ABSTRACTS

Hepatitis Monthly 2005; 5(1): 29-46

Hepatitis newswire/ Iran

Prevalence of hepatitis A virus antibodies in patients with chronic liver disease in Shiraz, Iran.

Indian J Gastroenterol. 2005 Jan-Feb; 24(1):82-3.

Saberifiroozi M, Serati AR, Taghvaee T, Marooofi GR, Shirazi KM.

Abstract is not available.

Hepatitis B vaccination status in health-care workers.

Indian J Gastroenterol. 2005; 24(2):33-4.

Saffar MJ, Jooyan AR, Mahdavi MR, Khalilian AR

Health-care workers (HCW) are at increased risk of hepatitis B virus (HBV) infection, primarily from occupational exposure to infectious body fluids from patients with chronic HBV infection. Pre-exposure immunization of HCW against HBV and documentation of their response to vaccination have been recommended. Voluntary immunization approach may fail and many HCW do not complete their HBV vaccination series. Therefore, optimal vaccine coverage would be best achieved by mandatory vaccination....

Genotype characterization and phylogenetic analysis of hepatitis B virus isolates from Iranian patients.

J Med Virol. 2005 Feb; 75(2):227-34.

Amini-Bavil-Olyaee S, Sarrami-Forooshani R, Mahboudi F, Sabahi F, Adeli A, Noorinayer B, Azizi M, Reza Zali M.

Hepatitis B virus (HBV) is one of the major causative agents of acute and chronic liver disease worldwide and is believed to be responsible for a million deaths annually. Eight genotypes of HBV, A to H, have been described on the basis of similarity of the complete genomes sequence. Although, it is reported that the predominant HBV genotype in the Mediterranean area and the middle east is genotype D, there are no reports on HBV genotypes prevalent in Iran. In this study, the C and S regions of HBV from 26 chronic hepatitis B Iranian patients were amplified and sequenced. Phylogenetic analysis revealed that all Iranian HBV isolates sequences were classified into genotype D with bootstrap values of 100%, 73%, and 100% (1,000 replicates each) for S, C, and preS2 regions, respectively. The mean percent intra-distance of S and C regions were 0.8% and 2.3%, respectively. The mean percent inter-distance of S and C regions between Iranians and genotype D isolates were 1.7% and 3.0%, respectively, and the range of mean percent nucleotide distance of S and C regions between Iranians and the other reference isolates were 7.9%-17.5% and 4.8%-14.7%, respectively. Thirteen out of 23 HBV C region sequences showed nucleotide "A" at position 1896 (precore mutant) in C region. Nucleotide 1858 showed presence of "T" in all isolates. No insertion or deletion was found in both regions. SimPlot and BootScanning analyses did not show any recombination between Iranian isolates and other genotypes in both regions.

Hepatitis newswire/ Middle East & Middle Asia

Prevalence of hepatitis B infection in the southeastern region of Turkey: comparison of risk factors for HBV infection in rural and urban areas.

Jpn J Infect Dis. 2005 Feb; 58(1):15-9.

Mehmet D, Meliksah E, Serif Y, Gunay S, Tuncer O, Zeynep S.

Although hepatitis B has been well studied, there are still aspects of its epidemiology that remain to be clarified. There are many regions with high seroprevalence, particularly in the developing regions of the world, and these regions are known to have different epidemiologic patterns. Nonetheless, there are currently no data on the differences in hepatitis B seroprevalence between urban and rural areas of Turkey. In the present study, therefore, we used 30-cluster sampling to determine and compare the prevalence of hepatitis B in the urban and rural areas of the least developed region of Turkey, the southeastern region. From 2,888 adults living in the region, blood samples were obtained from house visits, and screened for HBsAg, anti-HBs, and anti-HBcIgG. Factors associated with hepatitis B seroprevalence, particularly living in rural areas, were analyzed with multivariate methods. The seroprevalence of HBsAg was 8.2% in the rural and 6.2% in the urban areas. There was a statistically significant difference between urban and rural regions in terms of HBsAg positivity (crude OR: 0.74; 95% CI: 0.55 - 0.98). Exposure to hepatitis B virus (HBV) increased with age both in urban and rural areas. Lower education level was also an important risk factor for hepatitis B seropositivity in urban areas (adjusted OR: 1.66; 95% CI: 1.26 - 2.19) but not in rural ones (adjusted OR: 0.77; 95% CI: 0.36 - 1.69). Familial jaundice history was a statistically significant risk factor for HBsAg positivity in rural areas (adjusted OR: 2.15; 95% CI: 1.30 - 3.56) but not in urban ones (adjusted OR: 1.48; 95% CI: 0.96 - 2.27). This study shows that the prevalence of HBV infection in the southeastern region of Turkey is intermediate among the levels reported for the European region of the World Health Organization.

Serotyping of hepatitis C virus in hemodialysis patients: comparison with a standardized genotyping assay.

Diagn Microbiol Infect Dis. 2005 Feb; 51(2):91-4.

Elsawy EM, Sobh MA, El-Chenawi FA, Hassan IM, Shehab El-Din AB, Ghoneim MA.

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The aims of this study were to investigate the prevalence of hepatitis C virus (HCV) genotypes and serotypes in anti-HCV-positive hemodialysis patients and determine the concordance between genotyping and serotyping methods. Sixty-two hemodialysis patients were included in this study. HCV RNA was determined using polymerase chain reaction assay and genotypes using a line probe assay. HCV serotyping was performed with competitive enzyme-linked immunosorbent assay. Genotype 4 (52 patients) was the most predominant genotype, followed by type 1

(10 patients). The most prevalent HCV serotype was type 4 (41 patients), followed by serotype 1 (6 patients). We detected multiple serotypes in 4 patients and untypeable strains in 11. The overall sensitivity of serotyping assay was 82% for the study patients. According to the genotyping results, the sensitivity of serotyping was 60% and 86.5% for HCV types 1 and 4, respectively. There was a 100% concordance between results of serotyping and genotyping in the identification of HCV type 1 and 91% concordance in HCV type 4. Serological typing method may be of great value in microbiology laboratories that require a simple assay for identification of HCV genotypes, although the sensitivity of this assay may be limited by the immunocompetence of infected hemodialysis patients.

TRUGENE sequencing versus INNO-LiPA for sub-genotyping of HCV genotype-4.

J Med Virol. 2005 Mar; 75(3):412-20.

Zekri AR, El-Din HM, Bahnassy AA, El-Shehabi AM, El-Leethy H, Omar A, Khaled HM.
Virology and Immunology Unit, Cancer Biology Department, National Cancer Institute, Cairo, Egypt.

