

Double Pylorus

Sabiye Akbulut¹, Ahmet Erten², Ersan Özaslan², Emin Altıparmak²

¹Department of Gastroenterology, Kartal Koşuyolu High Specialty Education and Research Hospital, İstanbul, Turkey

²Department of Gastroenterology, Numune Education and Research Hospital, Ankara, Turkey

A 74-year old woman was admitted to the hospital with a history of peptic ulcer disease and a complaint of stomach pain with 24 month duration. The patient stated frequent use of non-steroidal anti-inflammatory drugs (NSAIDs) for her arthralgia. Her haemoglobin level was 10.1 g/dL. At upper gastrointestinal endoscopy, two pyloric openings into the duodenal bulb were seen. Ulceration, which was 0.5 cm in size, was coated with white exudates and the orifice opening to the bulb was 1 cm at the prepyloric antrum (Figure 1). Biopsy specimens were taken from there. Then, the guidewire was forwarded through the antrum, and was seen to pass from the orifice to the bulb when it was moved through the antrum. Therefore, the case was described as double pylorus. The histological examination revealed a scattered mild inflammation inside the oedematous tissue specimens. The presence of *Helicobacter pylori* was not observed. Proton pump inhibitor treatment was initiated for the peptic ulcer and the symptoms were resolved. When the endoscopy was repeated for control at the third month of the treatment, it was noted that the ulceration had disappeared but the orifice remained open.

Double pylorus is a rare condition consisting of a double communication between the gastric antrum and the duodenal bulb (1). Its incidence ranges between 0.02% and 0.08%. Double pylorus may be congenital or acquired. While congenital double pylorus is very rarely observed, the acquired form is more common and usually develops as a complication of peptic ulcer disease (2). The most widely accepted hypothesis for the pathogenesis of double pylorus is the penetration of a peptic ulcer either from the antrum or from the first part of the duodenal bulb that eventually leads to the formation of adhesions between the adjacent walls of the stomach and duodenum. Further ulceration results in the condition of a fistulous tract (3). Rarely, gastric cancer can also be the cause of acquired double pylorus (4). According to the reports, some chronic diseases, the use of various medications and the presence of *Helicobacter pylori* might play a role in the development

of double pylorus (1, 5). Long-term treatment with drugs including corticosteroids and NSAIDs may also prevent healing, leading to fistula formation (2).

The diagnosis of double pylorus cases should be confirmed endoscopically. In this endoscopic examination, the antrum must be sufficiently distended with air to visualise the fistula within the thickened gastric folds. Most of the fistulas were located on the lesser curve aspect of the gastric antrum. Fistula size may vary between a few millimetres and a few centimetres. From the gastric antrum, visualisation of biopsy forceps or a catheter that has been passed through the fistula and observed entering the pylorus has been described as a useful technique for the diagnosis of double pylorus (2, 3).

Most of the cases respond well to medical therapy for peptic ulcer disease such as antacids or proton pump inhibitors (2). In conclusion, acquired double pylorus is a rare benign compli-



FIG. 1. Endoscopic appearances of peptic ulcer and double pylorus.



cation of peptic ulcer disease. Surgical intervention should be considered in refractory cases where symptoms do not resolve with anti-ulcer therapy.

Ethics Committee Approval: N/A.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

Peer-review: Externally peer-reviewed.

Author contributions: Concept - S.A.; Design - S.A.; Supervision - E.Ö., A.E.; Resource - S.A.; Materials - S.A., A.E.; Data Collection&/or Processing - S.A., E.A.; Analysis&/or Interpretation - E.Ö., E.A.; Literature Search - S.A.; Writing - S.A.; Critical Reviews - S.A.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES

1. Safatle-Ribeiro AV, Ribeiro Júnior U, Habr-Gama A, Gama-Rodrigues JJ. Double pylorus: case report and review of literature. *Rev Hosp Clin Fac Med São Paulo* 1999;54:131-4. [[CrossRef](#)]
2. Hu TH, Tsai TI, Hsu CC, Lu SN, Hsiao M, Changchien CS. Clinical characteristic of double pylorus. *Gastrointest Endosc* 2001;54:464-70. [[CrossRef](#)]
3. Linea C, Sinagra E, La Seta F, Giunta M. Acquired double pylorus, due to penetrating gastric ulcer, presenting with melena. *World J Gastrointest Endosc* 2012;16:94-5. [[CrossRef](#)]
4. Matsuyama E, Nagashima R, Watanabe S, Takahashi T. Endoscopic hemostasis for hemorrhage from gastric cancer complicated by double-channel pylorus. *Gastrointest Endosc* 2001;53:679-80. [[CrossRef](#)]
5. Sayılır A, Kurt M, Önal K, Beyazıt Y, Suvak B. An unusual complication of peptic ulcer disease: Double pylorus. *Gastroenterol Nurs* 2011;34:401. [[CrossRef](#)]