increased at week 12 (P = 0.008) and maintained at such level. The mean ratio of nonSVR group was 3.1%(pretreatment), 3.2%(2w), 3.0%(4w), 3.5%(12w), 2.8%(24w) and 3.2% (AT-12W) respectively, and no significant rise of the ratio existed.

Conclusion: The imbalance of Th1 and Th2 exists in chronic hepatitis C genotype 6. Recovery of Th1 and Th2 cell immunity contributes to the good response of genotype 6.

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MINIMAL HEPATIC ENCEPHALOPATHY: POSSIBILITIES OF DIETARY FIBERS TREATMENT

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Aim: To study effects of dietary fibers (psyllium husks, Mucofalk) in patients with chronic liver diseases (CLD) on the course of minimal hepatic encephalopathy (MHE).

Materials and Methods: 45 patients with CLD and MHE were examined. In group 1 (25 patients) the treatment consisted of essential phospholipids (2 capsules t.i.d.) and Mucofalk (5 g of granules t.i.d.) for 4 weeks. Group 2 (20 patients) was treated with essential phospholipids (2 capsules t.i.d.) and lactulose (30 ml once a day in the morning) for 4 weeks. Clinical, biochemical and psychometric parameters (TLC, LT) and intestinal dysbiosis were controlled on day 1 and at 4 weeks. In all patients with CLD and MHE (100%) dysbiosis was found. Intestinal normal flora microorganisms (Bifidobacteria, Lactobacilli, E. coli with normal enzymatic activity) were found to be decreased while opportunistic pathogenic flora (Enterococci, Candida, hemolytic microorganisms) increased.

Results: After the treatment patient's general well-being improved, asthenic and dyspeptic syndrome manifestations decreased in 17 patients (68.0%) from group 1 and in 14 patients (70.0%) from group 2. Repeated bacteriological feces analysis in 1 and 2 groups of patients showed the improved quantitative and qualitative parameters of intestinal microflora content (differences are significant, $p < 0.05$). Psychomotor parameters restoration due to TLC and LT were registered in 17 (68.0%) of patients from group 1 and in 14 (70.0%) patients from group 2. Significant inverse correlation relation between TLC and LT and the level of Lactobacilli ($r = -0.29$, $p < 0.05$, and $r = -0.20$, $p < 0.05$) and direct relation with Clostridia growth ($r = 0.20$, $p < 0.005$, and $r = -0.19$, $p < 0.05$), Staphylococcus aureus ($r = 0.24$, $p < 0.05$ and $r = 0.23$, $p < 0.05$), Candida ($r = 0.41$, $p < 0.05$ and $r = 0.36$, $p < 0.05$) and TLC time and hemolytic microorganism growth ($r = 0.24$, $p < 0.05$) were found in the study.

Conclusion: Dietary fibers (psyllium, Mucofalk) positively influenced qualitative and quantitative intestinal microflora contents, promoted MHE resolution. The efficacy of MHE treatment with psyllium husks (Mucofalk) is comparable with efficacy of lactulose use.

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EVALUATION OF THE EFFECTIVENESS OF A RISK REDUCTION STRATEGY FOR THE PREVENTION OF HEPATOCELLULAR CARCINOMA IN PATIENTS WITH CHRONIC VIRAL HEPATITIS B INFECTION

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Introduction: Hepatocellular carcinoma (HCC) is the fifth most common cancer and the third most common cause of cancer-related death worldwide, with incidence rates two to three times higher in men than in women. Over 80% of HCC worldwide has been attributable to the combined effects of chronic hepatitis B and C infections. People with these infections have a twenty (20) to hundred (100) fold increased risk of developing HCC relative to those without these infections. Hence, the purpose of this study was therefore to access the effectiveness of hepatitis B vaccinations and antiviral therapies as a risk reduction strategy for the prevention and development of hepatocellular carcinoma in patients with chronic viral hepatitis B infection.

Materials and Methods: Between 2010 and 2011 In a cohort study, data of twenty (20) individuals been managed for chronic viral hepatitis B at Medicare Hospital, Ota Ogun State, Nigeria was collected and analyzed for their clinical, serological, and histological profile. Four (4) of which had presented with hepatocellular carcinoma before reporting in the hospital, while Sixteen (16) were on oral antiviral Lamivudine. Ten (10) Hepatitis B surface antigen negative individuals who had previously received the complete dosage of the hepatitis B vaccine was also recruited into the study as a control group. Data of Clinical History and treatment progression was studied in each patient and subsequently matched with those of the control group.

