Answer

Jejunal Diverticulum With Localized Abscess

Jejunal diverticula (JD) are uncommon and are usually asymptomatic; however, they can lead to obstruction, hemorrhage, and perforations. True incidence is hard to determine given their anatomic site and relative difficulty to confirm. An enteroclysis study of 520 subjects placed the incidence at 2.0% to 2.3%.[1-3] Most patients are in their sixth or seventh decade of life.[3,4] Patients with JD also have an increased incidence of diverticula elsewhere in the gastrointestinal tract. Makris et al[2] summarized multiple studies that have shown incidences to be 2% in the esophagus, 2% in the stomach, 15% to 42% in the duodenum, and 30% to 75% in the colon.

These "false" diverticula are thin-walled sacs consisting of mucosa and submucosa and thin serosa, in contrast to true Meckel diverticula, which consist of mucosa and submucosa with the additional muscular layer, hence being "true" diverticula with all 3 intestinal layers. Jejunal diverticula follow the entry point of the vasa recta into the gastrointestinal tract lumen,[3,4] which represents the path of least resistance for the diverticulum. It is thought that JD are acquired from increased intraluminal pressures.[3,4] The etiology of increased intraluminal pressure is most likely multifactorial. In a small series, degeneration of the smooth muscle and the myenteric plexus were present in patients with JD.[5] Histological analysis revealed neuronal and axonal degeneration with neuronal intranuclear inclusions that were postulated to be a subclinical presentation of systemic sclerosis or visceral neuropathy and could explain the multiple locations of diverticula in some individuals.[2,5]

Most JD are asymptomatic; an estimated 40% to 60% are incidentally found.[4,6] For incidentally found diverticula, 82% of patients remained asymptomatic at a mean follow-up of 4.8 years.[6] When found incidentally, JD will appear as discrete, round, contrast-, fluid-, or air-filled structures protruding out of the small intestine with a very thin wall.[7] On computed tomography, an inflamed diverticulum will appear as a focal inflammatory process adjacent to a loop of jejunum.[8] This finding is nonspecific and could represent other etiologies including neoplasms, focal Crohn disease, or foreign body perforation.[8] Current literature supports expectant management of incidentally found JD.[3,6] Jejunal diverticula that are symptomatic can be grouped into 3 presentations: chronic pain, diverticulitis, or obstruction. Symptoms can present as vague and chronic abdominal pain, which localizes to the epigastrium or periumbilically in 40% to 60% of patients.[6,9,10] If symptoms are thought to be due to JD, a trial of broad-spectrum antibiotics and hydration may improve symptoms. Patients managed conservatively with medical therapy, similar to colonic diverticular management, will need resection in 46% of cases.[6]

Approximately 15% to 18% of patients will present with acute symptoms.[3,6,11] Symptoms typically include those related to hemorrhage, obstruction, or diverticulitis.[11] Hemorrhage can result in hypotension, abdominal pain and melena, or hematochezia and can be quite profound.[2-4,12] Obstruction can be partial or complete and may act as a nidus of volvulus formation.[2,4,10,12] Diverticulitis with perforation is the most common complication of JD and can occur with or without abscess formation; it accounts for 33% to 55% of all JD-related complications. Symptoms of diverticulitis are generally nonspecific and may include sharp pain, fever, nausea, vomiting, or obstipation.[11] This occurs in 2% to 6% all of JD cases[3,13] Given the lack of specific examination findings, most cases are diagnosed with computed tomographic findings of abscess formation or perforation. Since the mortality of perforation ranges from 21% to 40%, emergent surgery is indicated.[3] Surgical resection and primary anastomosis is both diagnostic and therapeutic for patients with JD.[3] The surgical mortality rate for resection with primary anastomosis with laparotomy is reported at 14%.[2,4,13] In retrospective analysis of 50 patients, it has been demonstrated that a long lag time to surgery can lead to worse outcomes, and as such, a thorough workup should be completed if there is any suspicion of JD.[14] Less aggressive forms of surgical treatment such as simple closure, excision, or invagination are discouraged. These procedures have been associated with close to 3 times the mortality rate.[4,10,13] Recently, laparoscopy with resection and primary reanastomosis has been reported with success, but no large series have been reported to date.[15,16] A careful inspection of the intestines should be performed since the lesions may be multiple.

In conclusion, JD, while uncommon, have significant acute and chronic manifestations associated with high morbidity and mortality. Though expectant management is reasonable, asymptomatic patients should be made aware of their diagnosis and told to seek medical attention for abdominal pain or change in bowel habits. With increased awareness of JD, earlier diagnosis and recognition of symptoms may improve morbidity and mortality.

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