Hepatitis C virus genotypes and subtypes determination is an important factor for understanding the epidemiology of the virus, in the pre-treatment evaluation of the patients and in defining better treatment strategies. In the present study, we compared two commercially available assays for HCV genotyping: the reverse hybridization based Innogenetics INNO-LiPA HCV II and the direct sequencing by TRUGENE assay. The study included 31 HCV-RNA positive Egyptian patients; 18 patients with chronic active hepatitis, 8 with HCC, and 5 with cirrhosis. Using the TRUGENE genotyping test, all the samples had genotype 4 (100%) and subtyped as 4a in 18/31(58%), 4c in 10/31 (32%), 4e in 1/31 (3%), 4a/c in 1/31 (3%), and 4g in 1/31 (3%). Using the INNO-LiPA assay, 30 samples had genotype 4 (97%), and 1 sample had genotype 1e (3%). One sample showed mixed infection with type 4f and type 1. Only six samples were subtypable by INNO-LiPA, three were genotype 4c/d, and the other three were 4f, 4e, and 1e. Seven samples gave reactivity in the INNO-LiPA of lines 5, 6, 16, 17, 18, which are considered untypable by the interpretation chart but considered to be a rare HCV genotype 4 by the manufacturer. At the genotype level, there was a 97% concordance between TRUGENE sequencing and INNO-LiPA, but at the subtype level the concordance rate was 3% only. We conclude that the TRUGENE genotyping assay is a reliable test for HCV genotyping for the detection of major types and subtypes detection, while INNO-LiPA is a good test at the genotype level but unreliable for subtyping especially in the Egyptian population. This is mainly due to the high diversity of genotype 4, which is the most prevalent genotype in Egypt.

Immune response to Hepatitis B vaccine among children in Yemen.

Saudi Med J. 2005 Feb; 26(2):281-4.

Sallam TA, Alghshm HM, Ablohom AA, Alarosi MS, Almotawakel RE, Farea NH, Mosleh AA.

Objective: This study looks into the immune response to hepatitis B vaccine (HBV) among children who completed the 3 doses of vaccine 7-years after inclusion of HBV vaccination to the National Extended Program for Immunizations (EPI) in Yemen.
Methods: Between March 2002 and October 2002, a total of 170 children, aged 13-73 months with a mean age of 43.64 +/- 17.42 SD months; and have completed the 3 HBV vaccine doses were investigated for immune response to HBV vaccine by quantifying anti-HBs. Past infection was investigated by testing children to total anti-HBc.
Results: Of all children, 49.4% were males and 50.6% were females. One hundred and forty-two (83.5%) responded to the vaccine (antibody level > or = 10 mIU/ml). Only 3 children of 153 (2%) were reactive to anti-HBc indicating that the response was due to vaccination rather than combined effect of vaccine and HBV past-infections. There was a trend of decreasing antibody level with an increasing age. However, the difference in antibody levels between age groups was not statistically significant (P=0.40). Significantly lower antibody level (P=0.02) was found among children with a low economic status.
Conclusion: This study has revealed a high response rate to HBV vaccine. However, a considerable proportion (32.4%) of vaccinated children remains to be reconsidered for either revaccination or booster doses due to lack, inadequate or low response. The trend of decreasing antibody level with increasing age suggests a need of careful monitoring of HBV vaccine efficacy in Yemen. Demographic factors such as gender number of inhabitants per room and educational level of father did not significantly affect the immune response to HBV vaccine.

HCV associated glomerulopathy in Egyptian patients: clinicopathological analysis.

Virology. 2005 Mar 30; 334(1):10-6.

Sabry A, E-Agroudy A, Sheashaa H, El-Husseini A, Mohamed Taha N, Elbaz M, Sobh M.

Background: Hepatitis C virus (HCV) infection in Egypt has reached an epidemic proportion and is associated with many extra hepatic manifestations; Glomerulonephritis (GN) is one of the most consequences of HCV infection often resulting in end stage renal disease in some cases. Detection of viral genome or particles within the kidney biopsies from HCV-infected patients has proven to be difficult. Histological characterization of renal lesions still represents a major challenge. The aim of our work was to describe the histological pattern of HCV-associated nephropathy.
Methods: Fifty Patients-out of 233-presented to Mansoura Urology and Nephrology clinic with manifestations of glomerular disease were screened for HCV antibodies by a 3rd generation ELISA test. Those tested positive for HCV antibodies were confirmed by PCR for HCV-RNA and subjected to more detailed clinical, biochemical and histological study. Kidney biopsies and in appropriate cases liver biopsies were examined by LM and electron microscopy (EM).
Results: Histological study of renal biopsies revealed membranoproliferative (MPGN) type 1 to be the most common lesion encountered (54%), followed by focal segmental glomerulosclerosis (FSGS) (24%), mesangioproliferative GN (18%), membranous nephropathy (MN) (4%) in that order. EM examinations of renal biopsies were successful in identifying HCV like particles in frozen renal tissue.
Conclusion: HCV-associated glomerulopathy is a distinct category of glomerulonephritis. Results of LM showed some peculiar features. In addition, we were successful in location and detection of HCV particles in renal tissues by EM.

Frequency of hepatitis "C" in Buner, NWFP.

Coll Physicians Surg Pak. 2005 Jan; 15(1):11-4.

Muhammad N, Jan MA.
Department of Medicine, District Headquarter Hospital, Daggar, Buner.

Objective: To assess the frequency of hepatitis C in District Buner.
Design: Descriptive study.
Place and Duration of Study: This study was conducted on outdoor patients in Medical OPD of District Headquarter (DHQ) Hospital, Daggar from January 1998 to December 2002.
Patients and Methods: A total of 16,400 patients of age between (15-70 years), who attended the outpatients department of Medical Unit at DHQ, Daggar with non-specific symptoms of dyspepsia, heart burn, bloating, generalized body aches and pain in right hypochondrium were screened for anti-HCV anti-bodies by 3rd generation ELISA. PCR and abdominal ultrasound was also done. Standard treatment was also given. Risk factors were evaluated. Population of district was regionwise divided into sectors A-D and then into subsectors.
Results: Out of 16,400 patients, 751 were found positive for anti-HCV antibodies (4.57%).The mean age of the patients was 37 years. The youngest was 15 years while the oldest was 65 years. The frequency of hepatitis C was higher among the male, 409/751 (54.46%) as compared to female, 342/751(45.53%). Hundred percent (751/751) had history of injections, 52/751 (6.92 %) had major surgery, 8/751 (1.06%) had blood transfusion, 73/751 (9.72%) had dental procedure, 3/751 (0.39%) had tattooing and 332/751 (44.20%) had shaving by community barbers. The highest prevalence of hepatitis C was found in sector A1(9.7%) and the lowest in sector D3(0.5%).
Conclusion: Hepatitis C is a common health problem in District Buner, and needs proper attention to alleviate the suffering of the people. It is essential to assess the magnitude of the problem, which will help us in understanding the dynamic of its transmission for control and prevention.

Detection and genotyping of GBV-C virus in the United Arab Emirates.

J Med Virol. 2005 Jun 23; 76(4):534-540.

Abu Odeh RO, Al-Moslih MI, Al-Jokhdar MW, Ezzeddine SA.

