

tion with undetectable hepatitis C antibodies or/and RNA in serum. Scanty information is available about the etiology of viral chronic liver diseases in the United Arab Emirates (UAE). Therefore a study was carried out for detecting and genotyping of HCV & OCV in patients with chronic liver disease (CLD) in UAE.

Methods: A total of 142 serum samples from CLD patients and 139 healthy individuals were tested by polymerase chain reaction (PCR) & (RT-PCR) in determining HCV RNA & HBV DNA in serum samples. ELISA tests were used to detect HCV & HBV markers in patient sera. Liver biopsies were taken from CLD patients for immunohistochemistry (IHC) staining.

Results: The results indicated the prevalence of HCV, Occult HCV, dual (HBV & HCV) and HBV infections at a rate of 43.7%, 27.5%, 19.0% and 12.7% in CLD patients respectively. Whereas healthy subjects were positive for anti body HCV and HBV-DNA at a rate of 3.6% and 2.2% respectively ($P=0.001$). The most prevalent genotypes and subtypes of HCV infection in CLD patients were genotype 4 (28.3%), whereas the prevalence of other genotypes, 3a, 1a, and 3b, 1b, 5, 2, 3a & 3b, 2a and 1a & 1b were in the range of 25.3 to 1.3%. IHC results for HCV in biopsy tissues revealed that 84.6 (11/13) were positive. Histopathological studies of liver biopsies revealed that patients with HCV infection were more likely to have necroinflammatory activity and fibrosis than patients without HCV infection.

Conclusion: Occult HCV is relatively frequent among patients with CLD in the UAE. Phylogenetic tree showed that genotype 4 appears to be the dominant genotype whereas the prevalence of other genotypes that circulating in UAE population (1b, 5, 2, 3a & 3b, 2a and 1a & 1b) were less dominant than genotype 4.

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Clinical features of acute viral hepatitis A complicated with acute renal failure

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Background: Although acute hepatitis A is usually self-limited, the clinical manifestations can vary from mild to severe liver dysfunction. However, little is known about risk factors and outcome predictors for acute renal failure (ARF) in acute hepatitis A. The objective of this study was to identify the simple clinical predictors for acute renal failure (ARF) and its clinical course.

Methods: The study and control groups consisted of patients who did or did not develop acute renal failure, respectively, after acute hepatitis A from January 2006 to June 2009. A total of 396 patients were enrolled in this study. We conducted a retrospective analysis of the incidence, risk factors, and outcomes of patients with acute hepatitis A complicated with ARF.

Results: Thirty patients (7.6%) developed ARF. Older patients and males were more likely to ARF during hepatic

white blood cell count, higher levels of AST, ALT, total bilirubin and CRP, lower levels of albumin, more frequent coagulopathy, and lower platelet count compared with the others. On multivariate analysis, male gender [Odds ratio (OR) 9.616, 95% confidence interval (CI) 1.307–70.000, $P=0.026$], the presence of hypertension [OR 5.91, 95% CI 1.407–24.824, $P=0.015$] and fulminant hepatitis [OR 57.95, 95% CI 10.399–322.928, $P<0.001$] were independent risk factors of hepatitis A-associated ARF. Of the 30 patients with ARF, 23 (76.7%) patients fully recovered; 14 (46.7%) patients recovered with conservative care only, and nine (30%) patients required short-term hemodialysis. The two groups of spontaneous recovery from ARF ($n=14$) and hemodialysis/death ($n=16$) showed significant differences in platelet count at its worst value, creatinine at its worst value, albumin at admission, INR at admission and fulminant hepatic failure. Albumin level at admission higher than 3.6 mg/dL [OR 13.183, 95% CI 1.064–163.403, $P=0.045$] and INR at admission less than 1.6 [OR 14.969, 95% CI 1.346–166.447, $P=0.028$] were independent predictors of spontaneous recovery of ARF during acute hepatitis A.

Conclusion: Acute renal failure associated with acute hepatitis A is not a rare complication. Male gender and hypertension are risk factors of ARF. Patients complicated with ARF, higher albumin level and shorter INR at admission could be a favorable prognostic factor.

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Prevalence of isolated hepatitis B core antibody among injection drug users in Central Province of Iran

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Background: Prevalence of hepatitis B virus (HBV), hepatitis C virus (HCV) and co-infection of HBV and HCV are high among injection drug users. Hepatitis B may be presented only with isolated Hepatitis B core antibody (anti-HBc). This study aimed to determine the prevalence of isolated anti-HBc among injection drug users in central province of Iran and comparison of its prevalence with healthy blood donors.

Methods: A total of 531 voluntary blood donors with mean age of 36 ± 10.18 years (range 16–60 years) and 153 injection drug users with mean age of 30.66 ± 5.92 years (range

20–50 years) were enrolled in this study. All of the injection drug users were prisoners. Hepatitis B surface antigen (HBsAg), hepatitis B surface antibody (anti-HBs), anti-HBc, Anti-HIV and hepatitis C antibody (anti-HCV) were tested in all subjects.

