Atypical placement of the pylorus: a rare congenital abnormality

The most common congenital abnormality of the pylorus is hypertrophic pyloric stenosis, which occurs in about 3 in every 1000 live births and is an extremely rare disorder in adulthood [1,2]. Other congenital abnormalities are less frequently seen; most of them present in infancy or childhood and cause gastric outlet obstruction [3,4]. We present here the case of an older man who was found to have congenital displacement of the pylorus without any previous evidence of obstructive symptoms.

A 60-year-old man was admitted with a 1-day history of black-colored stool. After he had been given intravenous fluid resuscitation and was hemodynamically stable, he underwent an esophagogastroduodenoscopy (EGD). During the endoscopic examination, the pylorus was not detected at the antrum (**Fig. 1 a**). Instead, an opening was found at the site of the incisural notch on the lesser curvature (**Fig. 1 b**). Just beyond the atypically positioned pylorus, ulcers were detected on both the anterior and posterior walls of the duodenal bulb (**Fig. 1 c**).

The patient had had no chronic illnesses or previous abdominal surgery. He denied any drug intake. A rapid urease test for *Helicobacter pylori* was positive. A barium contrast study (**Fig. 2**) and magnetic resonance imaging (MRI) scan (**Fig. 3**) subsequently confirmed the atypical position of the pylorus without any additional intra-abdominal malrotation abnormalities or dextrogastria.

Pyloric abnormalities can be congenital or may be acquired, for example peptic ulcer, caustic ingestion, or tumor. Most patients present with obstructive symptoms; however, some patients are asymptomatic. Our patient was asymptomatic until he developed bleeding ulcers. Although *H. pylori* colonization was demonstrated, it is not known whether atypical placement of the pylorus affects the development of bulbar ulcers. It is possible that because of the atypical placement, the pyloric sphincter might be constantly open. Continuous acid reflux from the stomach to the bulb could contribute to mucosal injury and ulcer development in the bulb. Consequently, this unique congenital abnormality may have contributed to the patient's peptic ulcer disease.

