Exophytic gastric adenocarcinoma

Clinical History:

This 79-year-old lady presented with a four week history of upper abdominal pain, anorexia, vomiting and mild weight loss. She denied any previous history of abdominal problems or melena. Her only relevant past medical history was of hypertension and dyslipidemia. Examination revealed a non-tender epigastric mass.

Imaging Findings:

The initial imaging investigation was trans-abdominal ultrasound which identified a large heterogeneous mass within the right upper abdomen, closely related to the head of pancreas. Contrast enhanced CT imaging of the abdomen and pelvis was performed to investigate further, establishing the mass to be separate, but adherent to the pancreas and either arising from within the mesentery or from the antrum of the stomach. Endoscopy identified a large posterior extraluminal mass located in the antrum with ulceration and associated blood clot. Endoscopic ultrasound showed a large 5.5cm x 6.5 cm mainly hypoechoic mass with central hyperechoic foci. There was near circumferential thickening of the antrum. In certain views, the mass seemed to arise from the 4th gastric layer (muscularis propria).

Given the element of doubt on the exact diagnosis and the mass being highly amendable, an ultrasound guided percutaenous biopsy was performed.

Discussion:

Gastric adenocarcinomas account for 95% of gastric neoplasms and are usually identified as focal wall thickening or an intraluminal mass as they arise from the mucosal lining of the stomach. Exophytic growth of gastric carcinoma is rare, and such tumours may be confused with gastric leiomyosarcomas or gastrointestinal stromal tumours (GIST) [1]. Exophytic adenocarcinomas of the stomach are those tumours that have a large extraluminal component.

An exophytic gastric carcinoma may present with the typical symptoms of gastric malignancy, such as weight loss, haematemesis, or melena. However, given that the mass is largely extraluminal, they may present at a later stage with alternative symptoms, such as a mass or ‘fullness’ in the abdomen or vomiting due to outlet obstruction secondary to mass effect. It is important that in addition to endoscopy appropriate imaging is performed, be it CT, endoscopic ultrasound or both.

Exophytic gastric carcinomas are usually fairly large masses at presentation with the largest review describing the
size ranging from 5 to 14 cm in diameter (mean, 9 cm) [2]. As they grow exophytically from the stomach lumen this likely delays the presentation, compared to a typical gastric malignancy. This relatively large size is something that contributes to its confusion with gastric GIST on imaging as they tend to be sizeable at presentation, and may contain a necrotic centre. This study also highlighted the proponderance of exophytic tumours for the antrum of the stomach being located in the antrum in 11 cases out of 20 cases. The remainder were; body of the stomach in six cases, the body and antrum in two cases, and the gastric fundus and body in one case. CT typically shows an exogastric mass with a variable degree of internal low density or necrosis with morphological features very similar to a GIST. Both tumours are capable of direct invasion, haematogenous metastasis to the liver and local nodal disease [3, 4].

It is important to distinguish a gastric GIST from an exophytic gastric carcinoma as the treatment and prognosis offered to the patient is different. GIST has a better prognosis even when malignant (not all are) and is also usually highly responsive to chemotherapy.

Take Home Message

Exophytic gastric carcinomas are rare and can be confused with a GIST.

The antrum of the stomach is the commonest location for an exophytic gastric carcinoma.

If in doubt, biopsy is recommended. **Differential Diagnosis List:** Exophytic gastric adenocarcinoma, Gastrointestinal Stromal Tumour (GIST), Leiomyosarcoma, Gastric carcinoma with a large local lymph node metastasis

**Final Diagnosis:** Exophytic gastric adenocarcinoma

**References:**


**Description:** Microscopically the tumour was composed of moderately differentiated adenocarcinoma, intestinal type, comprising malignant glands focally infiltrating through serosa and into adherent pancreatic tissue. Adjacent gastric mucosa showed high grade dysplasia with extensive intestinal metaplasia. **Origin:**
Description: Gross (cut) surgical specimen, with the large exophytic tumour 'hanging' off the wall of the stomach. Origin:
**Description:** Gross surgical specimen of the stomach with the large exophytic mass, rather like a tennis ball. **Origin:**
Figure 3

Description: Heterogenous upper abdominal mass.

Origin:
Figure 4

Description: Portal venous phase imaging of the abdomen, outlining the close relationship of the mass to the head of pancreas. Origin:
Description: Large heterogenous well defined exophytic mass at 3-6 o'clock arising from the antrum of the stomach. Origin:
Figure 6

Description: The exophytic gastric adenocarcinoma (end of surgical instrument) with adjacent mobilised transverse colon. Origin: