THE DECOMPENSATED CIRRHOSIS IN HEPATITIS C EVALUATION QUESTIONAIRRE (DCHEQ) TO STREAMLINE HCV TREATMENT

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Background:
Test-and-treat strategies may lower barriers to hepatitis C (HCV) treatment. However, few tools exist to stratify decompensated cirrhosis risk without labs or imaging, limiting test-and-treat implementation. This case-control study describes the test characteristics of a new survey, the Decompensated Cirrhosis in HCV Evaluation Questionnaire (D-CHEQ), which predicts the presence of decompensated cirrhosis without labs or imaging.

Methods:
A cohort of 1743 participants received HCV treatment recommendations as part of an urban elimination program between 2017 and 2022. Cases were HCV RNA-positive and prescribed a 24-week or ribavirin-containing direct acting antiviral regimen for decompensated cirrhosis. Controls were randomly selected from the remaining cohort. Participants without sufficient documentation of alcohol history or liver disease were excluded. Reviewers assigned scores for each survey item based on documentation at the time of treatment: age (>40=2 points; ≤40=1 point); recent heavy alcohol consumption (active=3 points, use > 30 days=2 points; use > 90 days= 1 point); lifetime heavy alcohol consumption (yes=2 points; no=1 point); and history of cirrhosis and/or symptoms of decompensated cirrhosis (yes=8 points, no = 1 point). Advanced fibrosis was defined as Fibrosis-4 score >3.25 or cirrhosis on imaging. The study was powered to detect decompensated cirrhosis with 80% specificity at the maximum sensitivity, and 95% confidence interval of 70-90%.

Results:
35 cases and 129 controls were reviewed. Participants were predominantly male (64.6%) with average age 47 years. Mean D-CHEQ was higher among cases (14.2 vs. 5.5; $p<0.0001$). The area under the curve was 0.99. At a cut-off of ≥8, D-CHEQ predicted decompensated cirrhosis with 100% sensitivity and 89% specificity and advanced fibrosis with 92% sensitivity and 90% specificity.

Conclusions:
The D-CHEQ predicts decompensated cirrhosis with excellent discrimination in the derivation cohort. Prospective validation incorporating diverse populations is needed to demonstrate external validity. D-CHEQ may allow safe/effective HCV treatment without fibrosis assessment.

Disclosure of Interest Statement:
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