

Remnant Gastric Cancer: Adenocarcinoma in a Patient With Partial Gastrectomy for Benign Peptic Ulcer Disease

Taeyang Park, MD¹, Saima Ali, MD¹, Mahmoud A. Ali, MBBCh², Anish Vinit Patel, MD¹

¹Department of Gastroenterology and Hepatology, Rutgers - Robert Wood Johnson Medical School, New Brunswick, NJ

²Department of Pathology and Laboratory Medicine, Rutgers - Robert Wood Johnson Medical School, New Brunswick, NJ

Introduction

- Remnant gastric cancer is defined as cancer arising in the gastric remnant at least five years after gastric resection for benign disease such as peptic ulcer disease.
- It typically has a long latency period of 15 to 60 years.
- As it is commonly discovered at an advanced stage, remnant gastric cancer usually carries a poor prognosis.

Case Presentation

- A 76-year-old Asian male with a history of partial gastrectomy more than 30 years ago from peptic ulcer disease complicated by perforation presented after being found unresponsive and was found to have ST elevation myocardial infarction requiring coronary stent placement and initiation of dual antiplatelet therapy.
- During the hospitalization, patient was found to have iron deficiency anemia without evidence of overt bleeding. In the setting of recent acute coronary syndrome, patient was discharged with a plan for endoscopic evaluation in the future.
- Two months after discharge, patient was found to have a hemoglobin of 6 g/dL on routine outpatient blood work which prompted urgent hospitalization and upper endoscopy which showed a Billroth II gastrojejunostomy and a large, ulcerated mass in the gastric remnant proximal to the surgical anastomosis (Figure A).
- Biopsy of the mass revealed invasive adenocarcinoma, poorly differentiated with signet ring cells (Figure B).