GB virus-C/Hepatitis G virus (GBV-C/HGV), collectively known as GBV-C, is spread widely and has been reported to be associated with non A-E hepatitis. The aim of the current project was to determine the rate of infection and genotypic characteristics of GBV-C in the United Arab Emirates (UAE). A total of 379 plasma/serum samples representing different populations in the UAE and comprising healthy as well as patients positive for HBV and HCV were screened using RT-PCR/nested PCR of the 5'-untranslated region (UTR). National subjects (n = 168) and non-nationals residing in the UAE (n = 211) were tested. The results obtained showed that the rate of GBV-C infection in healthy nationals, and those positive for HCV or HBV were 11.1%, 14.3%, and 5.7%, respectively, compared to 8.3%, 33.3%, and 8.6%, respectively, in non-nationals. No statistically significant correlation between infection with GBV-C and HCV or HBV ($P > 0.05$) was found. Sequence analysis of the 5'-UTR using 37 and 46 clones from 8 and 6 healthy nationals and non-nationals, respectively, revealed the prevalence of the European/North American genotype 2 when compared to the five reference genotypes in GenBank.

Estimation of the risk of transmission of hepatitis C between spouses in Egypt based on seroprevalence data.

Int J Epidemiol. 2005 Feb; 34(1):160-5. Epub 2005 Jan 12.

Magder LS, Fix AD, Mikhail NN, Mohamed MK, Abdel-Hamid M, Abdel-Aziz F, Medhat A, Strickland GT.

Background: Transmission of hepatitis C virus (HCV) between spouses could be due to sexual contact, sharing needles, or other routes. There is uncertainty regarding the degree to which HCV is transmitted between spouses.
Methods: Data from a 1997 cross-sectional serological survey of HCV in two communities in Egypt were used to estimate the risk of transmission between spouses by simultaneously modelling the probabilities of community acquisition and spousal transmission of HCV as functions of known predictors.
Results: We estimate that the probability of wife-to-husband transmission was 34% (95% CI: 15-49%) and 10% (95% CI: 0-26%) for anti-HCV-positive wives with and without detectable HCV RNA, respectively. The probability of husband-to-wife transmission was estimated to be 3% (95% CI: 0-13%) and 0% (95% CI: 0-9%) for husbands with and without detectable HCV RNA, respectively, at the time of the survey. There was moderate evidence that the probability of wife-to-husband transmission differed from that of husband-to-wife transmission ($P = 0.076$), and there was greater risk of transmission from those with detectable RNA at the time of the survey ($P = 0.046$). We estimate that 6% of those infected acquired HCV from their spouse.
Conclusion: Our study results support the possibility that HCV is transmitted between spouses in Egypt. Further research is needed to identify the exact routes of transmission so that preventive measures can be instituted.

Chronic hepatitis C. Genotypes and response to anti-viral therapy among Saudi patients.

Saudi Med J. 2004 Dec; 25(12):1935-8.

Al-Traif I, Handoo FA, Al-Jumah A, Al-Nasser M.

Objective: The aim of this study is to compare the response of hepatitis C virus (HCV) genotype 4 with other genotypes to anti-viral treatment among Saudi patients in a prospective randomized trial.
Methods: The study was conducted in the Department of Hepatobiliary Sciences at King Abdul-Aziz Medical City, King Fahad National Guard Hospital, Riyadh, Kingdom of Saudi Arabia from March 1997 to January 2000. Sixty-two patients (33 males and 29 females) aged > or =18 with chronic hepatitis C not treated previously were tested for HCV genotype and randomly assigned to receive interferon (IFN) alfa 2b 3 million units 3 times per week alone or in combination with ribavirin 1000-1200 mg orally per day for 48 weeks. All patients were monitored for safety and efficacy of the therapy at 4 week intervals during treatment and followed up for at least 24 weeks after completion of treatment. The primary end point was loss of detectable HCV-RNA 24 weeks after treatment completion, defined as sustained virological response (SVR).
Results: Hepatitis C virus genotype 4 was seen among (64.5%) HCV Saudi patients. Hepatitis C virus genotype 1 was the next most common (30.6%). A SVR of 42.8% (9 out of 21) was seen in HCV genotype 4 and 40% (4 out of 10) among other HCV genotypes with combination therapy of IFN and ribavirin ($P>0.1$). With IFN alone the sustained response rate was 15.7% for genotype 4 and 16.6% for other genotypes mainly genotype 1 ($P>0.1$).
Conclusion: We concluded that HCV genotype 4 is the most prevalent genotype among HCV infected Saudi patients.

Genotype 1 was the next most common while genotypes 2, 3 and 5 were least prevalent. There is no statistically significant difference in response rate of patients with HCV genotype 4 to either IFN alone or IFN plus ribavirin when compared with genotype 1 of HCV.

Detection of HCV-RNA in cerumen of chronically HCV-infected patients.

Laryngoscope. 2005 Mar; 115(3):508-11.

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Objective/Hypothesis: Viral hepatitis C is a worldwide public health problem. Hepatitis C virus is mainly transmitted by parenteral or percutaneous route. Nonparenteral transmission, such as through sexual activity, household contact, and vertical or perinatal exposure to body fluids or secretions, can occur, which has been studied before. Cerumen, however, has not been investigated for its ability to transmit hepatitis C virus. The aim of this study is to evaluate the importance of cerumen in transmission of hepatitis C virus infection.
Study Design: This study was performed on 35 patients with confirmed chronic hepatitis C virus infection.
Methods: Thirty-five cerumen specimens collected from the patients with hepatitis C virus RNA in their sera were prospectively analyzed for the presence of hepatitis C virus RNA by polymerase chain reaction.
Results: None of the 35 cerumen specimens were positive for hepatitis C virus RNA.
Conclusion: This study showed that cerumen has no risk for transmission of hepatitis C virus infection, even in patients with high hepatitis C virus RNA serum levels; however, standard infection control precautions should be applied carefully in all examinations and surgical operations of the ears.

Interleukin (IL)-4, IL-10, IL-18 and IFN-gamma cytokines pattern in patients with combined hepatitis C virus and schistosoma mansoni infectionsdouble dagger.

Scand J Immunol. 2005 Jan; 61(1):87-91.

M El-Kady I, Lotfy M, Badra G, El-Masry S, Waked I.
Genetic Engineering and Biotechnology Research Institute, Minufiya University, Sadat City, Egypt.

Schistosoma mansoni infection is characterized by a strong T-helper type 2 (Th2) cell-associated immune response, but in the case of viral infection, it is associated with interferon-gamma (IFN-gamma) increase and induction of Th1 immune response. Few data are available about the immune response of cases infected with combined hepatitis C virus (HCV) and schistosomiasis. Thus, the investigation of the cytokine pattern in patients coinfected with both HCV and Schistosoma mansoni was our rationale. This study included four patient groups: Group 1 included 20 patients infected with chronic HCV, Group 2 included 15 patients infected with schistosomiasis alone, Group 3 included 20 patients with chronic HCV and schistosomiasis and Group 4 included 15 healthy control individuals with matched age and sex. Serum levels of IFN-gamma, interleukin (IL)-4, IL-10 and IL-18 were measured in all groups by enzyme-linked immunosorbent assay. The results showed that the patients infected with HCV had significantly higher serum levels of IFN-gamma and IL-18 compared with the controls and with the patients with schistosomiasis and coinfection ($P < 0.001$). On the other hand, serum levels of IL-4 and IL-10 were significantly higher in patients with schistosomiasis and coinfection compared with the control group ($P < 0.001$ and 0.0001, respectively) and with the HCV patients ($P < 0.05$ and $P < 0.001$, respectively). A significant increase in serum levels of IL-4 and IL-10 was also found in HCV patients compared with the control ($P < 0.05$). Schistosomiasis appears to induce a Th2 cytokine profile, with increase in serum levels of IL-4 and IL-10, even in the presence of HCV coinfection. In conclusion, schistosomiasis may downregulate the stimulatory effect of HCV on Th1 cytokines and this may lead to the chronicity of HCV infection in coinfected patients.

