

CASE REPORT

IDIOPATHIC GASTROPARESIS

Bader Faiyaz Zuberi, Muhammad Saeed Quraishy,* Nabiha Faisal and Shahid Ahmed

ABSTRACT

This case report describes a young female with idiopathic gastroparesis, who presented with persistent vomiting and weight loss. Treatment with erythromycin and tegaserod led to the recovery from symptoms and weight gain.

KEY WORDS: *Idiopathic. Gastroparesis. Conservative management.*

INTRODUCTION

Normal gastric emptying reflects a coordinated effort between different regions of the stomach and the duodenum as well as extrinsic modulation by central nervous system and distal gut factors.¹ The events required for normal gastric emptying include relaxation of stomach to accommodate food and pyloric relaxation to allow food to pass down the duodenum. A well-coordinated action of antro-pyloro-duodenum is essential for proper gastric emptying.² Disorders of gastric motility can result in a variety of symptoms of varying severity.³ Here an interesting case of idiopathic gastroparesis is presented along with its management and review of literature.

CASE REPORT

A 34 years old female presented with persistent vomiting and weight loss for 4 months. Vomiting was projectile, occurred after meals, was usually foul smelling and sometimes contained undigested food taken a day earlier. Patient also had epigastric pain and lost 12 kg during this period. Examination revealed normal vitals in general examination. Abdominal examination showed asymmetrical shape with swelling involving epigastric and left hypochondric region. Palpation revealed soft mass corresponding to the swelling with presence of succussion splash. Rest of examination was normal.

The hematological profile, blood sugar, urea, creatinine, electrolytes, LFTs, TSH, serum calcium and serum albumin were normal. Barium meal showed huge dilated stomach with no flow in duodenum in 15 minute film, Figure 1. The 6 hours film showed significant amount of barium in the stomach as shown in Figure 2. These findings were suggestive of gastroparesis. His upper GI endoscopy after 8 hours fasting was unsuccessful as stomach contained lot of food material.

Endoscopy was repeated after 12 hours fasting with passive naso-gastric tube aspiration for the said duration. The tube was taken out in endoscopy room after active aspiration.

Department of Medicine, Dow University of Health Sciences, Karachi.
*Department of Surgery, Dow University of Health Sciences, Karachi.

Correspondence: Dr. Bader Faiyaz Zuberi, C-404, Al-Habib Pride, CL-8/5, Civil Lines, Karachi. Email: bader@zuberi.com.pk

Received December 30, 2004; accepted: May 12, 2005.

Endoscopy revealed a dilated stomach with normal gastric and duodenal mucosa and no evidence of outlet obstruction. ANA and HbA_{1c} were also done and they were also normal.

Diagnosis of idiopathic gastroparesis was made and patient was put on erythromycin 250 mg t.i.d. and tegaserod 6 mg t.i.d. half hour before meals. Patient made excellent recovery. Her vomiting stopped and she was able to take liquid diets only for the first 6 weeks of therapy. Solid diets were introduced in the 7th week and she was able to tolerate it. She has also gained 4 kg weight in 3 months into therapy.

DISCUSSION

Gastroparesis is a symptomatic chronic disorder of the stomach characterized by delayed gastric emptying in the absence of mechanical obstruction. Symptoms of gastroparesis are nonspecific and variable and include early satiety, nausea, vomiting, bloating, and upper abdominal discomfort. Gastroparesis may mimic disorders like peptic ulcers, gastric outlet obstruction, chronic intermittent partial intestinal obstruction, gastric malignancy and pancreaticobiliary



Figure 1: Barium study at 05 minutes.

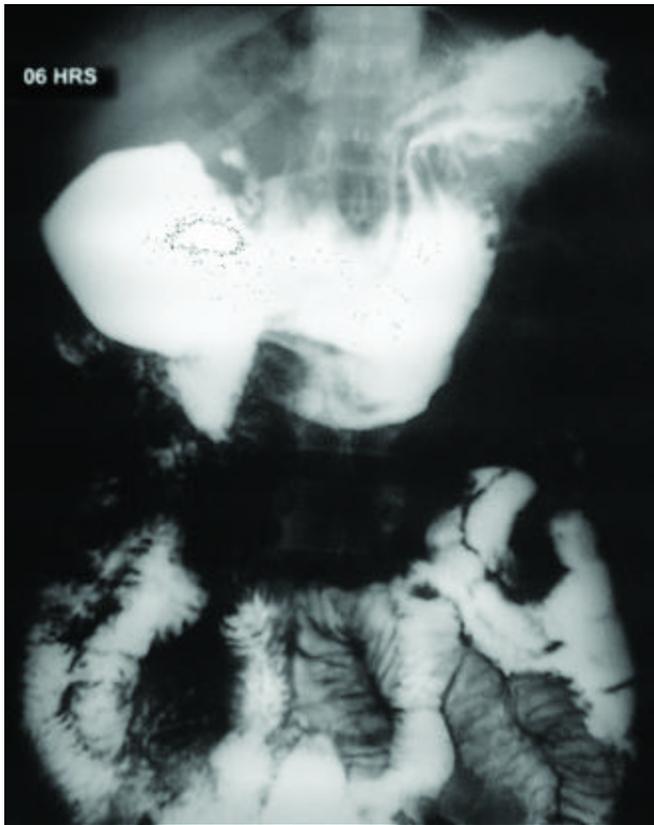


Figure 2: Barium study at 06 hours.