Figures

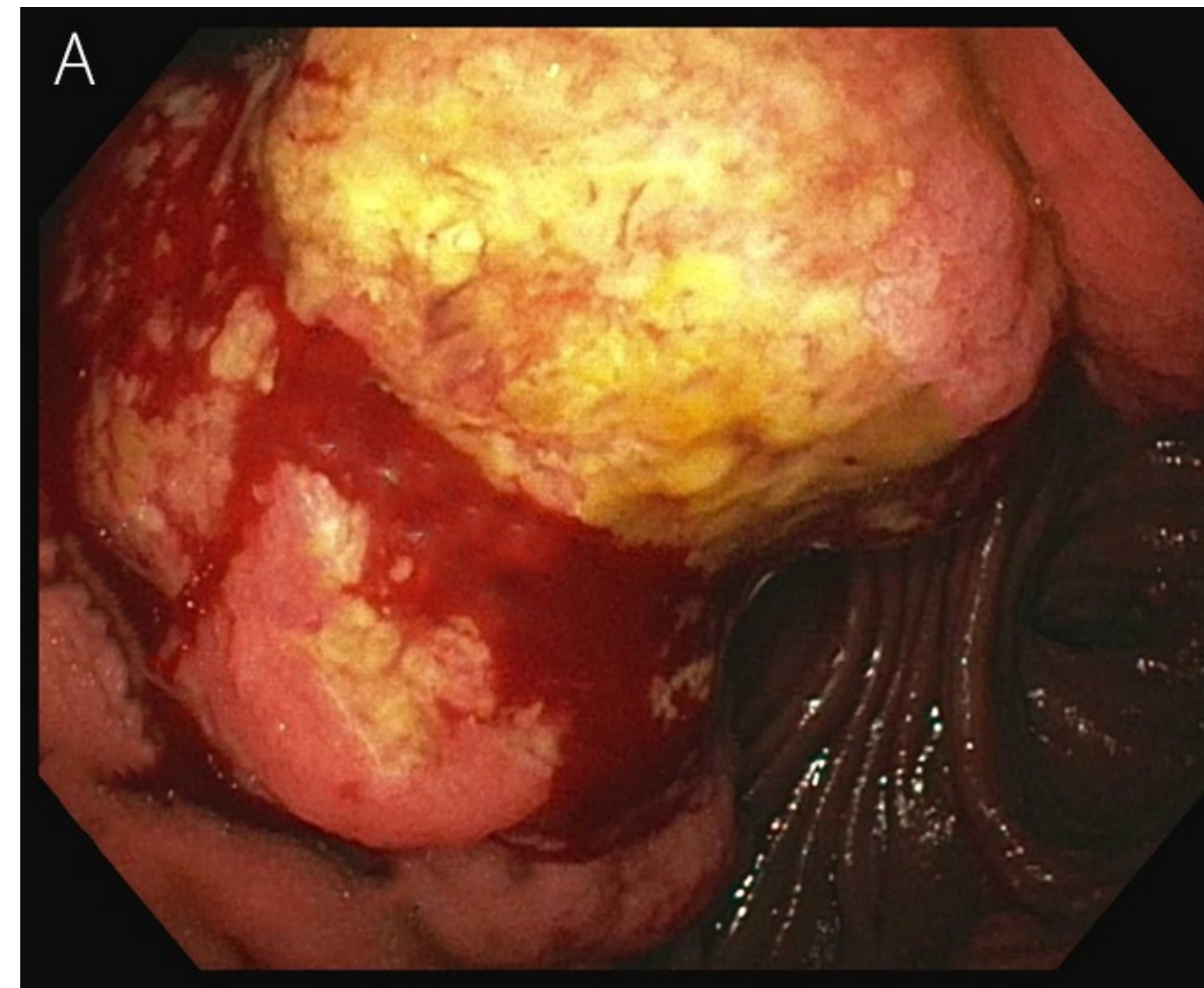


Figure A: Ulcerative mass in the gastric remnant proximal to the gastrojejunostomy

