Key Summary of Published Article

Hepatitis Delta and Chronic Hepatitis B
Testing in Patients With Chronic Hepatitis B

What do data from 2 large US cohorts reveal about hepatitis delta virus (HDV) testing patterns among adults with chronic hepatitis B (CHB)?

Background

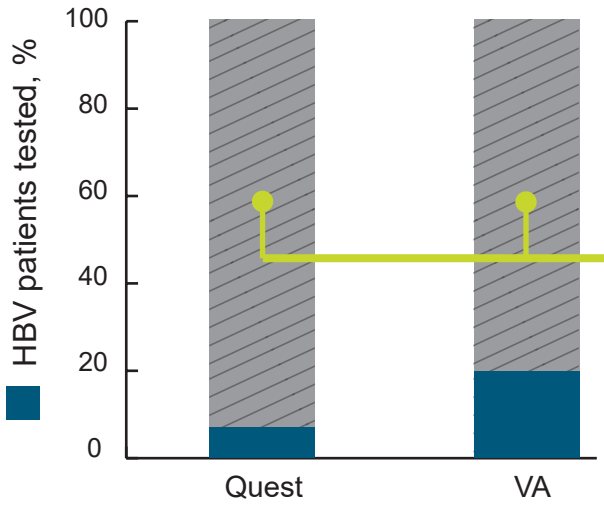
Hepatitis D is associated with liver-related deaths, and infection by the hepatitis D virus (HDV) occurs in people with hepatitis B. Unfortunately, there is little data from large studies that would reveal HDV testing patterns among US patients with CHB.

Methods

Testing for HDV infection among patients with CHB was assessed in a retrospective analysis that included data from the Quest Diagnostics laboratory database and Veterans Affairs (VA) Corporate Data Warehouse for 2010 through 2020.

Results

HDV testing in CHB patients



Study population:
CHB patients (Quest) = 157,333
CHB patients (VA) = 12,002

93.3% and 80.3% of patients with CHB were not tested for HDV.

2.2% (Quest) and 3.1% (VA) of those tested were positive for HDV.

Based on clinical laboratory data from 2 large US cohorts, HDV testing rates among patients with CHB were low.

1. Wong RJ, Kaufman HW, Niles JK, et al. Low performance of hepatitis delta virus testing among 2 national cohorts of chronic hepatitis B patients in the United States. *Am J Gastroenterol*. 2022;117(12):2067-2070. doi:10.14309/ajg.0000000000001947

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Hepatitis Delta and Chronic Hepatitis B
Testing in Patients With Chronic Hepatitis B

Article title: Low Performance of Hepatitis Delta Virus Testing Among Two National Cohorts of Chronic Hepatitis B Patients in the United States

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Background

- Hepatitis delta virus (HDV) infection in people with acute and/or chronic hepatitis B (CHB) infection increases the risk for liver-related complications (eg, cirrhosis, hepatocellular carcinoma).[1,2]
- One study reports the prevalence of coinfection at about 6% in US adults, which translates to an estimated 142,000 adults[3]; however, there is little data from large studies on HDV testing patterns among adults with CHB.
- **Objective:** The investigators of this study evaluated HDV testing patterns in 2 large US cohorts of adults with CHB.

Methods

- CHB in adult patients was identified from 2 data sources: 2016-2020 Quest Diagnostics clinical laboratory data and 2010-2020 Veterans Affairs (VA) data.
  - CHB was indicated by: (1) any 2 combinations of positive results from hepatitis B surface antigen, hepatitis B e antigen, or HBV DNA tests taken at least 6 months apart, or (2) 1 positive result in addition to 1 ICD-9/10 diagnosis code for CHB.
  - HDV infection was indicated by positive results from HDV total antibody (HDV Ab), HDV RNA, or IgM tests for the Quest cohort, and HDV Ab, HDV RNA, or HDV antigen tests for the VA cohort.
- HDV testing patterns among patients with CHB were evaluated; results were stratified within each cohort by sex, age, race/ethnicity, and risk for advanced fibrosis (ie, fibrosis-4 score [FIB-4]).

Results

- In the Quest cohort, CHB was identified in 157,333 patients.
  - Of these, 93.3% did not receive HDV testing (6.7% tested); 2.2% (95% CI, 1.9-2.6) of those tested were positive for HDV
  - Testing was more likely in men vs women (OR, 1.21; 95% CI, 1.15-1.27), patients aged 18 to 39 years vs ≥60 years (OR 1.64; 95% CI, 1.52-1.76), and in patients with the highest risk (FIB-4>3.25) for advanced fibrosis (OR 2.30; 95% CI, 2.08-2.56).
- In the VA cohort, CHB was identified in 12,002 patients.
  - Of these, 80.3% were not tested (19.7% tested); 3.1% (95% CI, 2.4-3.8) of those tested were positive for HDV.
  - Testing was more likely in patients aged 18 to 39 years vs ≥60 years (OR 1.53; 95% CI, 1.31-1.78), and in Asian Americans vs non-Hispanic white (OR, 1.23; 95% CI, 1.05-1.45).

Conclusions

- Based on clinical laboratory data, low rates of HDV testing were observed in 2 large US cohorts of adult patients with CHB.
- Raising awareness of HDV and CHB co-infection, improving the availability of HDV testing, and updating HDV testing guidelines to provide more clarity could help address these low rates.

References

1. Yurdaydin C, Idilman R, Bozkaya H, et al. *J Viral Hepat*. 2010;17(11):749-756. doi:10.1111/j.1365-2893.2010.01353.x
2. Kamal H, Fornes R, Simin J, et al. *J Viral Hepat*. 2021;28(10):1431-1442. doi:10.1111/jvh.13577
3. Stockdale AJ, Kreuels B, Henrion MYR, et al. *J Hepatol*. 2020;73(3):523-532. doi:10.1016/j.jhep.2020.04.008