Hepatitis newswire in January 2005

Disposal of injection material used for the treatment of hepatitis C: comparison with insulin-dependent diabetes and thromboembolism.

Gastroenterol Clin Biol. 2005 Jan; 29(1):63-8.

Causse X, D'Alteroche L, Si Ahmed SN, Giraudeau B, Metman EH.
Hepatitis C Network of the Centre Region.

Aim: The survey conducted in the Provence-Alpes-Cote d'Azur region in France in 1999 showed that 38% of patients infected with the hepatitis C virus (HCV) receiving interferon injections in their home were aware of the recommendations concerning the disposal of injection material and that 41% of the needles were discarded with household waste after use. The purpose of our study conducted in the Centre region of France was to ascertain how injection material used by HCV-positive patients for interferon treatment are disposed of in comparison with material used by patients injecting insulin for insulin-dependent diabetes mellitus (IDDM) or low-molecular-weight heparin (LMWH) for thromboembolism.
Material and Methods: A questionnaire to be completed by patients was proposed to HCV-positive patients attending hepatogastroenterology clinics in the Centre region hepatitis C network for therapeutic follow-up (N=113 patients) between October 2001-January 2002. The same questionnaire was proposed to patients attending follow-up consultations for insulin-dependent diabetes mellitus (N=85 patients) or thromboembolism (N=23 patients) between March-June 2002.
Results: Significantly more patients stated they were aware of recommendations for disposal of injection material in the HCV group (89%) than in the IDDM (67%) or LMWH (26%) groups ($P<0.01$). Injection material was discarded with household waste less often by patients in the HCV group (6%) than in the IDDM (32%) or LMWH (29%) groups ($P<0.001$) and more often collected in a safety box prior to incineration (73% in the HCV group versus 63% and 14% in the IDDM and LMWH groups respectively). The safety box was discarded with household garbage more often by patients in the IDDM (54%) or LMWH (50%) groups than in the HCV group (0%) ($P<0.001$). Equivalent proportions of the patients said they recapped the needle after use (HCV 83%; IDDM 93%; LMWH 84%).
Discussion: Information concerning use of safety boxes for disposal of injection material should be provided to patients in order to comply with regulatory recommendations on proper disposal of used injection material. Moreover, the habit of recapping needles (89% of all patients in this study) is still widespread.

The minimum number of clones necessary to sequence in order to obtain the maximum information about hepatitis C virus quasispecies: a comparison of subjects with and without liver cancer.

J Viral Hepat. 2005 Jan; 12(1):46-50.

Gao G, Stuver SO, Okayama A, Tsubouchi H, Mueller NE, Tabor E.

Most studies of hepatitis C virus (HCV) quasispecies have reported the results of sequencing only three to five clones per sample. The possibility that sequencing so few clones might not provide a representative picture of the quasispecies present in a sample has never been evaluated. The present study was conducted to evaluate whether sequencing greater numbers of clones results in better information about the HCV quasispecies number and distribution, and to compare the HCV quasispecies in liver cancer cases and controls. RNA was extracted from serial serum samples from six subjects with HCV-associated liver cancer and 11 age- and sex-matched HCV-infected controls without liver cancer. The hypervariable region 1 (HVR1) of the HCV genome was amplified, cloned, and sequenced. For further studies of 12 serum samples from two liver cancer cases and two matched controls, successive groups of 10 additional clones were sequenced up to a total of 50 clones per serum sample. When only 10 clones were sequenced from each specimen, no consistent differences were seen between the number of HCV quasispecies in the six liver cancer cases and the 11 controls. However, sequencing 40 clones from each of 12 samples from two liver cancer cases and two controls revealed a greater number of quasispecies in liver cancer cases than in controls. Testing an additional 10 clones (50 clones per sample) did not significantly increase the number of quasispecies detected.

Simultaneous detection of immunoglobulin A (IgA) and IgM antibodies against hepatitis E virus (HEV) is highly specific for diagnosis of acute HEV infection.

J Clin Microbiol. 2005 Jan;43(1):49-56.

Takahashi M, Kusakai S, Mizuo H, Suzuki K, Fujimura K, Masuko K, Sugai Y, Aikawa T, Nishizawa T, Okamoto H.

Serum samples collected from 68 patients (age, mean +/- the standard deviation [SD], 56.3 +/- 12.8 years) at admission who were subsequently molecularly diagnosed as having hepatitis E and from 2,781 individuals who were assumed not to have been recently infected with hepatitis E virus (HEV; negative controls; 52.9 +/- 18.9 years), were tested for immunoglobulin M (IgM) and IgA classes of antibodies to HEV (anti-HEV) by in-house solid-phase enzyme immunoassay with recombinant open reading frame 2 protein expressed in the pupae of silkworm as the antigen probe. The 68 patients with hepatitis E had both anti-HEV IgM and anti-HEV IgA. Among the 2,781 controls, 16 (0.6%) had anti-HEV IgM alone and 4 (0.1%) had anti-HEV IgA alone; these IgA/IgM anti-HEV-positive individuals were not only negative for HEV RNA but lack IgG anti-HEV antibody as well (at least in most of the cases). Periodic serum samples obtained from 15 patients with heparitis E were tested for HEV RNA, anti-HEV IgM, and anti-HEV IgA. Although HEV RNA was detectable in the serum until 7 to 40 (21.4 +/- 9.7) days after disease onset, both IgM and IgA anti-HEV antibodies were detectable until 37, 55, or 62 days after disease onset in three patients and up through the end of the observation period (50 to 144 days) in 12 patients. These results indicate that detection of anti-HEV IgA alone or along with anti-HEV IgM is useful for serological diagnosis of hepatitis E with increased specificity and longer duration of positivity than that by RNA detection.

Short- and long-term effects of therapy with interferon-alpha and pegylated interferon-alpha/ribavirin on platelet plug formation and von Willebrand factor release in patients with chronic hepatitis C.

Aliment Pharmacol Ther. 2005 Jan 1; 21(1):49-55.

Homoncik M, Ferlitsch A, Ferenci P, Formann E, Jilma B, Gangl A, Panzer S, Peck-Radosavljevic M.