Results: First-generation oral antiviral (lamivudine) has shown to reduce disease progression in Hepatitis B virus (HBV) related cirrhosis, including an approximately 50% decrease in HCC incidence. Such efficacy was achieved despite emergence of drug resistance in approximately 50% of cases. Case-control studies have suggested that hepatitis B cases without cirrhosis may also benefit. However, hepatitis B vaccination has been found to be the most effective method of preventing HBV-related hepatocellular carcinoma, thus preventing chronic HBV infection and chronic liver disease.

Conclusion: Since hepatitis B is one of the main causes of hepatocellular carcinoma, prevention, vaccination and quick antiviral treatment of this infection is key to reducing the risk of liver cancers in the future.

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REGIONAL PREVALENCE OF IL28B SNPS RS8099917&RS12979860 IN GENERAL POPULATION AND IN A COHORT OF CHRONIC LIVER DISEASES PATIENTS

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Background: The minor IL28b SNPs rs8099917&rs12979860 have been associated with progression to chronic infection and failure of antiviral therapy in HCV patients. Considerable variation in carriage frequencies have been reported in different ethnicities. Our AIM was to study their allele frequency and genotype distribution in our ethnic specific general population and in a cohort of chronic liver diseases patients.

Methods: Rs8099917 genotyping was performed by PCR/SSCP analysis; rs12979860 by PCR/RFLP. A total of 255 subjects were studied. The control Group A consisted of 79 randomized and anonymized ethnic DNA bank samples; Group B – 50 chronic HBV patients; Group C – 83 HCV patients; Group D – 43 patients, advanced liver disease and transplanted livers (Ci/Ltx). HCV RNA, HBV DNA and genotyping was done by Roche TaqMan IVD FDA approved RT-PCR.

Results: The allele frequency of rs8099917 in the control group reached Hardy Weinberg equilibrium (HWE); the study population did not. The frequencies of GG, GT and TT genotypes were as follows. In Group A: 0.05, 0.33, 0.62; in Group B: 0.07, 0.4, 0.54; in Group C: 0.07, 043, 0.33 Group D: 0.05, 0.25 0.13 respectively. The difference of the allele frequencies was statistically significant for Group A vs. combined (B+C+D), p = 0.0071 and for Group

A vs. Group D, p = 0.0062, two-tailed Fisher's exact test. Peg-interferon/ribavirin therapy received 28 HCV (genotype G1 = 25). Of those who completed 48 week therapy, 6 had SVR and 8 were non-responders or relapsers. In the SVR group, G containing genotypes were significantly lower compared to the NR/R group Chi sq. = 5.091, P = 0.012. For rs12979860 the control group is not yet studied, but the patients group (No = 80) was in HWE, with genotype frequency of CC 0.325, CT 0.475, TT 0.2.

Discussion: The frequency of rs8099917 in healthy individuals in our region is similar to that of Italians from Toscana. The prevalence of the minor/heterozygous genotype in HCV patients was higher as compared to the reported for Spanish, Australian and Swiss populations. Minor allele frequency was greater in the HCV therapy non-responder patients. The rs12979860 genotype frequency in was similar to the recently reported for Ci/Ltx by Fabris in J. Hepatol.

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CAN RAPID TESTS BE APPLIED FOR HEPATITIS C VIRUS DIAGNOSIS IN DEVELOPING COUNTRIES?

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Background and Aims: It is estimated that hepatitis C virus prevalence is 1.38% in Brazil corresponding to 2.6 million individuals infected with HCV, many unaware of their infection. A simple rapid HCV test may be a useful tool to identify HCV infected individuals, specially among remote regions of developing countries. This study was carried out to evaluate the performance of three rapid tests for HCV diagnosis between two field settings in Brazil.

Methods: Two groups were evaluated: (i) individuals referred to Brazilian Viral Hepatitis Centers presenting high risk to be HCV infected (n = 135) and (ii) health individuals located at remote area in the North Region of Brazil (n = 402). Specimens were obtained between February 2010 and September 2011 from individuals aging 2 to 85 years and tested by anti-HCV using commercial EIA (HCV Ab, Radim, Italy) and the following rapid tests: HCV Rapid Test (Bioeasy, Brazil) for sera and whole blood samples; ImunoRápido HCV (Wama, Brazil) for sera; and Oraquick HCV Rapid Antibody Test (Orasure, USA) for oral fluid samples. Anti-HCV reactive samples by EIA were tested by PCR (COBAS® AMPLICOR® Hepatitis C Virus Test v2.0, Roche Molecular Systems, USA) and PCR negative samples were excluded. The sensitivity and specificity of rapid tests (2 serum, 1 whole blood and 1 oral fluid rapid assays) from 3 manufacturers (Bioeasy, Wama and OraSure) were determined using GraphPad InStat version 3.0.

