

LIVERCON 2010: Abstract

Prevalence of hepatitis B and hepatitis C viruses in Mymensingh city in Bangladesh

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Background

Hepatitis B virus (HBV) and hepatitis C virus (HCV) infections are among the most frequent viral infections in humans and represent a major global public health problem, especially in Asia. HBV and HCV related chronic hepatitis is the main cause of cirrhosis and hepatocellular carcinoma (HCC) of liver that are responsible for a high rate of morbidity and mortality. The aim of study was to analyze the prevalence of HBV and HCV among the people of Mymensingh city, Bangladesh.

Methods

The cross sectional data was collected from the blood transfusion department of Mymensingh Medical College

Hospital and descriptive analysis was performed.

Results

Out of 2015 participants, 126 were HBsAg positive and 45 were found HCV positive cases

Conclusions

Based on the results, prevalence of HBV and HCV in Bangladesh has the similarity with other Asian countries which has proven that HBV and HCV are the emerging public health problem in a developing country like Bangladesh. Health awareness and education programme may help to prevent the fatality. Future study should emphasize on peoples perception, knowledge and practice behaviour on HBV and HCV infection.

Liver stiffness measurement is superior to ultrasonography in chronic hepatitis B patients with advanced fibrosis

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Background

Ultrasonography has been traditionally used to predict fibrosis or cirrhosis in chronic hepatitis patients. New non-invasive tools are always welcome to replace invasive procedure like liver biopsy. Liver stiffness

measurement is relative new modality of measuring fibrosis in advance fibrosis or cirrhosis.

Methods

15 patients of both sexes (M:F= 10:5, Age range 22-45

years) diagnosed as having chronic hepatitis B infection included in the study. Liver biopsy with Knodell scoring was done in all cases. Besides liver stiffness measurement were done to see efficacy of this new tool of diagnosis.

Results

It was observed that ultrasonography has a sensitivity of 19.5% and a specificity of 71.3%. Compared to this if a cut of value of ≥ 8 kPa taken as a mark of F3 or

F4 fibrosis in case of Liver Stiffness Measurement, then it has a high sensitivity of 57.14% and a specificity of 100%.

Conclusions

Though the study is small, liver stiffness measurement is a promising tool in diagnosis of fibrosis. If a cut of value of ≥ 8 kPa taken as a mark of F3 or F4 fibrosis it has a good predictive value in chronic hepatitis B patients.

Hepatitis B virus immunization status among health care workers: A study in a tertiary care hospital in Bangladesh.

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Introduction

Occupational exposure to hepatitis B virus (HBV) infection is common among health care workers (HCWs). This risk can be reduced by immunization against hepatitis B virus. Pre-exposure immunization of health care workers against HBV and documentation of their response to vaccination have been recommended to reduce the burden of HBV infection. This study was carried out to evaluate the efficacy of HBV vaccine in health care workers and need for their reassessment for revaccination.

Methods

This hospital based cross sectional study was carried out among the health care workers (doctors, dentists, nurse, lab technicians, ward boys, cleaners) of Comilla medical college hospital. Two thousand six hundred HCWs participate

in this study. Among them 123 HCWs were vaccinated against HBV and they were screened for presence of anti-HBs antibody in their sera

Results

Among 260 HCWs only 123 (47.30 %) HCWs were vaccinated. Among nonvaccinated HCWs 25 (20.30%) were unaware of their need for vaccination against HBV. Protective titre of anti HBs antibodies (> 10 IU/ml) was present in 114(92.68%) HCWs.

Conclusion

Despite the beneficial outcome of HBV vaccine, a major proportion of HCWs do not take vaccine. Mandatory vaccination of HCWs against HBV should be implemented in every hospital.

Initial experience of NASVAC in patients with chronic hepatitis B

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Background

Containment of hepatitis B virus (HBV) and control of liver damages in patients with chronic hepatitis B (CHB) is regulated by both hepatitis B core antigen (HBcAg) and hepatitis B surface antigen (HBsAg)-specific cellular and humoral immune responses. However, HBsAg-based commercial vaccine has mostly been used as therapeutic vaccine for treating CHB patients that have yielded inconclusive therapeutic effects.