Background: A pegylated interferon-alpha-induced decrease in platelet counts may become a limiting factor for continuation of therapy.
Aim: To evaluate the effect of pegylated interferon-alpha administration on platelet plug formation and von Willebrand factor antigen release in patients with chronic hepatitis C.
Methods: Thirty patients with chronic hepatitis C (genotype 1; fibrosis 1-3: n = 16, cirrhosis: n = 14) received a single dose of 9 MU interferon-alpha2a, followed by weekly administration of 180 mug of pegylated interferon-alpha2a/ribavirin for 48 weeks. Platelet counts, platelet function (collagen-epinephrine-induced closure time) and von Willebrand factor antigen were measured.
Results: Platelet counts and collagen-epinephrine-induced closure time decreased by 13% and 16%, respectively, 24 h after the first dose of interferon-alpha2a, and von Willebrand factor antigen levels increased by 31% ($P < 0.01$) compared with baseline. During a 48-week observation period, platelet counts decreased by a maximum of 33% ($P < 0.001$), von Willebrand factor antigen levels increased by 69% ($P < 0.001$) whereas collagen-epinephrine-induced closure time did not change. In noncirrhotic patients, the increase of von Willebrand factor antigen levels was maintained throughout therapy without a change in collagen-epinephrine-induced closure time. In contrast, in cirrhotics, von Willebrand factor antigen levels did not increase, while collagen-epinephrine-induced closure time was prolonged.
Conclusion: Single-dose interferon-alpha decreases platelet counts but improves platelet function, possibly by the release of von Willebrand factor antigen. Accordingly, long-term antiviral treatment had no effect on collagen-epinephrine-induced closure time, despite the decrease in platelet count in noncirrhotic patients. Such a compensation of decreased platelet counts by increased von Willebrand factor antigen level did not occur in cirrhotics.

Therapeutic modalities in hepatitis C: challenges and development.

J Viral Hepat. 2005 Jan; 12(1):10-9.

Moreno-Otero R.

Our understanding of the pathogenicity of hepatitis C virus (HCV) is based on patients infected chronically for >20 years. The lack of a suitable animal model, the narrow host range of the virus, and the protracted onset of liver disease induced by HCV have hampered advances in treatment. In spite of these problems, we identified patient and viral characteristics that predict responses to current therapies, including HCV genotype, viral load, body weight, age, liver histology, co-infection with HIV and treatment adherence and tolerance. Interferon (IFN) alpha was the first therapy for chronic HCV infection. The combination of IFN plus ribavirin increases sustained virological response rates compared with IFN alone. Two pegylated IFNs have been developed and are widely approved for the treatment of chronic hepatitis C: peginterferon alpha-2a (40 KD), and pegylated IFN alpha-2b (12 KD). These products have reduced systemic clearance, prolonged half-lives and reduced antigenicity compared with conventional IFN. The reduced clearance results in sustained plasma levels of the drug and allows for once-weekly dosing. Pegylated IFN alpha-2b

(12 KD) has a small, linear polyethylene glycol (PEG) moiety and has an intermediate duration of activity; peginterferon alpha-2a (40 KD) incorporates a large, branched-chain PEG moiety and has a longer half-life than both conventional IFN alpha and pegylated IFN alpha-2b (12 KD). The combination of a pegylated IFN plus ribavirin significantly increases sustained virological response rates compared with conventional IFN plus ribavirin in patients with chronic hepatitis C and is now recognized as the standard of care for these patients.

Prevalence of hepatitis B virus markers in municipal solid waste workers in Keratsini (Greece).

Occup Med (Lond). 2005 Jan; 55(1):60-3.
Dounias G, Kypraiou E, Rachiotis G, Tsovili E, Kostopoulos S.

Aim: To evaluate the prevalence of hepatitis B virus (HBV) markers among municipal solid waste workers (MSWWs) in Keratsini (Greece).
Methods: We assessed in a cross-sectional study the prevalence of biological markers of HBV infection (HbsAg, anti-Hbc, anti-Hbs) and their association with exposure to waste and other socio-demographic factors in 166 municipal employees in Keratsini (Greece).
Results: The prevalence of anti-Hbc (+) did differ significantly between exposed and non-exposed employees to waste. Older employees had a significantly higher prevalence of anti-Hbc (+). MSWWs who were anti-Hbc (+) were less educated than non-exposed employees. Logistic regression analysis has shown that the exposure to waste and age were independently associated with the anti-Hbc positivity.
Conclusion: Occupational exposure to waste is possibly associated with the acquisition of HBV infection. Immunization of MSWWs should be considered to reduce the risk of HBV infection.

Prevalence of markers of transfusion transmissible diseases in voluntary and replacement blood donors.

Natl Med J India. 2004 Jan-Feb; 17(1):19-21.
Sharma RR, Cheema R, Vajpayee M, Rao U, Kumar S, Marwaha N, Agnihotri SK.

Background: Transfusion of safe blood requires a safe donor. The voluntary donor movement encompasses the concept of a donor who is free from transfusion transmissible infections. It is now mandatory to screen blood for hepatitis B surface antigen, antibodies to HIV-1 and HIV-2, antibodies to hepatitis C virus, syphilis and malarial parasites.
Methods: Between 1996 and 2002, 235 461 donors were screened for markers of hepatitis B virus, and HIV-1 and HIV-2 using commercially available ELISA kits, VDRL test for syphilis and Geimsa stain for the malarial parasite, respectively. A total of 56 476 donors were screened for hepatitis C virus antibodies from June 2001 to December 2002, using third-generation ELISA kits.
Results: The proportion of voluntary donors increased from 47% to 56% during the study period. The prevalence of HIV showed a steady increase from 0.16% in 1996 to 0.3% in 2002. The prevalence of hepatitis B surface antigen decreased from 1.55% to 0.99%. VDRL reactivity did not show any trend and ranged between 0.11% and 0.66%. Hepatitis C virus antibodies showed a prevalence of 0.4%. The prevalence of all markers was significantly less in voluntary donors. Among the voluntary donors, transfusion transmissible disease markers were significantly less in student donors as compared to other donors.
Conclusion: A change-over to a voluntary donor service would considerably reduce the number of infectious donors and, among voluntary donors, student donors are the safest.

High-dose ribavirin in combination with standard dose peginterferon for treatment of patients with chronic hepatitis C.

Hepatology. 2005 Jan 19; 41(2):275-9.
Lindahl K, Stahle L, Bruchfeld A, Schvarcz R.

Improved treatment regimens for patients with chronic hepatitis C, genotype 1 and high viral load are needed. Increasing the dose of ribavirin has increased the response rate, but experience with doses of more than 1,200 mg/day is limited. The aim of this study was to investigate the safety and tolerance to treatment with a high and individualized dose of ribavirin in combination with peginterferon. Ten patients with chronic hepatitis C, genotype 1 and high viral load were treated with peginterferon alfa-2a and ribavirin for 48 weeks in a prospective trial. The initial ribavirin dose was individualized and calculated from a pharmacokinetic formula based mainly on renal function. Ribavirin plasma concentrations were monitored, and the dose was adjusted to reach the target concentration. Hemoglobin was monitored, and patients were treated with erythropoietin and blood transfusions when indicated. After dose adjustments, the mean dose of ribavirin was 2,540 mg/day (range, 1,600-3,600) at week 24. The main side effect was anemia, which was controlled with erythropoietin. Two patients required blood transfusions. One patient was withdrawn at week 24 because of a lack of viral response, and one patient at week 39 because of side effects, primarily interferon associated. At follow-up (>/=24 weeks posttreatment), nine of ten patients had undetectable HCV RNA and thus were cured by standard definitions. In conclusion, a high dose of ribavirin according to an individualized schedule is feasible but associated with more frequent and serious side effects such as anemia. The viral response merits further evaluation.

