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Prevalence of gallbladder disease among persons with hepatitis C virus infection in the United States.

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Abstract

Although cirrhosis is a known risk factor for gallstones, little is known about gallbladder disease (GBD) in individuals with hepatitis C virus (HCV) infection. We determined the association between chronic HCV infection and GBD in a representative sample of adults in the United States. Data on HCV infection and GBD were available for 13,465 persons 20 to 74 years of age who participated in the Third National Health and Nutrition Examination Survey. The presence of GBD (gallstones or cholecystectomy) was determined using abdominal ultrasonography, and HCV infection was assessed via a positive HCV antibody test and a positive HCV RNA test. Overall, 1.6% of adults (95% CI, 1.1-2.1) had chronic HCV infection and 12.5% (95% CI, 11.3-13.7) had GBD. After adjusting for potential confounding variables, the odds of gallstones (OR = 3.20; 95% CI, 1.08-9.45) and cholecystectomy (OR = 4.57; 95% CI, 1.57-13.27) among HCV-positive men was significantly higher compared with HCV-negative men. In contrast, the adjusted odds of gallstones (OR = 2.55; 95% CI, 0.58-11.25) and cholecystectomy (OR = 0.70; 95% CI, 0.21-2.37) among HCV-positive women was not significantly higher. The odds of GBD increased significantly with the severity of liver disease as assessed via elevated serum bilirubin levels and low levels of serum albumin and platelets. In conclusion, chronic HCV infection was strongly associated with GBD among men but not women in the United States, and GBD was more common in adults with severe liver disease.

HCV infection is a risk factor for gallstone disease in liver cirrhosis: an Italian epidemiological survey.

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Abstract

We assessed the prevalence of gallbladder disease (i.e. gallstones plus cholecystectomy) among patients with liver disease and its association with the severity and aetiology of hepatic injury. Subjects, referred to 79 Italian hospitals, were enrolled in a 6-month period. The independent effect of the severity and aetiology of liver disease on gallstone disease prevalence was assessed by multiple logistic regression analysis. Overall, 4867 subjects tested anti-hepatitis C virus (HCV) positive alone, 839 were hepatitis B virus surface antigen (HBsAg) alone, and 652 had an excessive alcohol intake. The prevalence of gallstone disease was 23.3% in anti-HCV-positive patients, 12.4% in HBsAg positive and 24.2% in subjects reporting excessive alcohol intake, respectively. Gallstone disease prevalence increased by age in each aetiological category. The proportion of patients with gallstone disease who had a cholecystectomy was the highest in HCV+ subjects. After adjusting for the confounding effect of age and body mass index, compared with patients with less severe liver disease, subjects with HCV-related cirrhosis, but not those with alcohol-related cirrhosis, were more likely to have gallstone disease. Subjects with HCV-related cirrhosis (OR 2.13, 95% CI: 1.38-3.26) were more likely to have gallstone disease when compared with those with HBV-related cirrhosis. HCV infection is a risk factor for gallstone disease. In Italy, the high prevalence of HCV infection among cirrhotic patients has important implications, as cholecystectomy in these subjects is associated with high risk of morbidity and mortality.

Hepatitis C virus infection is a risk factor for gallstone disease: a prospective hospital-based study of patients with chronic viral C hepatitis.

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Abstract

We evaluated the prevalence and the risk factors for gallstone disease in patients with chronic hepatitis C infection. We investigated 453 consecutively admitted patients with chronic infection with hepatitis C virus (HCV) (cirrhosis excluded) and 879 patients without liver disease (October 2006-April 2007). Gallstone disease was diagnosed if gallstones were present at ultrasonography or if there had been a previous cholecystectomy. Variables evaluated were age, gender, gallstone heredity, body mass index, waist circumference, parity, serum lipids, fatty liver, arterial hypertension, diabetes mellitus and metabolic syndrome (International Diabetes Federation criteria). Informed consent was obtained from all patients. We found that 88 of 453 (19%) patients with chronic HCV hepatitis (age 50.1 +/- 11.7 years) and 153 of 879 (17%) controls (age 60.6 +/- 12.6 years) had gallstone disease (GD). Abdominal obesity (OR = 2.108, 95% CI 1.287-3.452) and steatosis (OR = 3.699, 95% CI 2.277-6.008) were risk factors for GD in HCV patients. Gallstone heredity, dyslipidaemia, type 2 diabetes mellitus and metabolic syndrome increased the risk for GD in controls vs HCV patients. Our study shows that even HCV patients with chronic hepatitis but not cirrhosis have an increased prevalence of gallstones. Compared with controls, gallstones are present in HCV patients at a younger age and are associated with central obesity and liver steatosis, but not with gallstone heredity, dyslipidaemia, diabetes mellitus or metabolic syndrome. Although we could not establish a temporal relationship, the association between HCV infection and gall stone disease is real and appears to be causally linked, at least in predisposed individuals (obese and with liver steatosis)