Methods

We enrolled 18 treatment-naïve patients with CHB with detectable levels of HBV DNA and elevated levels of alanine aminotransferase (ALT) in the sera in Bangladesh. Patients were administered with a human-consumable vaccine containing both HBsAg and HBcAg (HBsAg/HBcAg vaccine, HBsAg; 50 µgm, HBcAg; 50 µgm) in phosphate-buffered solution for 10 times at an interval of 2 weeks (5 times by nasal spray and 5 times by both nasal and subcutaneous routes). General conditions, hematological parameters, liver functions, kidney functions, kinetics of HBV DNA and levels of ALT were assessed in all patients before therapy commencement, once in every 2 weeks during therapy, and then once in every 3 months for 12 months after end of therapy.

Results

Immunization with HBsAg/HBcAg vaccine was safe in all patients with CHB. There was no irritation in the nose during and after nasal spray of HBsAg/HBcAg vaccine. Also, parameters of general inflammation and kidney functions

remained within normal limits in all patients during therapy and follow up period. Flare of ALT was not detected in any patient. After the end of 5 nasal vaccinations, HBV DNA became undetectable in 6 patients, reduced in 7 patients and remained unchanged in 5 patients. The levels of ALT became normal in 13 patients. After end of 10 vaccinations (10 nasal and 5 subcutaneous), HBV DNA continued to be undetected in 6 patients and ALT became within upper limit of normal range in 16 patients. The patients received no antiviral or immune modulator drugs during follow up period of 12 months. After the end of 12-month follow up period, HBV DNA became undetectable in 9 patients and reduced in rest 9 patients. The levels of serum ALT was within normal range in all 18 patients.

Conclusions

This is the first study about immune therapy in CHB patients that showed maintenance of antiviral effect and control of liver damages during off-treatment period of 12 months. This study strongly suggest that an effective regimen of immune therapy against CHB may be designed by immunizing CHB patients with multiple HBV-related antigens and through different routes including mucosal routes.

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Liver elastography correlate with liver histological changes for prediction of significant fibrosis in non-alcoholic fatty liver disease

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Background

Non-alcoholic fatty liver disease (NAFLD) is common liver disease in clinical practice in Hepatology. Liver fibrosis is the main predictor of the progression of nonalcoholic fatty liver disease. Transient elastography (FibroScan), which measures liver stiffness, is a novel, noninvasive method to assess liver fibrosis. The aim of this study was to evaluate the relation of liver histology with liver stiffness measured by fibroscan in patients with NAFLD.

Methods

A total of 45 NAFLD patients were included. Transient elastography was performed for liver stiffness measurement in 45 nonalcoholic fatty liver disease patients. And the relationship between histological parameters and liver stiffness measurement

was studied by multivariate analysis.

Results

The correlation between liver elasticity measured by Fibroscan and grading of fibrosis in liver histology reveals significant association between these two variables (Pearson correlation .581, $p = .000$) with a stepwise increase of liver stiffness with increasing histological severity of liver fibrosis.

Conclusions

Our results show a significant correlation between liver stiffness measurement and fibrosis stage in nonalcoholic fatty liver disease patients, as confirmed by the results of liver biopsy, which remains the gold standard for evaluation of the severity of liver fibrosis in patients with nonalcoholic steatohepatitis.

Liver function tests in type 2 diabetic patients: Experience from Northern Bangladesh

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Background

Diabetic patients often have altered liver function. This study was designed to find out liver dysfunction as evidenced by liver function tests (LFT) and to observe the extent and severity of abnormalities of LFTs.

Methods

This was a descriptive cross-sectional comparative study carried out in Department of Medicine, Rajshahi Medical College Hospital and Rajshahi Diabetic Association Hospital from July 2008 to June 2010. 100 diagnosed type 2 diabetic patients and 30 apparently healthy people were included. All of those study population were free from taking any hepatotoxic drugs and free from any preexisting liver disease.

Results

The prevalence of abnormal serum bilirubin, ALT, AST, Alkaline

phosphatase, prothrombin time and S. albumin were 6%, 30%, 7%, 6%, 54% and 12% respectively in type2 diabetic patients and 0%, 3.3%, 0%, 6.7%, 10% and 3.3% respectively in normal people and the differences were statistically significant. All the LFTs of type 2 diabetic patients were mildly abnormal except 2 patients (2%) had moderate elevation of ALT, 7 patient (7%) had markedly prolonged PT, and 1 patient (1%) had moderately decreased s. albumin. In normal people all LFTs abnormalities were mild.

Conclusions

A high proportion of patients with type2 diabetes mellitus in our country have abnormal liver function tests that may be a marker of NAFLD and insulin resistance. Such patients would thus warrant more intensive glycaemic control to prevent progression of significant liver diseases.