USEFULNESS OF HIDA SCAN FOR THE DIAGNOSIS OF CHRONIC CHOLECYSTITIS IN PATIENTS WITH A HISTORY OF LYME DISEASE

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Introduction

In our community-based practice, we observed that a large proportion of patients with chronic symptoms of gallbladder pathology and a history of Lyme disease failed to show evidence of cholelithiasis, sludge or gallbladder wall thickening on ultrasound examination. In this retrospective analysis of our 5-year experience, we aimed to determine the value of performing a HIDA scan to reach an accurate diagnosis in this patient population and we report on symptom resolution following cholecystectomy.

Methods

Between June 2014 and July 2019, 61 patients (87% females, mean age 32) with a history of Lyme disease and symptoms consistent with gallbladder disease underwent laparoscopic cholecystectomy. A retrospective chart review was undertaken, and descriptive statistics were reported for all available data. McNemar's test, Chi-square, and/or Fisher's exact test were used where appropriate for cohort comparison and symptom resolution analysis with $P<0.05$ considered statistically significant.

Results

Preoperatively, 84% (51/61) had normal gallbladder findings on ultrasound, while 16% showed at least one pathologic finding such as cholelithiasis (5/61, 8%), sludge (1/61, 2%), gallbladder wall thickening (3/61, 5%) and hepatobiliary ductal dilatation (2/61, 3%). On HIDA scan, 21% (13/61) had biliary dyskinesia (EF < 38%). Reproduction of symptoms occurred in 77% (44/57) of all patients receiving cholecystokinin (CCK), and 84% (37/44) of those with a normal EF (>38%). Microscopic histology demonstrated presence of chronic cholecystitis in 89% (54/61) of resected gallbladder specimens. With a median follow-up of 17.7 months (5.3-26.1), nausea resolved in 60% (34/57), abdominal pain in 72% (39/54), vomiting in 89% (25/28), bloating in 75% (21/28), and postprandial discomfort in 96% (22/23), all $P<0.01$.

Conclusions

Our study demonstrates that abdominal ultrasound is an unreliable diagnostic modality in patients with a history of Lyme disease who present with biliary symptoms. In our series, 92% of patients had absent cholelithiasis and may have been misdiagnosed or suffered delay in treatment without further investigation. Performing a HIDA scan, with attention to the reproduction of symptoms with CCK provocation, is critical in selecting patients for cholecystectomy. By following this guideline, 89% of operated patients in our series had histologic evidence of chronic cholecystitis and a large majority enjoyed durable resolution of biliary symptoms.

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