



CHALLENGING DIAGNOSIS: AN IDIOPATHIC GASTROPARESIS CASE PRESENTATION

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ABSTRACT

Idiopathic gastroparesis is a challenging condition characterized by delayed gastric emptying without an identifiable cause. This case report details the presentation, diagnostic process, and management of a 43-year-old male patient with idiopathic gastroparesis, aiming to contribute to the understanding and treatment of this complex disorder.

KEYWORDS : Idiopathic gastroparesis, Levosulpiride, Electrogastrography

INTRODUCTION

Gastroparesis, a condition characterized by delayed gastric emptying in the absence of any mechanical obstruction, presents a significant diagnostic and therapeutic challenge in clinical practice¹. This condition can lead to a wide array of symptoms, including nausea, vomiting, early satiety, and abdominal pain, which can severely impact a patient's quality of life². Symptoms often overlap with features of gastroesophageal reflux disease (GERD) and other gastrointestinal (GI) motility disorders³. Understanding and managing idiopathic gastroparesis requires a multidisciplinary approach and a thorough evaluation to rule out secondary causes. This case report presents a detailed analysis of a patient with idiopathic gastroparesis, and highlights the diagnostic process, management strategies, and clinical complexities associated with this elusive disorder. By examining this case, we aim to contribute to the body of knowledge surrounding idiopathic gastroparesis and provide insights that may aid in the diagnosis and treatment of future patients.

Case Report

Presentation

A 43-year-old male patient with no prior medical conditions came to the hospital with complaints of:

- Loss of appetite, feeling of fullness, and indigestion for the past 3-4 years.
- Weight loss of 15 kg over the last 2.5 years.
- Stomach pain, mainly in the upper abdomen, for the past 1 year.
- History of H. pylori infection that was successfully treated 2 years ago.
- History of Covid infection back in Feb/2021
- The patient did not have any history of gastrointestinal bleeding, bowel movement issues, fever, or cough. His vital signs were stable.

Investigation:

Investigation	Results
Hemoglobin (12.0- 15.0 g/dl)	13.8 g/dL
White blood cell (4000-1000 cells/cumm)	6100
Platelet (150,000-450,000/cumm)	319000
Serum calcium (8.5-10.5 mg/dl)	9.2
Phosphorus Inorganic (2.3-4.7 mg/dL)	4.38

Serum creatinine (0.7-1.3 mg/dl)	1.09
Serum Albumin (3.5- 5.5 gm/l)	4.68
SGPT (<40 IU/L)	16
Serum CRP (mg/dL)	3.9
BILIRUBIN TOTAL (0.30-1.20 mg/dL)	0.90
TSH (0.4-4.94 microIU/mL)	1.155
Parathyroid Hormone Intact (15.0-68.3 pg/dL)	32.6
HIV/HBV/HCV ag	Negative
Endomysial Antibody IgA	Negative
Tissue Transglutaminase Antibody IgA (U/mL) (< 12 Negative, 12-18 Equivocal, > 18 Positive)	0.19
Electrogastrography	• Neuromuscular Dysfunction and ICC deficiency (<5/hpf) with abnormal Gastric Myoelectric Activity
Barium meal with follow through study	• Revealed an enlarged stomach with a J-shaped appearance. • Normal movement of barium from the stomach to the small intestine. • No signs of obstruction in the stomach or small intestine.
Upper GI endoscopy with biopsy, H pylori	• Ruled out any structural problems or the presence of H. pylori. • Duodenal biopsy/ histopathology showing no findings of Celiac Disease.
CT Abdomen with Contrast	• Normal appearance of the angle between the aorta and superior mesenteric artery, excluding the possibility of superior mesenteric artery syndrome.

• No other abnormalities were found.

ICC: Interstitial cells of Cajal

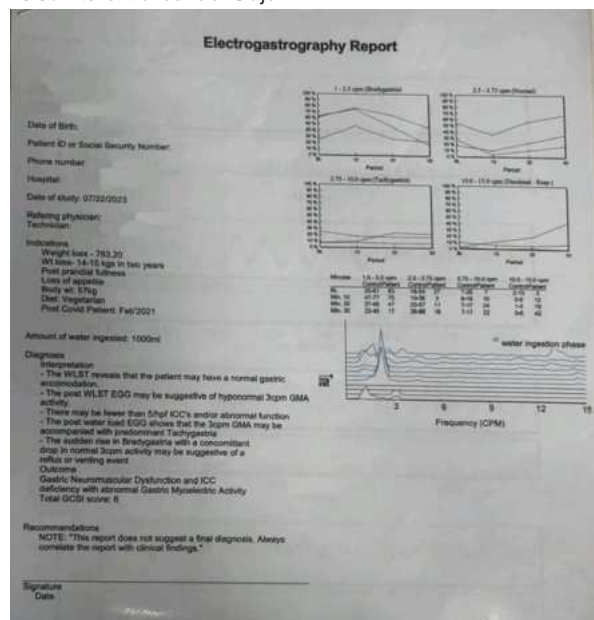


Figure 1 : Gastroparesis Cardinal Symptoms Index (GCSI) Score : 6 (can range from 0-5 with higher score reflecting greater symptom severity)

