

Characterizing Abdominal Pain in Patients with Gastroparesis

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Introduction

- Patients with gastroparesis typically present with nausea, vomiting, and early satiety
- Abdominal pain is a frequent, though misunderstood, symptom of gastroparesis
- In patients with gastroparesis whose predominant symptom is abdominal pain, other causes of abdominal pain (including chronic pancreatitis and porphyria) should be sought

Aims:

- 1) To characterize the abdominal pain in patients with diabetic and idiopathic gastroparesis
- 2) To determine if chronic pancreatitis and/or chronic porphyria may explain the abdominal pain in a proportion of patients

Methods

Patients with gastroparesis diagnosed by gastric emptying studies filled out standardized questionnaires assessing their symptoms

Patients who reported abdominal pain went on to fill out questions that assessed the characteristics of their pain and underwent further testing (serum trypsin, amylase, lipase, urine porphyrins, and urine porphobilinogen) as screening tests for chronic pancreatitis and porphyria

Results

158 patients filled out questionnaires
 88.6% women
 Average age (years): 45.7
 Average BMI: 26.9
 86 patients (54.4%) reported abdominal pain as a symptom
 Most common locations:
 Periumbilical (38.6%)
 Left upper quadrant (22.9%)
 Frequency:
 Constant pain (73.2%)
 Those with acute exacerbations → (91.5%)
 Severity (scale: 0-4, with 0 = none to 4 = severe):
 Constant pain: 2.94
 Acute exacerbations: 3.07

Alleviating/aggravating factors:
 Worsened by eating (78.2%)
 Improved by pain medications (53.9%)

DM vs non-DM:
 No difference in prevalence of abdominal pain (53% vs 56%, $p = 0.807$)
 No difference in severity of abdominal pain (3.13 vs 2.89, $p = 0.78$)

Porphyria:
 One patient with abdominal pain had a slight elevation in urine porphyrins (227.1 mg/L) and one had elevated urine PBG (4.1 mg/L)

Chronic pancreatitis:
 None of 45 patients (0%) with abdominal pain had low trypsin levels (< 30 mg/L)
 No correlation found between serum trypsin and pain severity ($r = 0.114$; $p = 0.46$)

Discussion

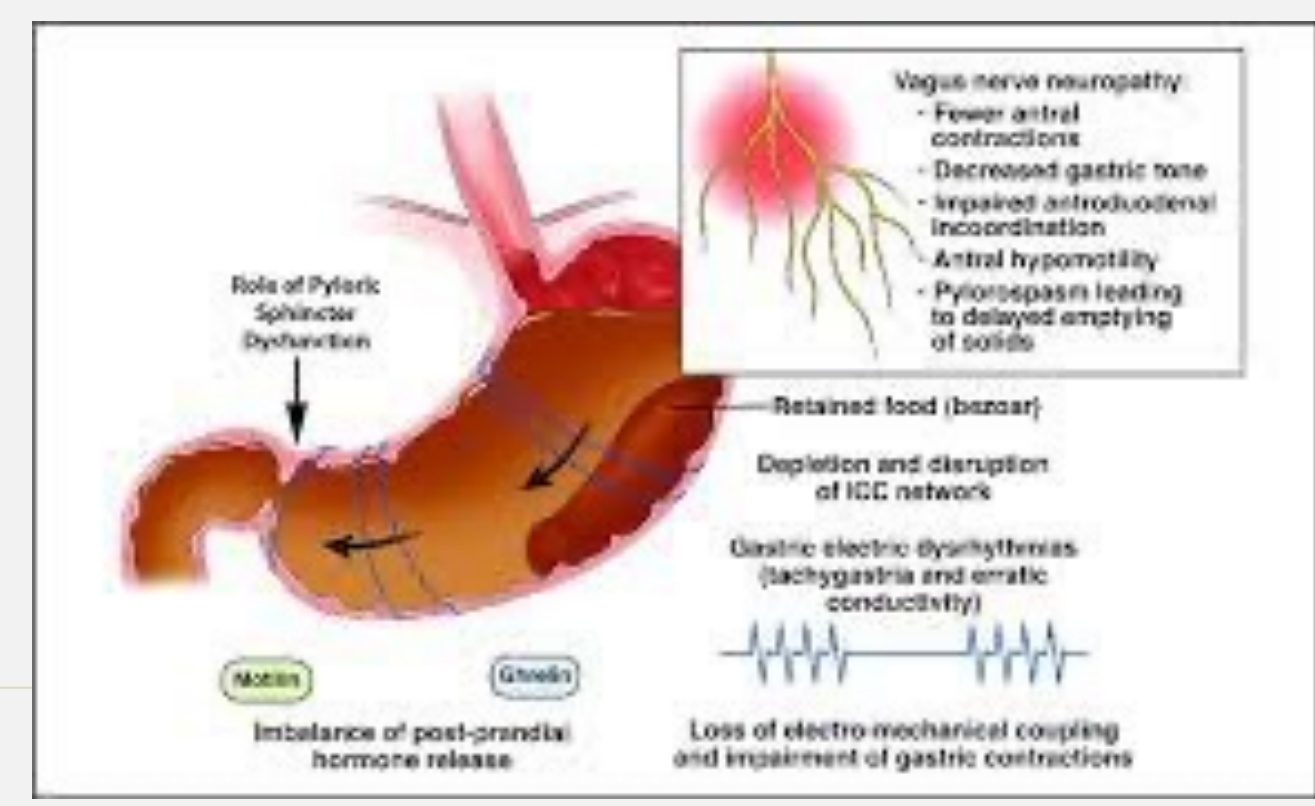
Abdominal pain was present in the majority of patients with gastroparesis and most frequently characterized by continuous pain with intermittent episodes of worsening pain

Pain frequently exacerbated by eating and relieved by pain medications and rest

No significant difference in abdominal pain characteristics between DM and non-DM patients

Abnormal pancreatic enzyme and urine porphyrin levels were uncommon among gastroparesis patients and did not correlate with severity of symptoms

Upper abdominal pain is frequent in patients with gastroparesis, though cause remains largely unknown



References

•Parkman HP, Wilson LA, Hasler WL, McCallum RW, Sarosiek I, Koch KL, Abell TL, Schey R, Kuo B, Snape WJ, Nguyen L, Farrugia G, Grover M, Clarke J, Mirell L, Tonascia J, Hamilton F, Pasricha PJ. Abdominal Pain in Patients with Gastroparesis: Associations with Gastroparesis Symptoms, Etiology of Gastroparesis, Gastric Emptying, Somatization, and Quality of Life. Dig Dis Sci. 2019 Aug;64(8):2242-2255.

