VIRAL OUTCOMES IN PATIENTS WITH CHRONIC HEPATITIS B AND CORRELATION WITH PHARMACY ADHERENCE MEASURES

Allard NL[1] Dev A[2] Dwyer J [3] Srivatsa G[4] MacLachlan JH[1] Thompson A[1,5] Cowie BC[1,6]

1. WHO Collaborating Centre for Viral Hepatitis, Peter Doherty Institute for Infection and Immunity, University of Melbourne, Melbourne, Australia, 2. Monash Medical Centre, Melbourne, Australia, 3. Mercy Hospital, Melbourne, Australia, 4. Western Hospital, Melbourne, Australia, 5. St. Vincent's Hospital, Melbourne, Australia, 6. Royal Melbourne Hospital, Melbourne, Australia

Background: Antiviral therapy for chronic hepatitis B (CHB) is effective and can substantially reduce the risk of progressive liver disease and hepatocellular carcinoma but is often administered for an indefinite duration. Adherence is important to maximize the benefit of therapy and prevent the development of resistance.

The medication possession ratio (MPR) is a measure of maximal adherence but a threshold value for adequacy of adherence has not been correlated with viral outcomes. The aim of this study was to analyse virological outcomes in a large multicentre hospital outpatient population and to correlate MPR with viral outcomes.

Methods: A retrospective analysis of records of patients dispensed single antiviral therapy for CHB from 4 major hospitals in Melbourne between 2010-2013. Pharmacy and pathology data were linked and viral outcomes for the period were classified: virological failure (> 1x $\log^{10}$ rise), full suppression, non significant rise (<1x x $\log^{10}$ rise), and if patients achieved complete virological suppression during the observed treatment period. Analysis was performed in STATA 13. The impact of MPR on virological outcomes was analysed as a continuous (t-tests) and categorical variable (difference of proportions, chi-squared or Fisher's exact test used).

Results: 643 individuals were included. Median age was 46.6 years, 68% were male, 77% were born in Asia. Of all patients, 45% had undetectable HBV DNA and 26% became undetectable, 15.5% experience a non-significant rise in viral load, and virological failure occurred in 2.6% of patients on antiviral therapy over the treatment period. Among patients with MPR ≥ 95%, 90–95%, 80-89%, and <80% the proportion who experienced virological failure over the treatment period was <0.6%, 3.8%, 8.33% and 11.3% respectively (p<0.000).

Conclusion: MPR is strongly associated with virological failure but not with other virological outcomes studied. Optimising adherence is important for preventing viral rebound, complications and development of viral antiviral resistance.

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