

Title: Two for the Price of One: Concurrent Diagnoses of Biliary Dyskinesia and Gastroparesis in Children

N. Applebaum¹, M. Michel¹, S. Islam¹

¹University Of Florida, Pediatric Surgery, Gainesville, FL, USA

Background: Biliary dyskinesia (BD) and gastroparesis (GP) are both poorly understood functional disorders involving the foregut that can cause substantial issues in children with chronic pain and nausea. Both diagnoses have similar presentations and symptoms, which may result in confusion, and surgical treatment of either condition frequently results in recurrent problems, which is frustrating to both patients and surgeons. The purpose of this study is to present and discuss patients who had both diagnoses occurring, and to highlight the potential for management.

Methods: Patients who had either undergone a cholecystectomy for BD or stimulator placement for GP were included over a 13-year period. Those who had both diagnoses occur in a metachronous or synchronous fashion were selected for further analysis, and clinical variables on their course were collected and analyzed. Descriptive statistics were performed.

Results: Of the 32 patients identified, 21 had an initial diagnosis of GP (65.63%) while 11 had that of BD (34.38%). Mean age at initial diagnosis was 15.44 years (+/- 3.37), with 93.75% being female. Average time between the initial and secondary diagnosis was 457.47 days (+/- 826.55). Mean ejection fraction on CCK-HIDA was 30.67% (+/- 34.4) and 24 patients had symptom reproduction with CCK (75.0%). Gastric Emptying tests were noted to be moderate to severely delayed in 78.13% of cases, with an average half time emptying of 130.08 minutes (+/- 60.41). The etiology of GP was idiopathic in 25/32 cases, with 9 patients having stimulators implanted after a successful temporary trial. Over half of recurrences were noted within 6 months of either cholecystectomy or placement of gastric electrical stimulator (GES). All patients responded to the secondary intervention and at last follow up (average 813.61 days (+/- 796.69)), had improvement in their overall symptom scores using the gastroparesis index.

Conclusion: Functional foregut disorders (BD and GP) have similar symptoms and recurrence after surgical management occurs. While persistent symptoms may suggest a recurrence in these cases, these data suggest that further evaluation should include testing for the other diagnosis before considering the patient to have failed from their initial intervention (cholecystectomy or gastric stimulator). Substantial and maintained improvement in children can be obtained from the secondary procedure. Patients and families should be educated regarding the potential for secondary diagnoses. Further understanding of these functional disorders is needed in the future to help improve outcomes.