Results: Of the 531 blood donors, 11 subjects (2.1%) had isolated anti-HBc and of 153 injection drug users, 12 cases (7.84%) showed isolated anti-HBc. All of 12 injection drug users with isolated anti-HBc were also HCV positive. Serologic profile of 2 groups was shown in Table 1.

Variable	Blood donors	Injection drug users	P value
HBsAg	0.4%	7.2%	0
Anti-HBs	31.8%	43.8%	0
Anti-HBc	11.5%	35%	0
Anti-HCV	0.2%	59.5%	0
Anti-HIV	0%	5.9%	0

Conclusion: Our study showed that prevalence of isolated anti-HBc among injection drug users was 3.73 fold in comparison with blood donors. This study supports that injection drug use and incarceration is contributing to increase prevalence of isolated anti-HBc.

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Persistence of protective antibodies against Hepatitis B virus among vaccinated health workers, Al-Hussein Hospital, Salt, Jordan, 2008

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Background: Health workers (HWs) have occupational exposure to blood or body fluids; unvaccinated HWs or those vaccinated with low hepatitis-B surface antibodies''(anti-HBs) <10UI'' are at higher risk of Hepatitis-B infection they could be focus for dissemination of infection. Duration of protection after fully vaccination is not known. The objective is to assess the immunogenicity ''anti-HBs ''10mIU/ml'' post vaccination among HWs.

Methods: Two stage study; cross-sectional and follow-up prospective-cohort. Voluntary HWs who met the inclusion criteria were surveyed and tested primary for hepatitis-B core antibodies and hepatitis-B surface antigen, only those with negative results were tested for ''anti-HBs''; fully vaccinated HWs with negative anti-HBs were voluntary enrolled in the second stage, retested for anti-HBs after 45 days from a booster dose.

Results: 252 HWs participate in the study; 10% of those don't meet the inclusion criteria, primary study sample was 226 HWs, 81% were fully and 19% were partially vaccinated. There was a significant association between the number of vaccine doses and the presence of anti-HBs, *p*-value-0.0002. There is a significant difference regarding the presence of anti-HBs among fully or partially vaccinated HWs; *P*-value-0.003. To verify ''persistence'', statistics were limited to 182 fully vaccinated HWs; was found significant association between the time period from the last administrated doses, age at vaccination, duration of practice and the per-

sistence of antibodies, *P*-value-0.00004, 0.040, and 0.010 respectively. There were no significant differences regarding the vaccination site, Fisher exact: 0.7018. There is no association between the ''place of working, profession, and frequency of exposure to blood or needle stick injury'' and the persistence of antibodies. 8% of participants in second stage didn't response by reforming the anti-HBs. 65% of HWs who were exposed to a needle stick injury report no post exposure preventive measures was taken after they had reported the injury.

Conclusion: The Hepatitis-B prevalence among HWs was 10%; the non-response rate to vaccine was 8%; the probability for antibodies-persistence is declining by time; probability of antibodies persistence is highly significant if the period from the last administrated dose is less than three years and increases with a booster dose. The older age the vaccine was administrated the higher was the risk to non response to vaccine.

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Regional and ethnical aspects of viral hepatitis B in pregnant women in Slovakia

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Background: The estimated prevalence of HBsAg in Slovak population is <2% with supposed regional differences and higher prevalence of HBV infection in Roma population. Pregnant women constitute a special subgroup, that is subject to routine HBsAg screening because of the risk of vertical transmission, and also pregnancy can modify the course of hepatitis B infection. The aim of this study was to determine the prevalence of HBV infection in pregnant women in districts of eastern Slovakia with diverse prevalence of Roma population and to determine the subset of women with chronic hepatitis B and increased risk of vertical transmission.

Methods: We have analyzed data from 9 regional Departments of Clinical Microbiology from January 2008 till June 2009. We have evaluated the portion of HBsAg positive findings from the overall examined samples and among pregnant women. Available sera from HBsAg positive pregnant women were also screened for ALT, HBeAg and HBV DNA.

Results: Overall, 44,912 sera samples were examined, with 10,739 from pregnancy screening. The number of HBsAg positive samples overall and during pregnancy was 803 (1.79%) and 251 (2.34%) respectively. Comparing districts with higher (>4%) and lower (<3%) prevalence of Roma population, there was no notable difference in the overall HBsAg prevalence (1.85% vs. 1.68%), however in the subgroup of pregnant women (2.69% vs. 1.25%) this difference was highly significant (*p* < 0.001). HBV DNA was evaluated in 158 pregnant women, 19 patients had viral load >105 copies/ml, 27 in the range of 104-105 copies/ml and 112 patients < 104 or negative. HBeAg positivity was confirmed in 17 of 146 examined samples (11.6%) and elevated ALT in 11 of 69 cases (15.9%). Twelve out of 58 patients with normal ALT (21%) had