genotype, viral mutations, level of HBV replication), host factors (gender, age, and immune status), and exogenous factors such as concurrent infection with other hepatotropic viruses or alcohol. This study was conducted to evaluate HBsAg persistence, related risk factors of HBV infection and detect of HBeAg positive cases and abnormal liver enzyme tests among chronic HBV carriers in Kashan.

Methods: This descriptive study was performed in HBsAg positive blood donors. They were invited to retest HBsAg. A questionnaire consisting demographic and history of risk factors of HBV infection were filled by interviewing and then 5cc blood was taken and HBsAg was measured by ELISA method. Who had HBsAg positive test without history of acute hepatitis during the previous year, were known as chronic carriers. and HBeAg, hepatic aminotransferases and alkaline phosphatase were measured.

Results: Of 150 HBsAg positive blood donors 124(83.7%) were male and 26(17.3%) female. Persistence and clearance of HBsAg was seen in 132(88%) and 18(12%). There was no significant correlation between sex, age, marital status, history of icter, endoscopy, tattoo, transfusion, with persistence of HBsAg was found. In 132 HBsAg +chronic carriers the prevalence of HBeAg positive cases was 18.2%. There was abnormal aminotransferase level including: 35 (26.3%) AST, 16 (12%) ALT, 26 (19.5%) ALKP. Significant statistical correlation was seen between ALT and HBeAg but there was no statistical correlation between AST and ALKP with HBeAg.

Conclusion: Considering the lower chance of clearance of HBsAg and detect of correlation between HBeAg positive and abnormal ALT, and also detect of suspected cases of chronic hepatitis, follow up seems to be essential in HBeAg positive cases.


53.020

Positive association of high risk behaviors and Hepatitis B infection

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Background: Hepatitis B is one of the most infectious diseases, without seasonal distribution, accounting for more than one million deaths annually due to chronic hepatitis, cirrhosis and hepatocellular carcinoma. We aimed to investigate the seroprevalence of the HBV infection in Bandar Abbas, Iran and determine the association of respective risk factors with its occurrence.

Methods: We conducted a cross sectional community-based study of 1152 apparently healthy individuals aged 8–65 years for the serological HBsAg screening. A standard questionnaire was administered to all subjects. Unpaired t-test for continuous data and the #2 test for categorical data were performed.

Results: A total of 1152 individuals were assessed for hepatitis B surface antigen (HBsAg), which was 2.1% in overall. There was no significant difference between males and females with respect to HBsAg seropositivity (male, 2.2% vs female, 2.1%, P > 0.05). Singles showed a prevalence of 1.7%, while HBsAg seropositivity in married participants was 2.3%. Subjects with tattooing practices reflected significant higher prevalence (7.5%) compared to those without tattooing (1.7%, P < 0.0002). History of drug abuse remained significantly associated with HBsAg seropositivity (4.9% vs 1.4%, P < 0.0001).

Conclusion: HBsAg seropositivity was found 2.1%. High risk behaviors associated significantly with seroprevalence of HBsAg. Of these, tattooing emerged more crucial compared to the risk factors identified in other regions.


53.021

Biodynamics of HCV infection in haemodialysis patients in Pahang

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Background: Hepatitis C is a global disease, WHO has described it as a "viral time bomb". In Malaysia, the seroprevalence is 1.6%. HCV infection is frequent in patients undergoing maintenance haemodialysis, with prevalence between 8 and 10%. Hepatitis C has an adverse effect on both patient and graft survival in those who get renal transplants. There are relatively scarce reports on the natural fluctuation in viral load and alpha interferon (α-IFN) level in patients on chronic hemodialysis.

Methods: A longitudinal short-term three months study where 27 chronic hemodialysis patients infected with known HCV genotypes were recruited from seven hemodialysis centers in Pahang. Serum samples were collected monthly, both pre- and post-hemodialysis sessions, over a period of three months. Viral RNA was extracted from serum using QIAamp Viral RNA Extraction kit (Qiagen). The HCV viral load was measured using one step reverse transcriptase qPCR (Applied Biosystems) targeting the 5’HCV non-coding region. The serum α-IFN level was measured using commercial ELISA kit (Amersham, UK). Six biochemical liver function tests (AST, ALP, TP, albumin, ALT and TB) were also done for all pre-hemodialysis samples.

Results: All patients showed persistent low level viral load that varied significantly over the study period (P = 0.001). HCV genotype 1 viral load was significantly higher than that of genotype 3. The difference between pre- and post-hemodialysis viral load was statistically insignificant. No significant correlation between viral load and liver function status was noted. No correlation was observed between pre-hemodialysis serum α-IFN level and prehaemodialysis viral load. The difference between pre and post-haemodialysis plasma α-IFN levels was statistically insignificant.
Viral load variation in three batches of sera taken one month apart.

