Massive mucinous discharge from a fistula caused by intraductal papillary mucinous neoplasm diagnosed by endoscopic ultrasound

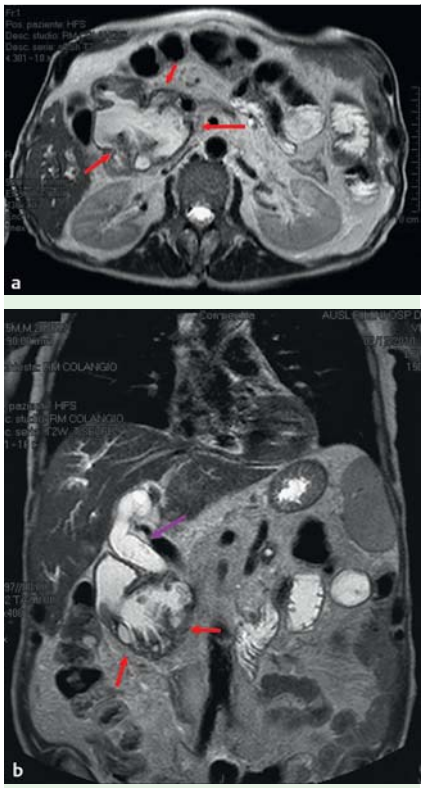

Fig. 1 Multilobular cystic lesion (arrows) adhering to the duodenal wall, seen at magnetic resonance imaging (MRI): **a** the cystic lesion (red arrows); **b** the cystic lesion (red arrows) and common biliary duct dilatation (purple arrow).

Fig. 2 Endoscopic view of a large crater full of mucus on the posterior wall of the duodenal bulb.

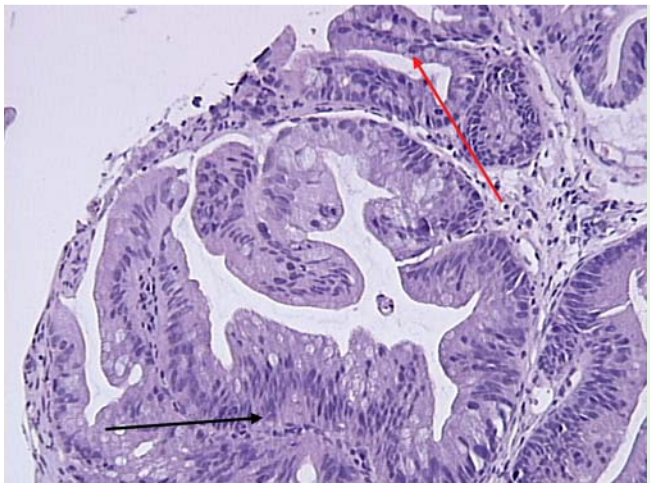

Fig. 3 Histological findings revealing glandular adenoma with high-grade dysplasia (black arrow) and mucinous cells with minor atypia (red arrow).

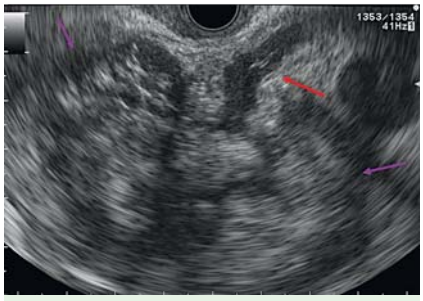

Fig. 4 Endoscopic ultrasound (EUS) showing the main pancreatic duct (red arrow) interruption that communicates with a massive solid and cystic lesion (purple arrows) (8 × 6 cm) adhering to the duodenal wall.

Fig. 5 Endoscopic ultrasound (EUS) showing a fistula (arrow) between the cystic cavity and duodenum.

A 76-year-old Caucasian man presented to our institution with progressive fatigue and weight loss. He had undergone esophagogastroduodenoscopy 1 year previously, which suggested a large duodenal ulcer [1,2].

Laboratory data showed abnormal liver function tests consistent with obstructive jaundice. Magnetic resonance cholangiopancreatography (MRCP) showed dilatation of the main pancreatic duct (MPD) and biliary tree, and a multilobular cystic lesion adhering to the duodenal wall (**Fig. 1**).

Esophagogastroduodenoscopy revealed a large crater (3 cm wide) in the posterior wall of the duodenal bulb, giving a massive mucinous discharge (**Fig. 2**, **Video 1**).

Biopsies were taken from the edges of the lesion, and histological findings showed tubulovillous adenoma with high-grade dysplasia (**Fig. 3**).

Subsequent endoscopic ultrasound (EUS) showed a marked diffuse dilatation of the MPD, which contained echogenic material compatible with mucus, and intraductal papillary vegetations. At the level of the isthmus there was a wide communication between the MPD and a large solid and

Video 1

Endoscopic view of a large crater on the posterior wall of the duodenal bulb producing a massive mucinous discharge.

cystic lesion (8×6 cm) adhering to the duodenal wall (**Fig. 4**).

A disruption of the parietal layers of the bulb was also demonstrated, consistent with a fistula between the lesion and the bulb (corresponding to the endoscopic finding) (**Fig. 5**, **Video 2**).

These findings were suggestive of a main-duct malignant intraductal papillary mucinous neoplasm (IPMN) with mixed solid and cystic degeneration (typical of the disease), fistulizing into the duodenum. Because of several co-morbidities, the patient was not a candidate for surgery and was referred for palliative care.

Fewer than 100 cases have been reported of IPMN forming fistulas in surrounding organs [1]. The proposed pathogenesis comprises mechanical compression from the cystic mass and/or direct neoplastic infiltration. The majority of these cases have been documented with computed tomography or MRCP, while EUS has rarely been described [2]. In our case, EUS was a useful adjunct in the diagnostic work-up allowing direct visualization of the fistula tract and clarifying the nature of the pancreatic disease.

Video 2

Endoscopic ultrasound (EUS) showing the main pancreatic duct interruption that communicates with a massive solid and cystic lesion adhering to the duodenal wall, and fistula between the cystic cavity and duodenum.

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Competing interests: None

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Bibliography

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