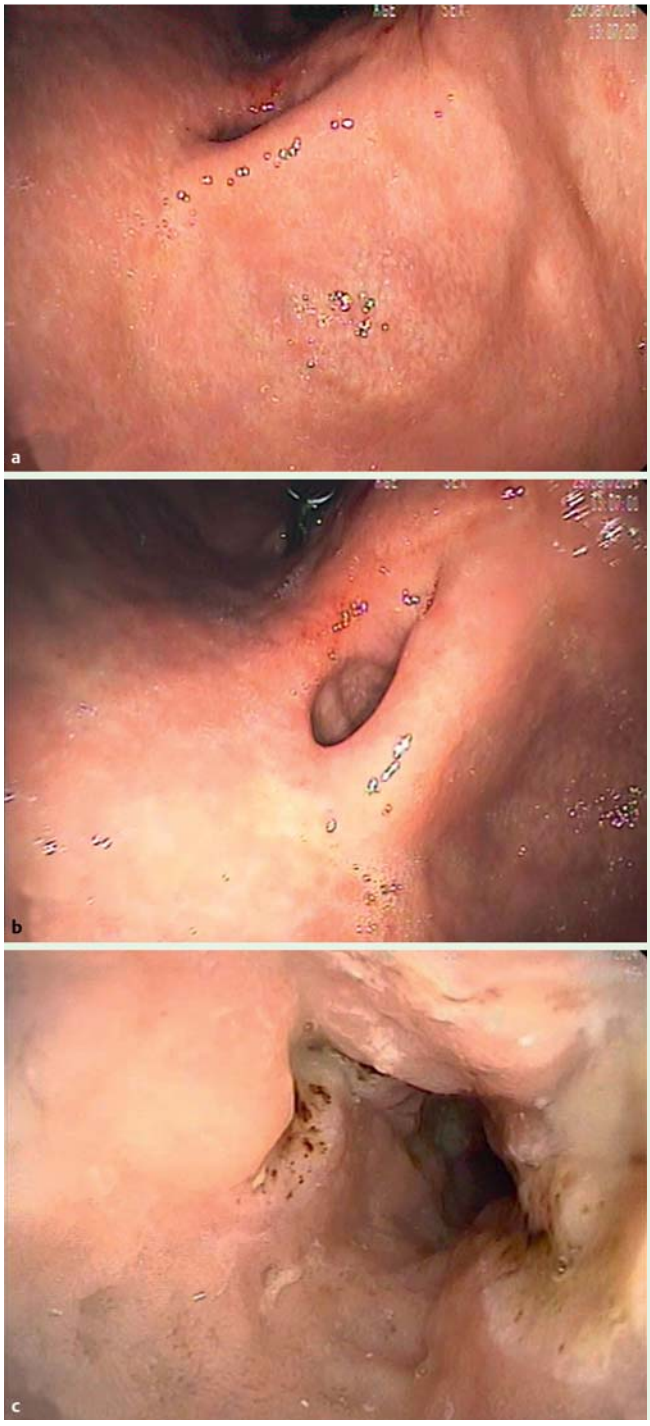

Fig. 1 Endoscopic views of: **a** the antrum; **b** the atypically placed pylorus at the incisura; **c** bulbar ulcers on both the anterior and posterior walls of the bulb.

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Competing interests: None

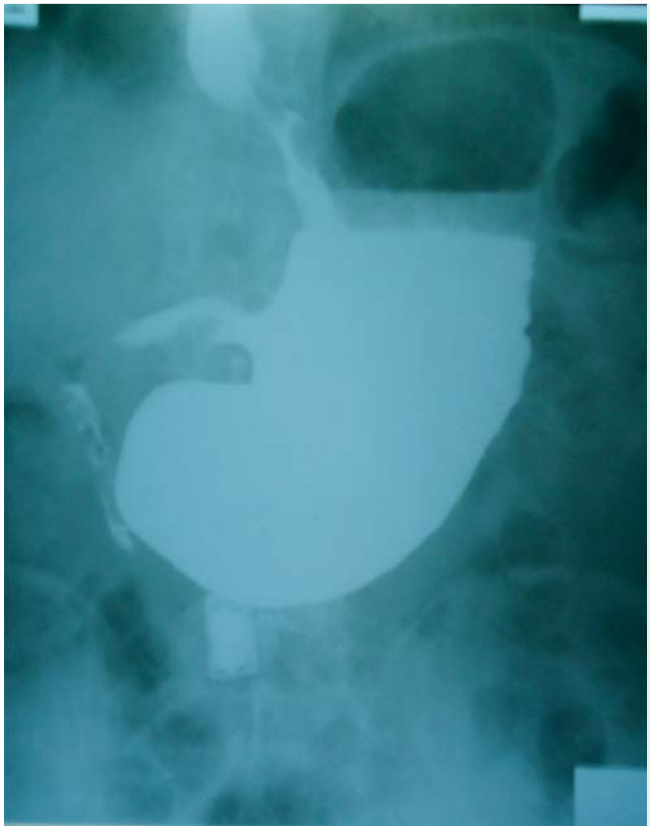

Fig. 2 Barium study showing the atypical placement of the pylorus at the lesser curvature.

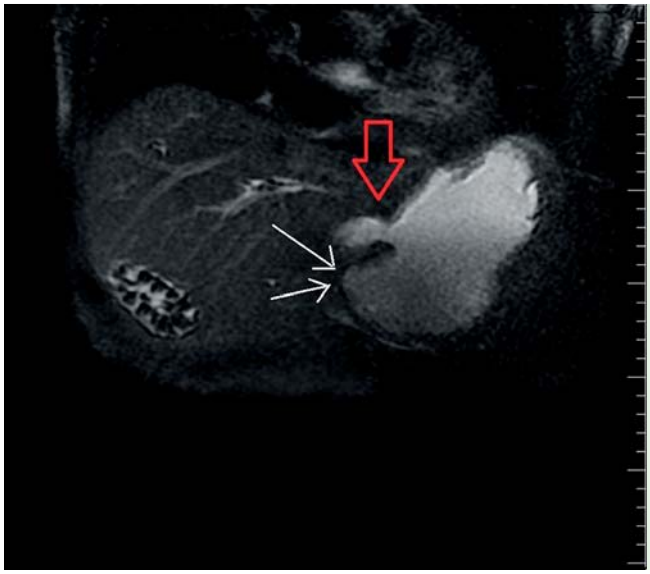

Fig. 3 Coronal T1-weighted magnetic resonance imaging (MRI) scan showing the atypically placed pylorus and bulb (red arrow), with the expected position of the pylorus indicated by the white arrows.

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Bibliography

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