Peginterferon alfa-2a for hepatitis C after liver transplantation: Two randomized, controlled trials.

Hepatology. 2005 Jan 19; 41(2):289-98.
Chalasani N, Manzarbeitia C, Ferenci P, Vogel W, Fontana RJ, Voigt M, Riely C, Martin P, Teperman L, Jiao J, Lopez-Talavera JC.

There is currently no effective treatment for recurrent hepatitis C after orthotopic liver transplantation (OLT). We therefore performed two randomized, controlled trials-a prophylaxis trial and a treatment trial-to evaluate the safety and efficacy of peginterferon alfa-2a in patients who had undergone OLT. The prophylaxis trial enrolled 54 patients within 3 weeks after OLT, and the treatment trial enrolled 67 patients 6 to 60 months after OLT. In each trial, patients were randomized to treatment with once weekly injections of 180 mug peginterferon alfa-2a or no antiviral treatment for 48 weeks and were followed up for 24 weeks thereafter. Peginterferon alfa-2a treated patients had significantly lower hepatitis C virus RNA levels and more favorable changes in hepatic histological features compared with untreated controls. However, only 2 treated patients in the prophylaxis trial (8%) and 3 in the treatment trial (12%) achieved a sustained virological response. In the prophylaxis trial, 8 patients (31%) in the peginterferon alfa-2a group and 9 (32%) in the untreated group were withdrawn prematurely; whereas in the treatment trial, 10 patients (30%) in the peginterferon alfa-2a group and 6 (19%) in the untreated group were withdrawn prematurely. The incidence of acute rejection was similar in the treated and untreated groups in both the prophylaxis (12% vs. 21%; $P = .5$) and treatment (12% vs. 0%; $P = .1$) trials. In conclusion, peginterferon alfa-2a treatment for 48 weeks is safe and tolerable and offers some efficacy in the post-OLT setting. Randomized controlled studies are needed to establish the efficacy of pegylated interferon and ribavirin in patients who have undergone OLT.

T-cell responses and previous exposure to hepatitis C virus in indeterminate blood donors.

Lancet. 2005 Jan 22; 365(9456):327-9.

Semmo N, Barnes E, Taylor C, Kurtz J, Harcourt G, Smith N, Klenerman P.

Blood donors are routinely screened for hepatitis C virus infection. Some individuals have weak or restricted virus-specific antibody responses, and are classed as indeterminate. Such donors are almost always negative for viral RNA in blood. We postulated that previous transient virus exposure might account for some of these cases. With sensitive ex-vivo analyses of T-cell responses, we identified virus-specific responses in 15 of 30 indeterminate blood donors tested, compared with none in controls (P=0.0013). Additionally, these responses were typically focused on core-derived peptides. These findings suggest previous exposure to the virus in many indeterminate blood donors.

Feasibility of vaccination in preventing secondary cases of hepatitis A virus infection.

Vaccine. 2005 Jan 4; 23(7):910-4.

Sagliocca L, Bianco E, Amoroso P, Quarto M, Richichi I, Tosti ME, Carannante N, Chironna M, Chiriaco P, Bari GD, Lopalco P, Resta F, Santantonio T, Tantimonaco G, Mele A.

Although the secondary transmission of hepatitis A virus (HAV) infection is preventable through vaccination, it is not known whether the vaccination of household contacts is feasible. To this end, we conducted a prospective cohort study among the household contacts, 40 years of age or less, of all persons infected with primary HAV infection (index cases) and admitted to eight hospitals in southern Italy within 7 days of onset. Household contacts were vaccinated, and serum samples were taken at vaccination and after 14 and 45 days. Secondary cases were defined as those with IgM seroconversion occurring at least two weeks after enrolment. Coprimary cases were those assumed to have had the same exposure as the index case. Susceptible cases were those who were negative for both IgG and IgM. A total of 495 household contacts participated (acceptance rate of 65%); 65% were vaccinated within 4 days of admission of the index case and 95% within 7 days. At enrolment, 196 (39.6%) household contacts were immune (IgG-positive serum). During follow-up, 19 (3.8%) were IgM-positive: 13 (2.6%) were coprimary cases and 6 (1.2%; 95% CI: 0.2-3.2) secondary cases (5 identified at 14 days from vaccination and 1 at 45 days). Of the 241 susceptible cases, 192 (79.7%) had developed IgG antibodies at 14 days and only 3 (1.2%) did not develop IgG antibodies at 45 days. The 65% acceptance rate and the finding that 95% of the participating household contacts were vaccinated within 7 days of the index case's hospitalization indicate that timely vaccination is indeed feasible. The necessity of returning for the collection of blood samples probably decreased the acceptance rate.

Depression during pegylated interferon-alpha plus ribavirin therapy: prevalence and prediction.

J Clin Psychiatry. 2005 Jan; 66(1):41-8.

Raison CL, Borisov AS, Broadwell SD, Capuron L, Woolwine BJ, Jacobson IM, Nemeroff CB, Miller AH.

Background: Interferon-alpha (IFN-alpha) plus ribavirin is used to treat hepatitis C virus (HCV) infection and is associated with a high rate of depression. Newer, pegylated preparations of IFN-alpha have a longer half-life, require once-per-week dosing, and may be associated with reduced neuropsychiatric burden. Limited data exist on depression during pegylated IFN-alpha therapy.
Method: Depressive symptoms were assessed using the Zung Self-Rating Depression Scale (SDS) in 162 HCV-infected patients at baseline and after 4, 8, 12, and 24 weeks of treatment with pegylated IFN alpha-2b (PEG IFN) plus weight-based (N = 86) versus standard dose (N = 76) ribavirin. Data were collected from March 2001 to April 2003.
Results: Compared with baseline, mean SDS index scores were significantly increased by week 4 and remained elevated throughout the study. Thirty-nine percent of the sample experienced moderate to severe depressive symptoms (SDS index score > or = 60) at some point during PEG IFN/ribavirin therapy. Baseline depression scores significantly predicted severity of depressive symptoms during PEG IFN/ribavirin treatment (simple regression analysis: $Y = 0.55X + 32.7$, $P < .0001$). In addition, assignment to weight-based ribavirin treatment and history of depression were associated with increased likelihood of developing moderate to severe depressive symptoms (odds ratio [OR] = 2.7, 95% CI = 1.3 to 5.6, $P < .01$, and OR = 3.3, 95% CI = 1.3 to 8.1, $P < .01$, respectively).
Conclusions: Development of moderate to severe depressive symptoms occurred frequently during PEG IFN/ribavirin treatment and was predicted by baseline depression scores and higher doses of ribavirin. History of major depressive disorder was also a significant predictive factor, but only through association with elevated baseline depression status. All of these factors can be evaluated and addressed to limit neuropsychiatric morbidity during HCV treatment.

