# Duplication of the Pylorus Found Concomitantly with Achalasia: Congenital or Peptic Etiology?

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Duplication of the pylorus is a rare anomaly of the gastrointestinal tract. The clinical presentation of this anomaly as well as its pathogenesis are both unclear. In this communication, we are presenting a patient who was found to have not only a true double pylorus communicating directly with the duodenum but also achalasia of the esophagus.

## CASE REPORT

S.T., a 56-year-old black female, was admitted to Harper Hospital in April 1976 with the chief complaint of intermittent regurgitation of food into the oropharynx, especially in the recumbent position. She had no history of peptic ulcer disease and denied ingestion of alcohol or ulcerogenic drugs such as aspirin. She gave no history of hematemesis or melena.

Physical examination showed a well-nourished female in no acute distress. Abdominal examination revealed a scar resulting from a previous cholecystectomy. There were no visible or palpable abdominal masses. The liver and spleen were not enlarged. Rectal examination produced stool which was guaiac negative. Upper-gastrointestinal barium-meal examination showed an abnormally dilated eosphagus as well as an antral deformity (Figures 1 and 2). Routine laboratory tests were all within normal limits. Endoscopic visualization of the upper gastrointestinal tract showed a dilated esophagus with no organized motility suggestive of achalasia. There were no structural abnormalities of the gastroesophageal junction and mucosal biopsies of the area did not show neoplasia. Gastric examination showed a double pylorus (Figure 3). The duodenum was entered easily from either pyloric orifice. No evidence of ulcer disease or mucosal inflammation was found in the stomach or the proximal duodenum.

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## DISCUSSION

Less than 20 patients have been documented to have had a true double pylorus (1–5). Most reported patients with a double pylorus have been documented to have had a long-standing prepyloric peptic ulcer disease. Therefore, the theory has been advanced that a double pyloric abnormality is secondary to peptic ulcer disease and is not a congenital abnormality. The double pylorus has been thought to be a connective tissue septum secondary to inflammation. At the other end of the spectrum of gastric anomalies is the relatively rare, but well-established, congenital abnormality of duplication of the stomach. Congenital duplication of the stomach, which has been reported and documented, opens sometimes into the duodenum and at other times into the stomach itself (6).

The patient presented in this communication does not appear to have had peptic ulcer disease. Interestingly, the patient was found to have an associated abnormality of achalasia of the esophagus. The association between the double pylorus and achalasia as presented in this patient has not been previously made. The etiology of achalasia itself is unclear and could perhaps represent some congenital abnormality of the esophageal musculature (5). In the absence of any historical support or present findings for peptic disease, it is possible that the double pylorus found in this patient may also represent a congenital abnormality. Thus, a double pylorus, which may at times be the result of peptic disease, may also be at times congenital in origin.

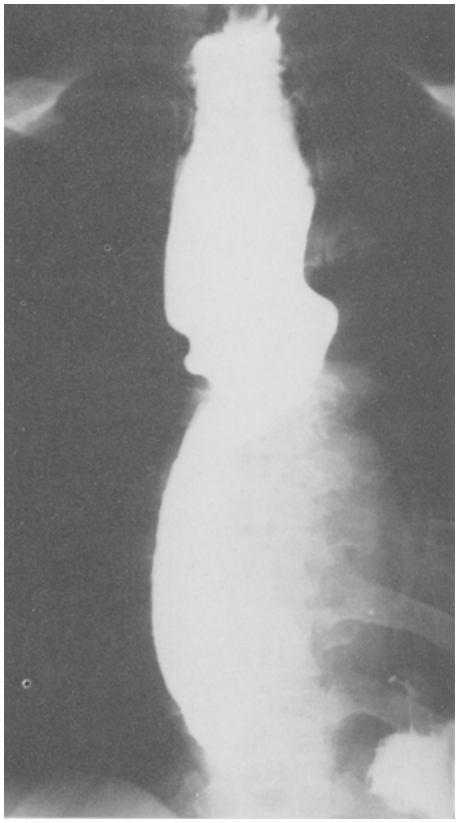

**Fig 1.** Barium swallow examination of the patient. Radiograph disclosed a dilated, atonic esophagus compatible with the diagnosis of achalasia.

**Fig 2.** Barium meal examination of the patient. The radiograph disclosed the presence of a deformed gastric antrum.

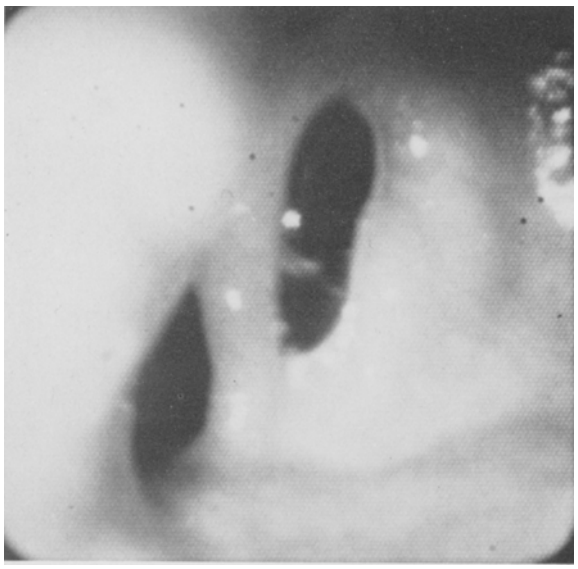

**Fig 3.** Photograph of endoscopic view of the distal antrum of the patient's stomach. Two pyloric orifices were found which were large enough to allow easy passage of the endoscope into the duodenum.


## SUMMARY

A patient is presented with true duplication of the pylorus and concomitant achalasia of the esophagus. This patient has never had peptic ulcer disease and is suspected to have a double pyloric anomaly as a congenital abnormality rather than the result of peptic disease and scarring.


## REFERENCES


1. Christien G, Branthomme JM, Volney L, Deschamps P, Morice E: Pylore double: Malformation congenitale. Sem Hop Paris 47:1485–1488, 1971
2. Hansen OH, Kronborg, O, Pedersen T: The double pylorus. Scand J Gastroenterol 7:695–696, 1972
3. Farack UM, Goresky CA, Jabbari M, Kinnear DG: Double pylorus: A hypothesis concerning its pathogenesis. Gastroenterology 60:596–600, 1974
4. Drapkin RL, Otsuka AL, Castallanos HL, Hindi SE, Nowicka H, Levitan R: Acquisition of a pyloric septum or pyloric duodenal fistula. Gastroenterology 66:1234–1236, 1974
5. Bender MD, Soffa DJ: Acquired double pylorus: A case report. Radiology 116:325–326, 1975
6. Abrami G, Dennison WM: Duplication of the stomach. Surgery 49:794–801, 1961
7. Cassella RR, Brown AL Jr, Sayre GP, Ellis FH Jr: Achalasia of the esophagus: Pathologic and etiologic considerations. Ann Surg 160:474–487, 1964