon based regimens.

Patients & Methods: The study population consisted of patients with chronic hepatitis C who were referred to Imam Khomeini Complex Hospital, Tehran, Iran since 1388 until 1393. All patients with definitive diagnosis of hepatitis C who received different regimen of Interferon were included. HCV viral load, and liver enzyme tests and CBC were checked before treatment then monthly for all patients.

Results: Of the 554 patient records reviewed, 404 patients excluded because of different exclusion criteria. Among 150 patients were enrolled, 135 (90%) were men. The mean age was 39.8 (+- 10.8). Most of the patients (66%) had genotype two or three and the most common drug regimen (83.3%) was Ribavirin and Pgaferon (pegylated interferon alfa 2a). Mild to moderate anemia was observed in 40.7% of patients, but only 6 patients (3.9%) were suffering from severe anemia. Hemoglobin changes had a significant relationship with gender (p= 0.01), age (p<0.0001), underlying disease (p= 0.01) and virus genotype (P= 0.04). Mild to moderate leukopenia was observed in 66.6% and 10.7% of the study patients had severe leukopenia (WBC <2000). About one third (34.6%) of the patients had mild to moderate thrombocytopenia (PLT= 100000 – 150000) and severe thrombocytopenia (Plt <50000) Was observed in 4.7% of the patients.

Conclusion: Anemia, leukopenia, and thrombocytopenia were common side effects among study patients who received different types of Interferon plus ribavirin. However, hematologic changes did not lead to serious complications or dose reduction. It seems hematologic changes are an innate part of HCV treatment and in high-risk patients should be cautious and appropriate changes made at the appropriate time.

P310 THE CORRELATION BETWEEN NON-ALCOHOLIC FATTY LIVER DISEASE AND CORONARY ARTERY DISEASE IN PATIENTS UNDERGONE CORONARY ANGIOGRAPHY IN IRAN

Reza Karbasi Afshar[1], Shideh Shakerzadeh[1], Hamidreza Karimi-Sari[2], Mohammad Saeid Rezaee-Zavareh[2], Reza Ajudani[2]

[1]*Atherosclerosis Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran;*
[2]*Students' Research Committee, Baqiyatallah University of Medical Sciences, Tehran, Iran*

Presenting Author: Hamidreza Karimi-sari, Email: dr.karimih@yahoo.com

ABSTRACT

Introduction: Non-alcoholic fatty liver disease (NAFLD) is a growing concern with prevalence of 15-30% in different populations. It is said that NAFLD increases the incidence of coronary artery disease (CAD). This study aimed to determine the prevalence of NAFLD in CAD in Iranian patients undergone coronary angiography.

Methods: In this cross-sectional study, patients undergone coronary angiography in Baqiyatallah Hospital during November 2014 to March 2015 were considered as study population. Alcohol consumers, drug abusers, known cases of hepatitis and chronic kidney diseases were excluded from the study. The abdominal ultrasonography was performed by a well-expert radiologist for all patients to determine NAFLD and its grade after the coronary angiography. The echocardiography and tissue doppler imaging study were also performed for all patients. The correlation between coronary angiography findings and NAFLD was evaluated using SPSS and a regression model was designed for predicting prevalence of NAFLD in these patients.

Results: Three hundred patients with the mean age of 62.72 year and the mean weight of 79.57 kg evaluated. In our project, 10.3% of patients had normal angiography findings, 17.7% had minimal changes, 27% had single vessel disease, 20.7% had two vessels disease, and 24.3% had three vessels disease. One hundred fifty five patients had fatty liver (60 patients grade one, 73 patients grade two, and 23 patients grade three) based on abdominal ultrasonography. The prevalence of fatty liver was significantly more in patients with coronary atherosclerosis compared to individuals with normal angiography or minimal changes. (28.6% vs. 60.6%, P<0.001, OR=0.260) There

was a significant correlation between the severity of fatty liver and severity of coronary atherosclerosis in the age and sex adjusted partial correlation. (r=0.326, P<0.001) The mean age was significantly less and mean weight was significantly more in patients with NAFLD compared to patients with normal liver. There was no significant difference in LVEF between the patients with and without NAFLD, but the prevalence of diastolic dysfunction were significantly more in NAFLD patients (93.5% vs. 80%, P=0.001, OR=2.167). Three variables (age, coronary angiography, and diastolic dysfunction) were remained in the logistic regression model (R2=0.290, P<0.001).

Conclusion: According to the results of our project, there was a significant correlation between CAD and its severity with NAFLD in Iranian patients. Liver ultrasonography and further follow-up is recommended in Iranian patients candidate for coronary angiography, especially in patients with lower age, more severe CAD and having diastolic dysfunction.

P311 A RANDOMIZED CONTROLLED TRIAL OF TWO SCHEDULES OF HEPATITIS B VACCINATION IN PREDIALYSED CHRONIC RENAL FAILURE PATIENTS

Zahra Khazaeipour[1], Farokhlegha Ahmadi[2]

[1]*Brain and Spinal Cord Injury Research Center, Tehran University of Medical Sciences, Tehran, Iran;*
[2]*Neuroscience Institute, Tehran University of Medical Sciences, Tehran, Iran*

Presenting Author: Zahra Khazaeipour, Email: khazaeipour@sina.tums.ac.ir

ABSTRACT

Background: Patients with chronic renal disease should be vaccinated as soon as dialysis is forestalled, and this could improve the seroconversion of hepatitis B vaccination.

Objectives: In this study, we aimed to compare seroconversion and immune response rates using 4 doses of 40 μg and 3 doses of 20 μg Euvax B recombinant Hepatitis B surface Antigen (HBs Ag) vaccine administered to predialysis patients with chronic kidney disease (CKD).

Patients and Methods: In an open, randomized clinical trial, we compared seroconversion rates in 51 predialysis patients with mild and moderate chronic renal failure who received either 4 doses of 40 μg or 3 doses of 20 μg of Euvax B recombinant hepatitis B vaccine administered at 0, 1, 2, 6 and 0, 1, 6 months, respectively.

Results: Differences in seroconversion rates after 4 doses of 40 μg (80.88%) compared to 3 doses of 20 μg (92%) were not significant (P = 0.4124). The mean HBs antibody level after 4 doses of 40 μg at 0, 1, 2, and 6 months (182.2 ± 286.7) was significantly higher than that after 3 doses of 40 μg at 0,1, and 6 months (96.9 ± 192.1) (P = 0.004). Seroconversion after 4 doses of 40 μg (80.8%) was also significantly higher than that after 3 doses of 40 μg (77%) (P = 0.004). Multivariable analysis showed that none of the variables contributed to seroconversion.

Conclusions: We found that 4 doses of 40 μg did not lead to significantly more seroconversion than 3 doses of 20 μg.

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