disorders. It has been reported to be more common in females especially during the luteal phase of the menstruation.² The proposed scheme of evaluation should cover the organic causes as well as delayed gastric emptying. Gastric emptying after solid meal is considered to be better than liquid meal testing. Gastric emptying scintigraphy of a solid phase meal using ^{99m}Tc sulphar colloid-labeled egg sandwich is considered gold standard as this gives physiologic caloric testing too.

Gastroparesis is a known complication of type-1 diabetes. Studies have shown its prevalence in type-1 diabetes at 25-55%.⁴ Clinical consequences may include alteration in drug absorption leading to disordered diabetic control, but the severity of symptoms does not correlate with the degree of gastric stasis.⁵ Common etiological causes of gastroparesis include diabetes, postsurgical, motility disorders, collagen disorders, infections, metabolic and endocrine disorders and drug-induced typtomotility. Exact cause of idiopathic gastroparesis is poorly known; some found reduction in myenteric ganglions and interstitial cells of Cajal while others suggested viral etiology.⁶

A similar case of gastroparesis was reported elsewhere where a 32-year-old lady presented with similar symptoms. She was initially managed on erythromycin and cisapride for 2 years

after which she became unresponsive to these agents and eventually she had to undergo total gastrectomy with a gastroenteric anastomosis of the "Roux-en-Y" type.⁶

While treating idiopathic gastroparesis, one should first try to correct the fluid, electrolyte and nutritional status.⁷ Diabetic patients should aim for proper glycemic control. Patient's medication list should be reviewed to exclude the agents that might exacerbate the disorder, e.g., opiates, anticholinergics, tricyclic anti-depressants, calcium channel blockers, proton pump inhibitors, H₂ receptor blockers, sucralfate, alcohol, tobacco and excessive fiber.⁸ Small frequent meals should be advised and liquid meals should be preferred over the solid meals. High fiber diets should be avoided as they tend to form bezoar. Prokinetic agents are the mainstay of management.⁹ These include metoclopramide, erythromycin, cisapride, domperidone and tegaserod. In stomach they increase antral contraction force, correct dysrhythmic contractions and perk up antroduodenal coordination. Prokinetics should be administered 30 minutes before meals. A nocturnal dose just before going to bed may be required in some patients. Treatment response is monitored on clinical round rather than serial gastric emptying tests as there is poor correlation between them.¹⁰

REFERENCES

1. Talley NJ, Shuter B, McCrudden G, Jones M, Hoschl R, Piper DW. Lack of association between gastric emptying of solids and symptoms in non-ulcer dyspepsia. *J Clin Gastroenterol* 1989; **11**: 625-30.
2. Soykan I, Sivri B, Sarosiek I, Kierran B, McCallum RW. Demography, clinical characteristics, psychological profiles, treatment and long-term follow-up of patients with gastroparesis. *Dig Dis Sci* 1998; **43**: 2398-2404.
3. Ahmed R. Management of dyspepsia. *Pak J Med Sci* 2004; **20**: 55-60.
4. Nowak TV, Johnson CP, Kalbfleisch JH, Roza AM, Wood CM, Weisbruch JP. Highly variable gastric emptying in patients with insulin dependent diabetes mellitus. *Gut* 1995; **37**: 23-9.
5. Jones KL, Russo A, Stevens JE, Wishart JM, Berry MK, Horowitz M. Predictors of delayed gastric emptying in diabetes. *Diabetes Care* 2001; **24**: 1264-9.
6. Zarate N, Mearin F, Wang XY, Hewlett B, Huizinga JD, Malagelada JR. Severe idiopathic gastroparesis due to neuronal and interstitial cells of Cajal degeneration: pathological findings and management. *Gut* 2003; **52**: 966-70.
7. Quigley EMM, Hasler W, Parkman HP. AGA technical review on nausea and vomiting. *Gastroenterology* 2001; **120**: 263-86.
8. Bujanda L. The effects of alcohol consumption upon the gastrointestinal tract. *Am J Gastroenterol* 2000; **95**: 3374-82.
9. Shamim SM, Ali SMM. Metoclopramide: a drug with versatile therapeutic uses. *Ann Abbasi Shaheed Hosp Kar Med Dent Coll* 2002; **7**: 256-62.
10. Talley NJ. Diabetic gastropathy and prokinetics. *Am J*





Gastroenterol 2003; **98**: 264–71.

