Hepatitis D testing patterns and prevalence in Australia: a retrospective statewide cohort study

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Background: Hepatitis D (HDV) – hepatitis B (HBV) coinfection is associated with a threefold higher risk of cirrhosis and hepatocellular carcinoma. We aimed to describe changing hepatitis D testing patterns and disease prevalence in Victoria state, Australia (~40,000 people with confirmed HBV in 2023).[1]

Methods: This retrospective observational cohort study included every adult aged >18 years who underwent anti-HDV antibody testing and HDV PCR testing in Victoria between January 1, 2010 and December 31, 2023. Testing numbers and proportion positive were described overall and stratified by year, age category and sex. Associations with anti-HDV positive status were assessed by chi square test and Mantel-Haenszel odds ratios calculated.

Results: 11,361 anti-HDV antibody tests were ordered in 10,048 adults in Victoria during the study period. Over half (56%) were male and mean age was 42.2 +/- 14.7 years. 500 anti-HDV antibody tests were positive and 50 had equivocal results, with a total of 498 anti-HDV antibody tests confirmed positive (4.3%) in 365 adults (3.6%). Of these, 210 adults (42%) who were anti-HDV Ab positive underwent HDV PCR testing and 72 (34%) were HDV RNA positive, consistent with active infection. 24 (33%) of HDV PCR positive adults had more than one PCR test during the study period. Of those who underwent HDV PCR testing, 48 (10%) did not have a HDV PCR test after their first positive anti-HDV antibody test, but after a repeat anti-HDV antibody test.

Conclusion: HDV-HBV coinfection is uncommon in Australia, with 1% of people with HBV tested having evidence of active HDV infection. However, major gaps in testing persist, with less than half of those who tested anti-HDV antibody positive having a HDV PCR test. Policy changes such as reflex HDV PCR testing for those who test anti-HDV antibody positive would significantly improve the HDV cascade of care.

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