Usefulness of a new immuno-radiometric assay to detect hepatitis C core antigen in a community-based population.

J Viral Hepat. 2005 Jan; 12(1):106-10.

Hayashi K, Hasuike S, Kusumoto K, Ido A, Uto H, Kenji N, Kohara M, Stuver SO, Tsubouchi H.

A new immuno-radiometric assay (IRMA) to detect hepatitis C virus (HCV) core antigen (HCVcAg) has been developed. The aim of the present study was to investigate the sensitivity and specificity of this IRMA to measure HCV antigenemia, based on the detection of HCV RNA as the gold standard, and to assess the utility of the IRMA in a community-based population. Anti-HCV positive residents in a hyperendemic area of HCV infection in Japan were studied. Serum levels of HCVcAg were measured using IRMA, and the presence of HCV RNA was determined by a qualitative reverse transcription-polymerase chain reaction (RT-PCR) assay. The sensitivity and the specificity of the IRMA were 96.4 and 100%, respectively. The sensitivity of the IRMA was similar between serological HCV group I (HCV genotypes 1a and 1b) (97.6%) and group II (HCV genotypes 2a and 2b) (94.0%). There was a strong correlation between serum HCVcAg level and HCV-RNA measured by a quantitative RT-PCR ($r = 0.832$, $P < 0.0001$). There also was a very strong correlation of HCVcAg level between IRMA measurements performed on serum and those

performed on plasma ($r = 0.984$, $P < 0.0001$). In conclusion, this new IRMA is useful for the detection of HCV core antigen in a community-based population.

The effect of adherence to therapy on sustained response in daily or three times a week interferon alpha-2b plus ribavirin treatment of naive and nonresponder chronic hepatitis C patients.

J Viral Hepat. 2005 Jan; 12(1):91-5.

Raptopoulou M, Tsantoulas D, Vafiadi I, Ketikoglou I, Paraskevas E, Vassiliadis T, Kanatakis S, Hatzis G, Sidiropoulos L, Akriviadis E.

The aim was to demonstrate adherence to treatment has been suggested to enhance rates of sustained response in patients with hepatitis C. In this study, we evaluated the effect of drug dosage reduction or the duration of the expected therapy in patients treated with interferon (IFN)-alpha2b plus ribavirin. Virologic response rates were re-analysed according to compliance to therapy in (i) 301 naive and (ii) 142 nonresponders to previous IFN therapy treated with either IFN 5 MU TIW for 8 weeks followed by IFN 3 MU TIW for 40 weeks plus ribavirin or IFN 3 MU QD for 16 weeks followed by IFN 3 MU TIW for 24 weeks plus ribavirin. Patients were separated into those who adhered to >/=80% of their intended treatment schedule (dose of both drugs and duration) and those who did not. Compliance to treatment resulted in significantly higher response rates in both groups of patients: 43.93% compared with 6.90% of noncompliant naive patients and 30.77% compared with 10.53% of nonresponder patients. Compliance to treatment was found to have a similar effect when the results were analysed according to HCV genotype. Our findings suggest that compliance to treatment for >/=80% of the intended treatment schedule results in significantly higher sustained response rates in both naive and nonresponder patients. Consequently, every effort should be made to improve patient adherence to therapy.

Efficiency and safety of lamivudine therapy in patients with chronic HBV infection, dialysis or after kidney transplantation.

World J Gastroenterol. 2005 Jan 21; 11(3):400-2.

Lapinski TW, Flisiak R, Jaroszewicz J, Michalewicz M, Kowalczuk O.

Aim: To analyze the effectiveness and safety of lamivudine treatment in patients with chronic HBV infection undergoing hemodialysis or after kidney transplantation, and to study the frequency of tyrosine - methionine - aspartate - aspartate (YMDD) mutation occurrence after lamivudine treatment.
Methods: We analyzed 91 patients with chronic hepatitis B, among whom, 16 patients underwent hemodialysis, 7 patients had kidney transplantation and 68 patients had normal function of kidney. The hemodialysis patients were treated by lamivudine 300 mg/wk. Patients after kidney transplantation and patients with normal function of kidney were treated with lamivudine 100 mg/d. Therapy lasted for 12 mo. HBV-DNA, HBsAg, HBeAg and anti-HBe, and anti-HCV antibodies were assessed in sera of patients. The analysis was performed before and 6 mo after the end of lamivudine treatment. Before, during and after the lamivudine therapy, the number of erythrocytes, leukocytes, platelets and hemoglobin concentration, ALT and AST activity, as well as bilirubin, urea and creatinine concentrations were analyzed in sera from patients.
Results: After the 12-mo lamivudine treatment, elimination of HBV - DNA was observed in 56% patients undergoing hemodialysis and in 53% patients with normal kidney function. Only 1 from 7 (14%) kidney-transplanted patients eliminated HBV-DNA. Furthermore, HBeAg elimination was observed in 36% hemodialysis patients, in 51% patients with normal function of kidneys and in 43% kidney-transplanted patients. Among the patients undergoing dialysis, no YMDD mutation was found after 12 mo of therapy, while it was detected in 9 patients (13%) with normal function of kidney and in 2 kidney-transplanted patients (29%, P<0.006). We did not observe significant side effects of lamivudine treatment in studied patients.
Conclusion: Effectiveness of lamivudine therapy in dialysis patients is comparable with that in patients with normal function of kidney. Lamivudine treatment is well tolerated and safe in patients with renal insufficiency undergoing hemodialysis and kidney-transplantation. However, in the latter group, high incidence of YMDD mutation after lamivudine treatment was observed.

Benefit of hepatitis C virus core antigen assay in prediction of therapeutic response to interferon and ribavirin combination therapy.

J Clin Microbiol. 2005 Jan; 43(1):186-91.

Takahashi M, Saito H, Higashimoto M, Atsukawa K, Ishii H.

A highly sensitive second-generation hepatitis C virus (HCV) core antigen assay has recently been developed. We compared viral disappearance and first-phase kinetics between commercially available core antigen (Ag) assays, Lumipulse Ortho HCV Ag (Lumipulse-Ag), and a quantitative HCV RNA PCR assay, Cobas Amplicor HCV Monitor test, version 2 (Amplicor M), to estimate the predictive benefit of a sustained viral response (SVR) and non-SVR in 44 genotype 1b patients treated with interferon (IFN) and ribavirin. HCV core Ag negativity could predict SVR on day 1 (sensitivity = 100%, specificity = 85.0%, accuracy = 86.4%), whereas RNA negativity could predict SVR on day 7 (sensitivity = 100%, specificity = 87.2%, accuracy = 88.6%). None of the patients who had detectable serum core Ag or RNA on day 14 achieved SVR (specificity = 100%). The predictive accuracy on day 14 was higher by RNA negativity (93.2%) than that by core Ag negativity (75.0%). The combined predictive criterion of both viral load decline during the first 24 h and basal viral load was also predictive for SVR; the sensitivities of Lumipulse-Ag and Amplicor-M were 45.5 and 47.6%, respectively, and the specificity was 100%. Amplicor-M had better predictive accuracy than Lumipulse-Ag in 2-week disappearance tests because it had better sensitivity. On the other hand, estimates of kinetic parameters were similar regardless of the detection method. Although the correlations between Lumipulse-Ag and Amplicor-M were good both before and 24 h after IFN administration, HCV core Ag seemed to be relatively lower 24 h after IFN administration than before administration. Lumipulse-Ag seems to be useful for detecting the HCV concentration during IFN therapy; however, we still need to understand the characteristics of the assay.