**Conclusion:** HCV infected haemodialysis patients experience significant fluctuation in viral load with time but no correlation with biochemical evidence of liver injury. HCV genotype 1 is associated with higher viral load as compared to genotype 3. Single-step rt qPCR assay has the potential for rapid HCV genotyping.

**doi:**10.1016/j.ijid.2010.02.2003

53.022

Runs test and linear trend test of the time series of primary hepatocellular carcinoma mortality in Haimen City, 1969—2007

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**Background:** To evaluate the trend and contributing factors of time series changes of primary hepatocellular carcinoma (HCC) mortality between 1969 and 2007 in Haimen City.

**Methods:** A five-year retrospective survey was conducted in Haimen City in 1973 to verify the cause of death among all city population between 1969 and 1973. The birth/death reporting system was also established and was defined as one of the nation’s pilot city for vital statistics by Ministry of Health and Ministry of Public Security. In 2006 it was accepted by the International Union Against Cancer (UICC) as a member institute. This paper describes the time series changes of HCC mortality in Haimen City between 1969 and 2007. Runs test was performed as stability test for the time series and linear trend test was performed as significance test.

**Results:** HCC mortality increased from 33.18 per 100,000 in 1969 to 49.32 per 100,000 in 1979, with an annual increasing rate of 4.04%. Between 1979 and 1989 the mortality increased from 49.32 to 70.64 per 100,000, with an annual increasing rate of 3.66%. Between 1989 and 1999 the mortality decreased from 70.64 to 54.94 per 100,000, with an annual increasing rate of -2.28%. Between 1999 and 2007 the mortality decreased from 54.94 to 50.09 per 100,000, with an annual increasing rate of -1.15%. The runs test showed an instable time series, and the linear trend test indicated a statistical significant decreasing trend of HCC mortality since 1990. It is unlikely that this decreasing trend is caused by random.

**Conclusion:** The decreasing trend of HCC mortality in Haimen City since 1990 is related with the intervention of environmental factors including 'changing drinking water, changing staple food and prevention of HBV infection' as major components.

**doi:**10.1016/j.ijid.2010.02.2005

53.023

Predictive factors for sustained virological response in the treatment of patients with chronic hepatitis C

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**Background:** The goal of antiviral therapy in patients with chronic hepatitis C is to prevent progression of the disease. The most important treatment response is the absence of viral RNA six months after discontinuation the therapy, defined as the sustained virological response (SVR). Successful therapy depends on many factors that are in association with the virus itself and/or infected person. The aim of the investigation was identifying some characteristics of the patients and hepatitis C virus as pre-treatment predictive factors for achieving SVR.

**Methods:** Total of 364 treatment-naïve patients was enrolled in the study (60.4% were males; age from 16 yr to 65 yr, mean 42.18, SD ± 11.71). Liver cirrhosis had 21.7% of patients. Patients were treated with standard doses of pegylated interferon alpha and ribavirin during 6 to 12 months depending on the genotype in the period from January, 2004 to January, 2009. Source of infection was blood transfusion, intravenous drug abuse, accidental injury and unknown in 25.6%, 19.5%, 12%, and 42% of patients, respectively. Genotype distribution revealed genotype 1, 3, and 4 in 56.8%, 26.7% and 5% of patients, respectively. The minority of patients had genotype 2 and/or mixed genotypes (1b3a, 1b4). Detection and quantification of viral RNA with commercial assay (Cobas Amplicor HCV Monitor v2, Roche Molecular Systems) was evaluated before treatment, after treatment and six months later. Electronic data base (SPSS for Windows V11.0) was used for statistical analysis.

**Results:** Total of 82.8% of patients were negative (HCV RNA < 50 IU/mL) after treatment while SVR was achieved in 68.8% of patients. Binary logistic regression analysis revealed intravenous drug abuse (p = .005) and genotype 3 (p = .003) as positive, whereas age older than 40 (p = .000), presence of cirrhosis (p = .039), and genotype 1 (p = .000) were negative predictor factors for SVR. In multivariate analysis, age older than 40 (p = .001) and genotype 1 (p = .000) were significant variables (Exp(B) = .351 vs. .233).

**Conclusion:** Successful virological response to therapy is expected in patients with genotype 3 and intravenous drug users. Presence of genotype 1 is the most important negative predictor for treatment of patients with chronic hepatitis C.

**doi:**10.1016/j.ijid.2010.02.2005