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A juxtapapillary windsock diverticulum connected with the third portion of the duodenum via a natural orifice

To the Editor,

Here, we report an extremely rare endoscopic finding, intramural duodenal diverticulum (IDD), a windsock diverticulum, in a 38-year-old woman who was admitted to our outpatient clinic with the complaint of dyspepsia. Her medical history and physical examination were unremarkable. All laboratory findings, including whole blood count, total biochemistry, erythrocyte sedimentation rate, and C-reactive protein, were in the normal range. Abdominal ultrasonography was normal. An upper gastrointestinal endoscopy revealed antral gastritis, and gastric biopsies were performed for H. pylori infection. Also, a juxtapapillary flat diverticulum was detected in the second portion of the duodenum (Figure 1). When the endoscope was inserted into the diverticulum, there was an orifice approximately 11 mm in diameter at the end of the diverticulum, surrounded with a totally normal mucosa, which revealed that it was a natural orifice (Figure 2). The third portion of the duodenum could be visualized from the orifice. When methylene blue was sprayed from the orifice with a sclerotherapy catheter, it was confirmed that the diverticulum was connected with the third portion of the duodenum via this orifice. Due to the typical endoscopic finding, the diverticulum was thought to be a duodenal windsock diverticulum, and abdominal computerized tomography was performed for possible co-existing gastrointestinal abnormalities, which revealed normal findings. In the follow-up, the patient was symptom free after H. pylori eradication therapy.

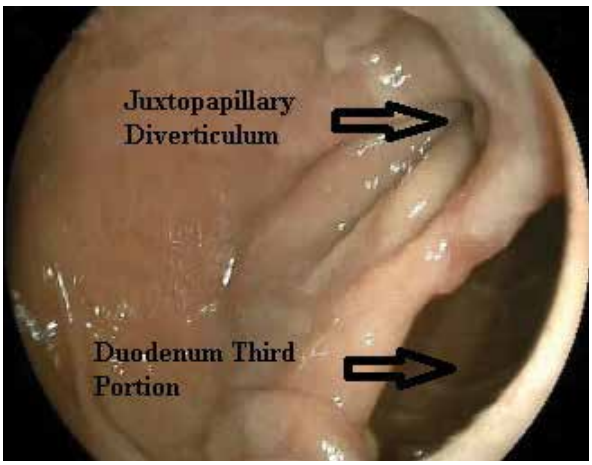

Figure 1. Endoscopic view of the entrance of juxtapapillary windsock diverticulum.

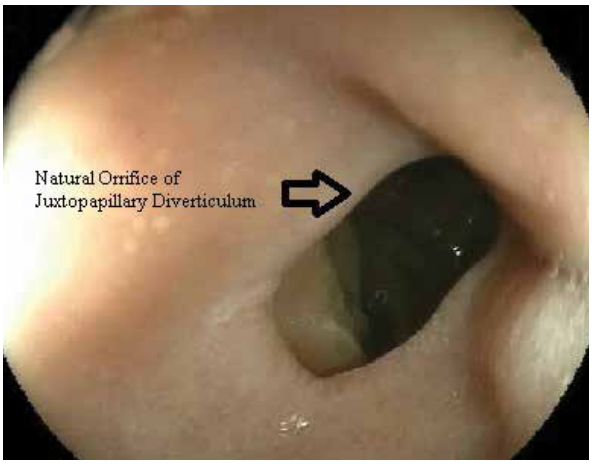

Figure 2. Endoscopic view of the natural orifice in windsock diverticulum.

Intramural duodenal diverticulum is a rare condition and less common than extramural duodenal diverticulum. IDD is a result of a defect of epithelial proliferation and recanalization of the embryonic duodenum. It is a part of duodenal development defects, ranging from duodenal webs to stenosis and atresia (1,2). The typical radiographic finding of this diverticulum is called windsock diverticulum (3). Although, the diagnosis of IDD can be made by its characteristic radiologic appearance on CT, in our patient, the CT findings were normal. But, during the examination, the diverticulum was not filled with fluid, and we believe that the lack of visualization

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of the diverticulum on CT was due to this technical defect. The typical symptoms of IDD are nausea, epigastric pain, and vomiting, and it is believed that intermittent filling and emptying of the diverticulum with food are the cause of these symptoms (4). Our patient had only epigastric pain; she did not complain of nausea or vomiting. We believe that the occurrence of a natural orifice in the diverticulum is the reason for the lack of nausea and vomiting symptoms in our patient.

To the best of our knowledge, our case is the first in the literature who has a very rare diverticulum, windsock diverticulum, with a natural orifice that makes our patient have nausea and vomiting symptoms, which is noteworthy to report.

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