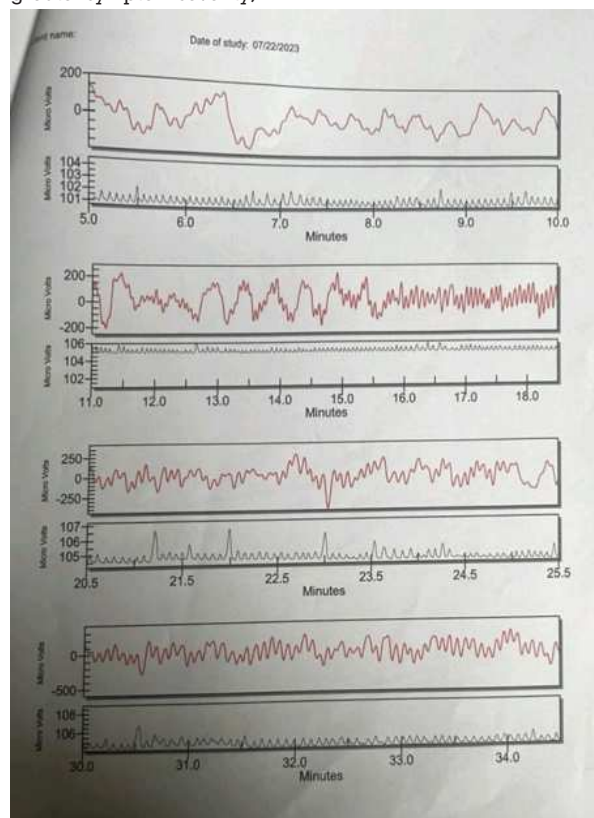


Figure 2 : Recording of Gastric Myoelectrical Activity using cutaneous electrodes placed on the abdominal skin over the stomach.

Treatment and Follow-Up

The patient was advised to implement dietary modifications such as eating smaller meals more frequently (about 5-6 times a day), no spicy food, low fat diet along with adequate hydration and light physical activity. In addition, he started

Levosulpiride 25 mg three times a day half an hour before the meal. After 5 months, he was advised to take the drug intermittently (on 4 weeks and off 4 weeks) to mitigate potential side effects.. Since starting the first dose of Levosulpiride, abdominal fullness resolved considerably, and appetite improved. Consequently, he regained 8 kg in the last year, with a resolution of earlier symptoms.

On follow up, with one year of treatment, his symptoms are managed with only dietary modification and he no longer feels the need of medication. No adverse effect of medication was noted during this period. Regular follow-ups and weight monitoring are recommended for a better recovery.

DISCUSSION

Idiopathic gastroparesis is a diagnosis made when other possible causes of delayed gastric emptying have been ruled out. In this patient's case, a past infection with H. pylori, though treated, might have contributed to the development of gastroparesis. However, no direct link could be established, leaving the cause of the condition unexplained.

The management of idiopathic gastroparesis focuses primarily on symptom relief, as there is no cure for the underlying motility issue. The goal is to improve the stomach's ability to move food through the digestive tract and to control symptoms like nausea and fullness. In this case, Levosulpiride, a medication that increases gastric motility, was effective in relieving the patient's symptoms.⁴ The patient's quality of life improved significantly after starting the medication, and he was able to regain the weight he had lost. This case also emphasizes the importance of careful evaluation in diagnosing idiopathic gastroparesis. Ruling out other potential causes, such as mechanical obstructions, metabolic disorders, and neurological conditions, is crucial. Only after a thorough investigation can idiopathic gastroparesis be diagnosed.⁵

Long-term use of prokinetic agents like Levosulpiride can have side effects, so intermittent use or dose adjustments may be necessary.⁶ Regular follow-up is crucial for monitoring the patient's response to treatment and making any necessary adjustments.

CONCLUSION

Idiopathic gastroparesis is a challenging condition to diagnose and treat because its cause is unknown. A thorough and systematic evaluation is necessary to exclude other possible causes of delayed gastric emptying.⁷ Once diagnosed, treatment focuses on managing symptoms and improving the patient's quality of life.

This case highlights the potential benefits of using Levosulpiride in managing idiopathic gastroparesis, but also underscores the importance of careful monitoring and follow-up. A team approach involving different specialties may be required for optimal management of this complex condition. Further research is necessary to deepen our understanding of the underlying mechanisms of idiopathic gastroparesis and to develop more effective treatment strategies.

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