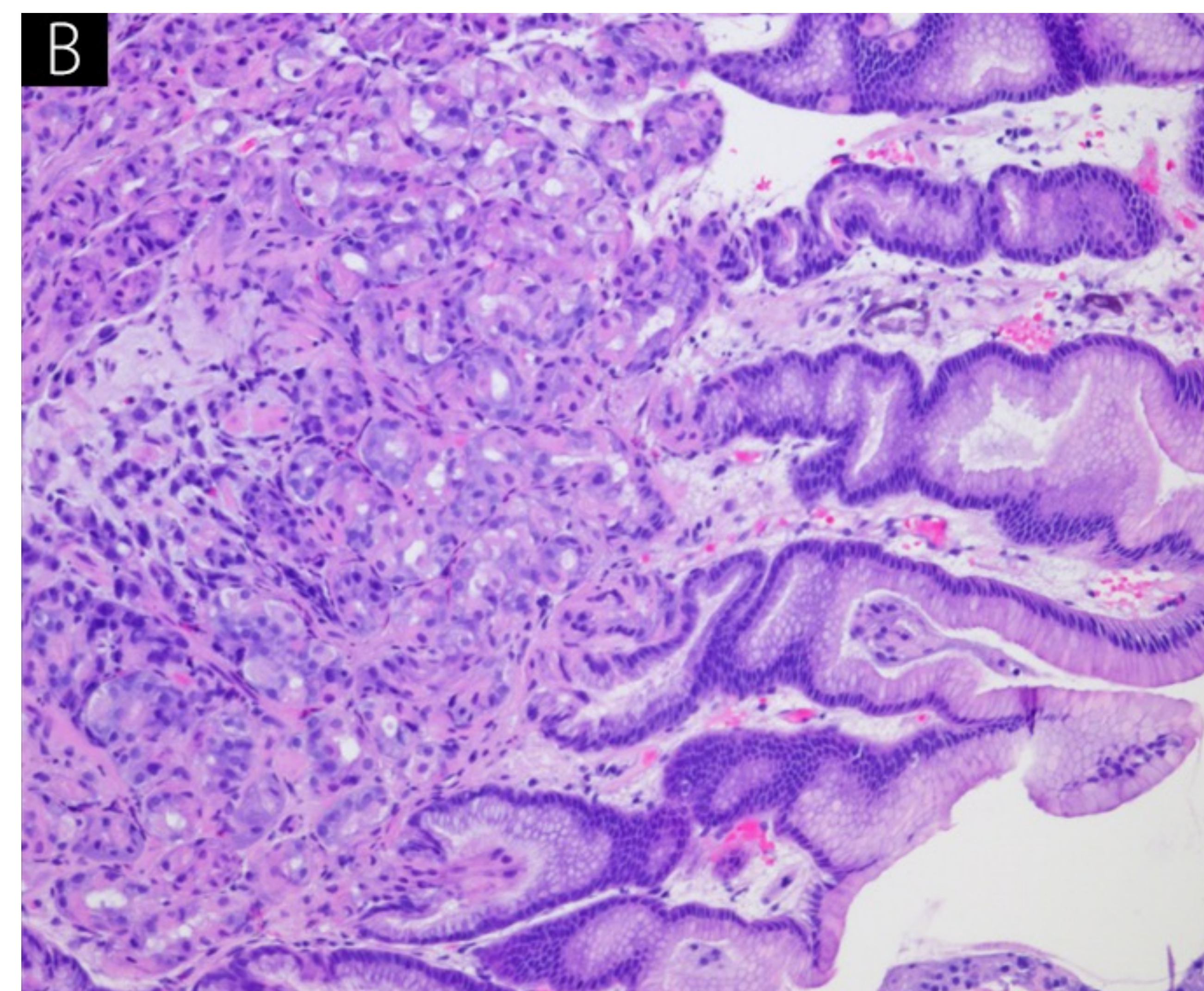


Figure B: Biopsy of the mass showing invasive adenocarcinoma, poorly differentiated with signet ring cells

Discussion

- In the past, surgical treatment was a popular option for peptic ulcer disease. However, with the introduction of histamine-2 receptor antagonists and proton pump inhibitors and the discovery of *Helicobacter pylori*, the rate of surgery for uncomplicated peptic ulcer disease has decreased.
- It is speculated that the risk of developing gastric cancer is increased in patients with a history of partial gastrectomy for benign peptic ulcer disease.
- Pathogenesis is thought to involve biliary and pancreatic reflux causing chronic inflammation of the mucosa in the gastric remnant.

Conclusion

- Although partial gastrectomy has fallen out of favor for treatment of benign diseases such as peptic ulcers, it was routinely performed in the past and as remnant gastric cancer has a long latency period, physicians may continue to encounter it.
- Currently, there are no guidelines regarding endoscopic surveillance in asymptomatic patients.
- As remnant gastric cancer is commonly diagnosed at an advanced stage, clinicians should maintain a high index of suspicion in these patients.

References

1. Mak TK, Guan B, Peng J, Chong TH, Wang C, Huang S, Yang J. Prevalence and characteristics of gastric remnant cancer: A systematic review and meta-analysis. *Asian J Surg*. 2021 Jan;44(1):11-17. doi: 10.1016/j.asjsur.2020.03.012. Epub 2020 Apr 3. PMID: 32253109.
2. Hanyu T, Wakai A, Ishikawa T, Ichikawa H, Kameyama H, Wakai T. Carcinoma in the Remnant Stomach During Long-Term Follow-up After Distal Gastrectomy for Gastric Cancer: Analysis of Cumulative Incidence and Associated Risk Factors. *World J Surg*. 2018 Mar;42(3):782-787. doi: 10.1007/s00268-017-4227-9. PMID: 28924721.
3. Ohira M, Toyokawa T, Sakurai K, Kubo N, Tanaka H, Muguruma K, Yashiro M, Onoda N, Hirakawa K. Current status in remnant gastric cancer after distal gastrectomy. *World J Gastroenterol*. 2016 Feb 28;22(8):2424-33. doi: 10.3748/wjg.v22.i8.2424. PMID: 26937131; PMCID: PMC4768189.