HEP DART 2017

"Frontiers in drug development for Hepatology, including viral hepatitis, NASH, and co-infections"

Abstracts
Invited speakers

the difference between baseline HBV DNA and HBV DNA at HBVr (defined by authors) ranged between 1.9 logs to 4.1 logs. Clinical significant outcomes were observed in those with difference around or above 3 logs. In those with undetectable baseline HBV DNA, clinical significant outcomes were observed in those with HBV DNA above 6 logs at HBVr. Baseline HBV DNA level did not seem to be correlated with HBVr and clinical significant outcome due to HBVr.

Conclusion: Clinical significant outcomes due to HBVr seemed to be predicted by a more than 3 logs increase in HBV DNA from baseline and a level of more than 6 logs HBV DNA when baseline HBV DNA level undetectable. A proper nomenclature of HBVr is needed to be able to predict the clinically significant outcomes due to HBVr.

Abstract 34

AVERTING AN EMERGING EPIDEMIC OF INCIDENT HEPATITIS C VIRUS INFECTION IN RAJSHAHI CITY OF BANGLADESH: MASSIVE INTERVENTIONS NEEDED FOR INJECTING DRUG USERS (IDUs) IN BANGLADESH

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Background: IDUs in Bangladesh are a high-risk group for Hepatitis C Virus Infection due to lack of knowledge and risky behavior, and has led to the emerging epidemic of incident hepatitis C virus (HCV) infection across the border city of Rajshahi. We aim to examine the prevalence of HCV screening, confirmatory testing, and care experiences among young adult users in Rajshahi City of Bangladesh.

Materials & Methods: Two hundred young adults aged 18-29 years reporting past-month injected drug users were recruited into The Rajshahi City young adult drug study conducted between January 2016 and December 2016. We used Pearson $\chi 2$ test to examine bivariate associations of self-reported HCV screening history in this cohort, and used modified Poisson regression to identify associated socio-demographic and drug use patterns.

Results: Among 196 eligible participants, 154 (78.6%) reported prior screening for HCV, among whom 18 (11.7%) reported positive results. Of these 18 participants, 13 (72.2%) reported receiving a confirmatory HCV test; 12 (66.7%) were referred for specialty HCV care. HCV screening was associated with injection drug use (adjusted prevalence ratio (APR): 1.19; 95% confidence interval (CI): 1.05–1.33) and history of hospitalization for psychiatric illness (APR: 1.23; 95% CI: 1.09–1.39). Younger participants (18-23 years) were less likely to have received screening (APR: 0.69; 95% CI: 0.57–0.85).

Conclusion: Although 3 in 4 young adults injecting drug users (IDUs) had been screened for HCV, post-screening diagnostic testing, support, and referral to care were inadequate. Strategies may be needed to promote HCV screening, confirmatory diagnostic testing, and care leading to cure, early in the course of illicit drug use among young persons. IDUs in Bangladesh are a high-risk group for HCV due to lack of knowledge and risky behavior.

Abstract 35

Influence of the TLR4, TLR7 polymorphisms on the fibrosis progression and DAAs efficacy in HCV/HIV- co-infected patients in Ukraine

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Background: Recent studies have shown that TLR4 Asp299Gly single-nucleotide polymorphisms (SNP) impacts the development of liver cirrhosis and the efficiency of peg-interferon based antiviral therapy in

patients with hepatitis C virus (HCV) infection. Direct-acting antiviral drugs (DAAs) have a very high efficacy in HCV-infected persons. Impact of polymorphisms in TLR4 and TLR7 genes on DAAs effectiveness in HCV/HIV- coinfected patients seems to be unclear.

Materials & Methods: The retrospective observational study included 106 HCV/HIV-coinfected adult patients on ART > 6 months (TDF/3TC(FTC)/EFV 300/200/600 mg /day) who were assessed for the presence of SNP in TLR4 and TLR7 genes. Toll-like receptors genotyping was performed by real-time polymerase chain reaction. Regimen choice of DAAs was based on viral genotype and stage of disease, according to guidelines. Negative HCV RNA at week 12 of post-treatment follow up was considered as sustained virological response (SVR). Potential risk factors associated with advanced liver fibrosis (F3-F4) and virological failure of DAAs were identified by using multivariable logistic regression models. SPSS version 22.0 was used for statistical analysis.

Results: The risk for accelerated fibrosis progression was significantly higher in patients with Asp299Gly TLR4 gene polymorphism (AOR=3,44; 95% CI [1,14-11,67]) and wild genotype Gln11Gln TLR7 gene (AOR=1,6; 95% CI [1,11-3,7]) adjusted for age, sex and CD4+ count at the ART initiation.
Direct-acting antiviral therapy administered to HIV-patients with Asp299Gly TLR4 gene polymorphism has shown virological efficacy on the level of the patients with Asp/Asp TLR4 genotype (83,3% versus 86,3%).

Conclusion: This study suggests association between the presence of Asp299Gly TLR4 polymorphism, wild genotype of Gln11Gln TLR7 gene and accelerated fibrosis progression. In HIV/HCV- coinfected patients no significant association was found between genetic variation of the TLR4 and SVR of DAAs.

Abstract 36

HIV Testing in patients presenting with Hepatitis C Monoinfection

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Hepatitis C virus and HIV co-infection is a major global public health concern. An estimated 2.3 million people living with HIV are co-infected with Hepatitis C virus worldwide [1]. Extrapolating from data from the UK Collaborative HIV cohort (UK CHIV) study in 2012, it is estimated that 9000 people in the UK are co-infected with HIV and hepatitis C [2]. Co-infection complicates each disease. Co-infected patients have a significantly poorer prognosis than monoinfected patients with either disease. Untreated HIV in hepatitis C patients increases the chance of liver damage compared with those infected with Hepatitis C alone [1], and liver disease caused by hepatitis C is an important cause of death in HIV patients [3]. Diagnosing co-infection early in patients improves the chances of hepatitis C treatment success and reduces related morbidity and mortality [2]. Given that HIV and Hepatitis C share many of the same risk factors for acquisition, and having HIV increases the risk of acquiring hepatitis C infection, early identification of at risk groups is paramount. British HIV Association guidelines recommends that every patient presenting with a new hepatitis C diagnosis should also be offer HIV testing as soon as possible, even if they recently tested negative [4].

This audit set out to determine how many monoinfected Hepatitis C patients receiving antiviral treatment from April 2016 – March 2017 at Chelsea and Westminster Hospital, which is a large tertiary hospital in West London specializing in HIV, were tested for HIV prior to starting anti-viral treatment. The total number of patients included in the audit was 176. Results showed 39% of all patients had not been offered a HIV test at any point. The mean time of HIV testing prior to treatment was 21 months, with a median of 10 months and a range of 0 – 133 months. This audit has highlighted the low level of HIV testing in monoinfected Hepatitis C patients, despite adequate resources, guidelines and pathways