

DUODENAL CROHN'S DISEASE

Introduction

- CD can occur anywhere in the GI tract from the mouth to anus
- Most commonly occurs in the terminal ileum and colon
- Typically insidious onset and a progressive course, but occasionally presents in an acute, fulminant manner
- Duodenal involvement is uncommon
 - Reported incidence ranges from 0.5% to 4.0% in persons with diagnosed CD
 - Median age of onset of symptomatic DCD ranges from 22-26 in reported series
 - Largest published series is of 89 patients collected b/w 1952-1986 from the Lahey Clinic
- Primary vs. Secondary DCD
 - Primary – only the duodenum is involved
 - Secondary – duodenal involvement with CD elsewhere in the intestine
- >90% of patients with duodenal CD have or eventually develop extraduodenal disease
- In a series of 89 patients, only 8% had isolated duodenal involvement at the end of an 11-year follow up. (Nugent and Roy, *J of Gastroenterology* 1984)
- >50% of patients have known disease elsewhere in the intestine before the discovery of DCD
- the incidence of asymptomatic duodenal CD in patients with known distal disease may be much higher than previously anticipated
 - Oberhuber et al. (1998) – histological duodenal involvement in 12.1%
 - Wright and Riddell (1998) – 75% of 205 patients with distal disease had abnormal upper GI bxs

Diagnosis

- Careful H&P is most important
- Most common symptoms:
 - Abdominal pain, weight loss, post-prandial N/V, early satiety (60%), upper GI bleeding (<20%), massive hemorrhage (very rare), pancreatitis secondary to PD obstruction due to duodenal scarring and inflammation (very rare)
- Differential Diagnosis: PUD, neoplasia, lymphoma, tuberculosis, sarcoidosis, eosinophilic gastroenteritis
 - Most commonly misdiagnosed as PUD
- *Upper GI contrast studies* – often nonspecific but show abnormalities in >90% of pts.
 - Deformities of the duodenal bulb, irregular mucosal thickening, edema, ulceration, nodularity, cobblestoning, segmental duodenal narrowing or “string sign” (Murray et al. 1984, *Am J Surg*)
 - A barium UGI study is essential before surgery in order to assess the extent of involvement, the amount of gastric outlet obstruction, and whether there are “skip” lesions in the jejunum
- *EGD* – 95% will have abnormal findings

- Diffuse granularity, irregular mucosal thickening, nodular cobblestone mucosa, and aphthous ulcers, linear ulcers, luminal stenosis, lack of antral and duodenal distensibility, notching of the Kerckring's folds
- Biopsy:
 - granulomas are seen in roughly 15-20% of specimens (study dependent)
 - may be non-specific but are necessary to rule out neoplasia/malignancy

Location of Disease

- Most common distribution of gastroduodenal CD is contiguous involvement of the gastric antrum, pylorus and proximal duodenum
- Gastric sparing occurs in 40% of patients (Nugent and Roy, *J of Gastroenterology* 1984)
- Distal duodenal involvement is uncommon and usually occurs in association with proximal jejunal disease

Medical Management

- the use of common IBD drugs (ant-inflammatories, immunomodulators)
- medical therapy is the treatment of choice without evidence of obstruction
- acid suppression for symptom relief

Surgical Management

- most common indications for surgery
 - stenosis and progressive obstruction (70-80%)
 - intractable pain
 - bleeding
 - fistulas
- operative intervention is usually required in >1/3 of affected patients
 - Lahey Clinic – 37% of the 89 pts required an operation
 - Murray et al. – 38.5% of the 70 pts required an operation
- (1) *Bypass w/ and w/o resection*
 - Gold Standard: lap bypass w/o resection of diseased segment via gastrojejunostomy
 - Increased morbidity with resection vs. leaving diseased portion in situ
 - Malignant degeneration is rare, but has been reported
 - 1st portion – gastrojejunostomy with vagotomy
 - 3rd-4th portions – duodenojejunostomy w/o vagotomy
 - Vagotomy minimizes the risk of marginal ulceration
 - Vagotomy can exacerbate diarrhea in CD patients
- (2) *Stricturoplasty*
 - Worsey et al. at the Cleveland Clinic
 - Symptom relief equivalent
 - Reoperation rate was equivalent
 - Lower morbidity
 - Stricturoplasty offers anatomic and physiologic advantages over bypass
 - Yamamoto et al. from Birmingham, UK

- Complicated by anastomotic leaks, persistent early obstruction, late stricturing
- stricturoplasty is associated with a high incidence of post-operative complications and restructure
- While most duodenal strictures are amenable to stricturoplasty, short proximal fibrotic strictures are most suitable
- Distal strictures may require extensive careful duodenal mobilization
- Contraindications:
 - Acute inflammation
 - Periduodenal phlegmon
 - Dense scarring

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