Treatment of histologically mild hepatitis C virus infection with interferon and ribavirin: a multicentre randomized controlled trial.

J Viral Hepat. 2005 Jan; 12(1):58-66.
Wright M, Forton D, Main J, Goldin R, Torok E, Tedder R, Grant P, Thursz M, Naoumov N, Millson C, Mills PR, Bassendine M, Thomas HC; on behalf of the UK Mild HCV Trial investigators.

Current guidelines advocate no treatment for patients with histologically mild hepatitis C virus (HCV) infection. This was a UK multicentre randomized controlled trial comparing alpha-interferon (3 MU thrice weekly) + ribavirin (1000-1200 mg/day) for 48 weeks with no treatment in treatment naive, adult patients with histologically mild chronic HCV infection. The aim was to compare benefits, safety and efficacy of combination therapy with alpha-interferon 2b and ribavirin for 48 weeks with no treatment (current standard management) in this patient group. In the treatment group 32 of 98 (33%) patients achieved a sustained virological response (SVR). Patients infected with genotype 1 had a lower SVR than those infected with genotype non-1 (18%vs 49% $P = 0.02$). No patients who failed to achieve a 2-log drop in viral load at 12 weeks achieved SVR. Improvements in quality of life 24 weeks postcessation of therapy compared with baseline using the SF-36 questionnaire measures were observed in the treated group. For patients with mild HCV infection with viral genotype non-1, the results are sufficiently good to suggest that therapeutic decisions should no longer be biopsy-driven. For patients infected with genotype 1, a liver biopsy is still indicated as the low chance of SVR is outweighed by an unacceptable burden of side-effects. Patients who fail to respond by 12 weeks of therapy should have their treatment curtailed early.

Patient concerns regarding chronic hepatitis C infections.

J Viral Hepat. 2005 Jan; 12(1):51-7.
Minuk GY, Gutkin A, Wong SG, Kaita KD.

Counseling of patients with chronic hepatitis C infections is often limited to discussions regarding how the virus is transmitted and what can be done to decrease the risk of transmission to others. The purpose of the present study was to document the principal concerns of newly diagnosed and follow-up patients with chronic hepatitis C, and thereby enhance counseling strategies and content. Seventy newly diagnosed and 115 follow-up patients with chronic hepatitis C virus (HCV) infection were initially asked in an open-ended manner (volunteered concerns) and then to prioritize from a prepared list of seven potential concerns (prioritized concerns), to identify those concerns that were of utmost importance to them. The most common volunteered concerns of newly diagnosed patients in decreasing order were: disease progression (27%), premature death (19%), infecting family members (13%), side-effects of treatment (11%) and miscellaneous others. In decreasing order, prioritized concerns included: infecting family members, development of liver cancer, infecting others, development of cirrhosis, social stigma of having liver disease, need for liver transplant and loss of employment. The principal volunteered and prioritized concerns of follow-up patients were similar to those of newly diagnosed patients. Volunteered and prioritized concerns were relatively consistent across the different genders, age groups, ethnic backgrounds, education level, marital status, employment, modes of viral acquisition and in the case of follow-up patients, duration of follow-up. These results indicate that health care providers who focus counselling efforts exclusively on viral transmission are unlikely to address other important concerns of newly diagnosed and follow-up patients with chronic HCV infection.

Acute hepatitis and renal function impairment related to infection by hepatitis E virus in a renal allograft recipient.

Am J Kidney Dis. 2005 Jan; 45(1):193-6.
Kamar N, Mansuy JM, Esposito L, Legrand-Abravanel F, Peron JM, Durand D, Rostaing L, Izopet J.

Clinicians often are faced with an increase in liver enzyme levels. In the majority of cases, the cause is found rapidly. Conversely, in a few cases, the etiologic agent remains unknown and requires either liver biopsy or drug-medication modification. We report a case of acute icteric hepatitis associated with renal function impairment related to infection caused by primary hepatitis E virus (HEV) in a renal transplant recipient who lived in a nonclassic endemic area and had not traveled abroad. Clinicians must be aware that in cases of unexplained hepatitis in organ transplant recipients and in the absence of evident drug hepatotoxicity, HEV should be considered as an etiologic agent for hepatitis. Subsequently, HEV serological tests should be performed, HEV RNA should be looked for in acute-phase serum and stool samples, and liver parameters should be monitored closely because HEV might be responsible, in some cases, for fulminant hepatitis.

High prevalence of celiac disease in autoimmune hepatitis detected by anti-tissue tranglutaminase autoantibodies.

J Clin Lab Anal. 2005 Jan 11;19(1):6-10.
Villalta D, Girolami D, Bidoli E, Bizzaro N, Tampoia M, Liguori M, Pradella M, Tonutti E, Tozzoli R.

Celiac disease (CD) may be found in association with other autoimmune diseases. We investigated the relation between autoimmune hepatitis (AIH) and CD by assessing the prevalence of IgA and IgG anti-tissue transglutaminase (tTG) antibodies in AIH, and by verifying whether the findings were associated with clinical and histological features of CD. Forty-seven consecutive patients with AIH (type I: n = 39; type II: n = 8) were studied. One hundred patients with chronic hepatitis C, and 120 healthy blood donors were also studied as controls. We analyzed sera for the presence of IgA and IgG anti-tTG antibodies using a specific human recombinant tTG immunoenzymatic assay. Anti-tTG positive patients and controls were further tested for anti-endomysium antibodies (EMA) and HLA typing, and those found positive by either of these tests underwent duodenal biopsy to confirm a possible diagnosis of CD. Three of the 47 AIH patients (6.4%) were positive for IgA anti-tTG and EMA antibodies, and were subsequently confirmed to be affected with CD by small-bowel biopsy findings. No IgG anti-tTG positivity was found in the AIH patients. None of the controls were positive for IgA anti-tTG, and only one with chronic hepatitis C had a low positive reaction for IgG anti-tTG, which resulted as a false positive. The crude prevalence rate of CD in AIH was 63.8 per 1,000 (95% CI, 13.2-186.1), and it was significantly higher than that found in the general population in Italy (4.9 per 1,000; 95% CI, 2.8-7.8). The results of this study showed a high prevalence of CD in patients with AIH. For this reason, early serological screening testing for CD is strongly recommended for all AIH patients.