



## “CLINICAL, RADIOLOGICAL AND HISTOPATHOLOGICAL FEATURES OF MENETRIER'S DISEASE: A CASE REPORT”

### General Surgery

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### ABSTRACT

**Introduction:** Menetrier's disease is a rare gastric disorder marked by enlarged gastric folds, excessive mucus secretion, and protein loss, often leading to hypoalbuminemia. Its exact cause remains unclear, though associations with *Helicobacter pylori* infection and Transforming Growth Factor-Alpha (TGF- $\alpha$ ) overexpression have been reported. **Case Report:** We report a case of a 49-year-old male presenting with chronic abdominal discomfort, weight loss, and diarrhea. Laboratory investigations revealed hypoproteinemia, while imaging and endoscopic findings showed thickened gastric folds. Histopathology confirmed the diagnosis. The patient was managed conservatively with octreotide and proton pump inhibitors, with periodic endoscopic surveillance advised due to the potential for malignant transformation. **Discussion:** Menetrier's disease is often misdiagnosed due to its overlapping features with other gastric pathologies, including Zollinger-Ellison syndrome and malignancies. Diagnostic confirmation requires a combination of clinical, radiological, and histopathological assessments. Treatment strategies range from medical management to total gastrectomy in severe cases. **Conclusion:** Given its rarity and potential complications, Menetrier's disease should be considered in patients presenting with hypertrophic gastric folds and protein loss. Early recognition and long-term monitoring are crucial for optimal management and to mitigate the risk of gastric adenocarcinoma.

### KEYWORDS

#### INTRODUCTION

Menetrier's disease is a rare disorder of stomach characterized by the enlarged gastric fold and gastric mucosal hypertrophy leading to excessive mucous secretion and protein loss.<sup>(1)</sup>

To date, less than 1000 cases of Menetrier's disease have been reported. Menetrier's disease is common in middle-aged male. It less commonly seen in females and children.<sup>(2)</sup>

The exact etiopathogenesis of Menetrier's disease is unknown. However, association with *H.pylori* infection and over expression of TGF-Alpha is described in literature.

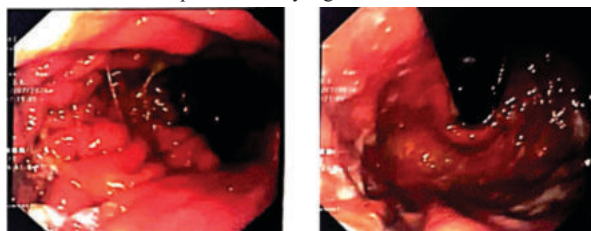
Here, we present a rare case of Menetrier's disease in adult male patient.

#### Case Report

A 49 year old male patient presented with complaint of abdominal pain, loose stool and Weight loss for the past 6 months. No significant medical past history. Family history was not significant for any medical illness.

On routine blood investigation, complete blood count (CBC) - Hemoglobin: 8.20g/dl, WBC-10,000/cm<sup>3</sup>, platelets -159000/cm<sup>3</sup>. Renal function test - S. Urea and Serum Creatinine were within normal limit. Serum Potassium was 2.89 meq/l. Hypoproteinemia was present with Serum Total protein-3.96 g/dl, Serum Albumin-2.39g/dl and Serum Globulin-1.57g/dl.

Contrast enhanced CT scan (CECT) of Abdomen showed marked thickening of wall of stomach with enhancing mucosa and sub mucosal edema in fundus and proximal body region.



On upper GIT endoscopy, Hypertrophic folds with copious amount of thick mucous secretion in fundus and body of stomach. A Biopsy was

taken from the stomach and sent for Histopathological examination (HPE).

Histopathological examination of biopsy specimen showed foveolar hyperplasia and cystically dilated foveolar glands. *H.pylori* was not seen.

The patient was treated with Octreotide (a somatostatin analogue), depot formulation 20ug IM every four weeks and proton pump inhibitors. The patient advised to undergo routine surveillance upper GIT endoscopy every 1-2 years to assess the progression and due to risk of development of gastric cancer.

#### DISCUSSION

Menetrier's disease also known as Hypertrophic gastropathy and Giant hypertrophic gastritis is a rare disorder characterized by enlarged gastric folds and gastric mucosal hypertrophy leading to excessive mucus secretion, reduced acid secretion and protein loss.<sup>(3)</sup>

Menetrier's disease is slightly more common in males than females and usually presents between the age of 40-60 years.<sup>(4)</sup>

The etiology of Menetrier's disease is currently unknown. However, an association with *H.pylori* infection has been found in some studies. Also a strong correlation between the over expression of Transforming growth factor- Alpha(TGF-Alpha), stimulating Epidermal growth factor receptor(EGFR) leading to proliferation of the gastric epithelium and gastric mucous cells, resulting in foveolar hypertrophy and giant gastric folds. There are rare case reports of families showing association with mutation in SMAD4 gene.<sup>(2)</sup> Abdominal pain, vomiting, anorexia, weight loss and peripheral edema are the usual presenting symptoms of patient with Menetrier's disease, which is insidious in onset and progressive in nature.

Laboratory evaluation of Menetrier's disease includes Complete blood count (CBC), Renal function test (RFT), Liver function test (LFT), Serum Total protein, Serum Albumin level, Serum Globulin level and *H.pylori* serology. Common laboratory findings in Menetrier's disease are Anaemia, lymphopenia, hypo proteinemia and decreased level of Serum cholesterol and Serum Triglyceride.<sup>(5)</sup>

On Contrast enhanced CT scan, increased thickness of the stomach wall can be seen.

On upper GIT endoscopy, Giant gastric folds with copious mucus seen in fundus and body of stomach.

Histopathological examination in Menetrier's disease includes massive foveolar hyperplasia (hyperplasia of surface and glandular mucous cells) and Atrophy of oxyntic cells and parietal cells.

The differential diagnosis of Large gastric folds includes Zollinger-Ellison syndrome (ZES), Malignancy (lymphoma, infiltrating carcinoma), Gastritis polyposa profunda, Infectious etiology (CMV, Tuberculosis, Histoplasmosis) and Infiltrative disorder (sarcoidosis).<sup>(6)</sup> Medical management of Menetrier's disease includes High protein diet, proton pump inhibitors, H2 receptor antagonists, Anticholinergic agents, Prostaglandins and Somatostatin analogue (octreotide) with varying results. Eradication of H.pylori with standard regimen is recommended if positive.

Cetuximab, a monoclonal antibody against EGFR has shown near complete histological remission and improvement in symptoms in trials.<sup>(7)</sup>

Treatment for patients with severe disease and persistent protein loss despite medical therapy is Total gastrectomy.<sup>(8)</sup>

Menetrier's disease is considered to be a pre malignant condition with future risk of development of gastric adenocarcinoma thus close monitoring and surveillance endoscopy is recommended.<sup>(9)</sup>

## CONCLUSION

Menetrier's disease is a rare disorder should be suspected in patients with Upper GI symptoms and Upper GIT endoscopy showing hypertrophic gastric folds with hypoproteinemia with or without H.pylori infection.

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