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## Acquired double pylorus: A case report

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## ABSTRACT

Double pylorus is one of the rare anomalies of the gastrointestinal tract, it can be congenital or acquired. In this case we report a case of double pylorus because of chronic peptic ulcer. Upper GI endoscopy revealed gastroduodenal fistula located on the lesser curve of the antrum, the patient's symptoms were improved rapidly by intensive antiulcer treatment.

*Keywords:*

Acquired double pylorus

Gastric endoscopy

Gastroduodenal fistula

### 1. Introduction

Double pylorus, which consists of two openings connecting the antrum to the duodenal bulb, may occur as either a congenital abnormality or an acquired complication of chronic peptic ulcer disease. It is a rare anomaly and most of the fistulas were located on the lesser curve aspect of the gastric antrum and duodenal bulb<sup>[1]</sup>. The first case of double pylorus was reported by Smith in 1969<sup>[2]</sup>. In most cases acquired double pyloric is a complication of peptic ulcer disease, resulting from penetration of the peptic ulcer and the creation of a fistula between the duodenal bulb and the prepyloric antrum<sup>[3]</sup>. In this article, we describe one case of acquired double pylorus caused by chronic peptic ulcer.

### 2. Case report

A 56–year–old male patient had a history of intermittent

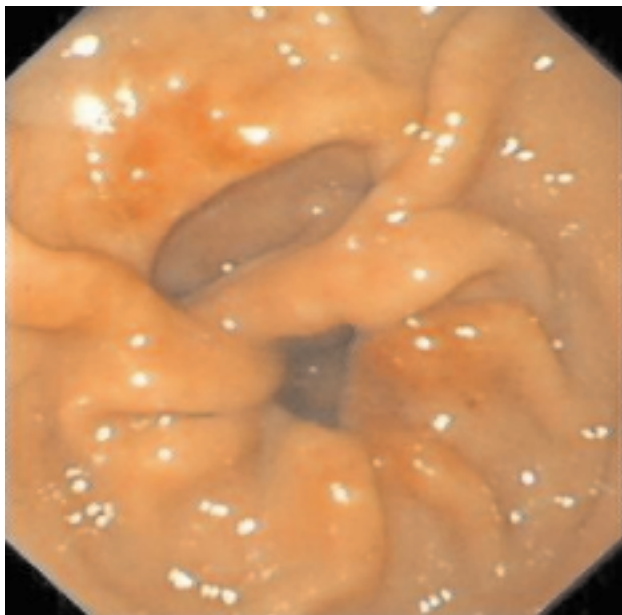
upper abdominal pain for two years, but had not got any regular treatments. He had a past history of chronic gastritis diagnosed by upper GI endoscopy 5 years ago. On admission, an upper GI endoscopy revealed gastroduodenal fistula located on the lesser curve of the antrum, and near the anatomic pylorus. The endoscopy could pass through both channels, from the antrum to the duodenal bulb. The two channels were separated by a tissue bridge. The channel near the greater curvature had a smaller diameter and presented contractions, suggesting that it could be the true pyloric ring (Figure 1). A biopsy was taken from the bridge area between the two channels and the result showed normal mucosa and the test for helicobacter pylori was negative. The patient was treated with antacids and proton pump inhibitor. After 2 weeks' of treatment, the symptoms were improved rapidly.

### 3. Discussion

The prevalence of double pylorus varies from 0.001%–0.4%<sup>[4]</sup>. The incidence is twice in male than that in

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female<sup>[5]</sup>. Double pylorus can be congenital or acquired. The reason for congenital double pylorus probably is abnormal development during the early stages of embryonic life<sup>[6]</sup>. The majority of reported cases of double pylorus are acquired and attributed to complication of ulcer at the antrum or at the duodenal bulb. Most of them are the consequences of gastric ulcer, and only few cases are due to duodenal ulcer<sup>[7]</sup>. In this patient, the previous endoscopy didn't showed double pylorus, and the patient suffered abdominal pain for the last two years, indicating the lesion was acquired. The patient's acquired pylorus presented on the lesser curve of the gastric antrum. There were some superficial bleeding points on the anterior wall of the duodenal bulb, and the systolic function of the acquired pylorus was very poor, we speculated that gastric acid may infuse into duodenal bulb and damage the mucosa. The reason for double pylorus is not clear, in our view the repeated gastric ulcer erosion and healing may form the fistula channel. Our endoscopy center have finished more than 60 000 cases of gastric endoscopy in the past 5 years, this is the only one double pylorus case, suggesting the prevalence may less than 0.002%.



**Figure 1.** Sign of two pylorus, the bridge between two channels is easily visualized.

The clinical symptoms of acquired double pylorus are similar to those caused by peptic ulcer disease. A few patients reported relief of the symptoms after the fistula

formation. Treatment for anti-ulcer regimen must be rapidly performed<sup>[8]</sup>. However, refractory cases may require surgery<sup>[9]</sup>.

In conclusion, double pylorus is a rare anomaly found in less than 0.002% of gastric endoscopy in our endoscopy center, acquired double pylorus is usually a complication of peptic ulcer disease, and intensive antiulcer treatment would have a significant effect.

### Conflict of interest statement

We declare that we have no conflict of interest.

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