Results: Sensitivity (96.8%-97.9%) and specificity (91.9%-100.0%) were variable across assays and sites. The highest sensitivities achieved for the Bioeasy Serum, Bioeasy Blood, Wama, and OraSure tests were 97.9%, 97.9%, 96.8% and 96.8%, respectively; the highest specificities were 100%, 100%, 98.6%, and 100%, respectively. Among health individuals located at North Region of Brazil, none of them was anti-HCV/HCV RNA reactive and discocordant results were obtained only for Wama assay. While among HCV suspected cases, discordant results obtained were: 4 samples using Bioeasy sera and blood, 8 samples for Wama and 5 samples for Orasure.

Conclusions: Sensitive rapid anti-HCV assays are appropriate and feasible for high and low prevalence settings, and these assays could be employed for HCV diagnosis among developing regions.

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USEFULNESS OF RAPID TESTS FOR HEPATITIS B AND C VIRUS MARKERS DETECTION AMONG CRACK USERS LOCATED AT TWO BRAZILIAN GEOGRAPHICAL AREAS

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Background and Aims: Hepatitis B virus (HBV) and Hepatitis C virus (HCV) represents a major public health problem in Brazil and in the world. HBV and HCV prevalence among noninjection drug users (NIDUs) who smoke, snort, or sniff heroin, cocaine or crack, is higher than expected, suggesting a means of virus transmission other than intravenous drug use in this group. In Brazil, there is a paucity of information about HBV and HCV among crack users, although the rise of prevalence of crack use. This study was conducted to evaluate the usefulness of HBsAg and anti-HCV rapid tests among samples from crack users.

Methods: During June 2010 to February 2011, after informed consent, 193 blood samples were obtained from crack users, being 113 from Rio de Janeiro State (Southeast Region of Brazil) and 80 from Bahia State (Northeast Region of Brazil). HBsAg was detected using two immunochromatographic assays (HBsAg Vikia, BioMerieux, France and Imuno-Rápido HBsAg, Wama Diagnóstica, Brazil) and validated by EIA (ETI-MAK-4, DiaSorin, Italy). While for anti-HCV detection, HCV Rapid Test (Bioeasy, Brazil) and Wama HCV (Wama Diagnóstica, Brazil) were employed and validated by EIA HCV Ab (Radim, Italy).

Results: This study was composed by 159 male and 34 female subjects, with a mean age of 22 years (13–58 years; SD: 3.77). HBsAg was detected among sera samples from 5 individuals by EIA while it was not present in 188 individuals. Anti-HCV was detected in one serum samples and it was not obtained in 192 sera by EIA. Using Vikia HBsAg rapid test and Immuno-rapid HBsAg, 99% (191/193) and 98% (189/193) of results were concordant with EIA, respectively. Using HCV rapid test and Wama HCV, 99% (191/193) and 98.5% (190/193) were concordant with EIA, respectively.

Conclusions: These results showed that rapid tests can yield reliable results and can be used with high efficiency in some specific groups, like, drug users.

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DELAY IN TESTING FOR HEPATITIS DELTA AFTER DIAGNOSING HEPATITIS B – IMPACT ON PROGNOSIS: VIEW FROM LARGE SINGLE CENTER COHORT

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Background and Aims: Hepatitis delta virus (HDV) is a defective RNA virus, which requires hepatitis B virus (HBV) for transmission and replication, causing the most severe type of viral hepatitis infection in humans. Approximately 5% (20 mln people) of HBsAg chronic carriers worldwide are estimated to be infected with HDV.

Methods: We retrospectively investigated past medical history of the patients, admitted to our clinic between 2002 and May 2011 for the duration of delay in time in testing for HDV after establishing the presence of HBsAg and stage of liver disease at that moment.

Results: Out of 453 HBsAg (+) patients evaluated in our clinic between 2002 and May 2011, 92 (20.3%) had markers of HDV infection, median age 37 (16–68), male 52 (56.5%). Information on