Metastatic duodenal germ cell tumor diagnosed with endoscopic ultrasound

Testicular tumors are the most common solid tumors reported in young males aged 15–35 years [1, 2]. These tumors frequently metastasize to retroperitoneal lymph nodes, but only 5% of these tumors seed the gastrointestinal (GI) tract [3, 4], with the duodenum being the least common site (1.4%) [4]. Local extension from the retroperitoneal lymph node into the GI tract is the common method of spread.

We report on a 44-year-old man with symptoms of gastric outlet obstruction. Computed tomography (CT) of the abdomen showed a bilobed retroperitoneal mass of 7×5 cm compressing the duodenum, suspicious for duplication cyst (Fig. 1a, b). Esophagogastroduodenoscopy showed a subepithelial near-obstructive mass in the second portion of the duodenum (Fig. 1c). Endoscopic ultrasound (EUS) showed a 7 × 5.4 cm solid cystic duodenal mass (Fig. 1d). Fine-needle biopsy (FNB) with a 22-gauge needle (Fig. 1e) revealed poorly differentiated epithelioid carcinoma, with unknown primary. Given the patient’s age, testicular tumor was a highly likely differential diagnosis.

The patient underwent pancreas-sparing duodenal resection. Histology showed a mixed germ cell tumor with unusual presence of cartilage (Fig. 1f). Ultrasound of the testes showed a 1.7 cm
right testicular mass, which was resected, and histology was consistent with mixed germ cell tumor. Staging revealed bony metastasis. The patient is currently undergoing chemotherapy. This case highlights a testicular mixed germ cell tumor with metastasis to the duodenum, which is rare (1.4%). In addition, hematogenous spread without the local involvement of the lymph nodes was noted, which is also a rare phenomenon. EUS-FNB confirmed a previously unsuspected malignancy, prompting a search for the primary and subsequent surgical management. In young males with upper gastrointestinal tumors, metastasis from a testicular mass should always be considered. EUS-FNB can provide valuable information.

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Competing interests
None

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