CASE REPORT

Glomus tumour of the stomach

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SUMMARY

Glomus tumours are benign tumours typically arising from the glomus bodies and primarily found under the fingernails or toenails. These rare neoplasms account for <2% of all soft tissue tumours and are generally not found in the gastrointestinal tract. We report a case of a 40-year-old man presenting with recurrent epigastric pain and pyrosis. Endoscopy revealed a solitary tumour in the antrum of the stomach. Fine-needle aspiration biopsy was suspicious for a gastrointestinal stroma tumour. After CT indicated the resectability of the tumour, showing neither lymphatic nor distant metastases, a laparoscopic-assisted gastric wedge resection was performed. Surprisingly, histology revealed a glomus tumour of the stomach.

BACKGROUND

Most glomus tumours are typically found in the subungual region of the fingertips or toes and arise from the glomus body of peripheral soft tissue. They account for only 2% of all soft tissue tumours.¹ Although rare, glomus tumours may develop at various body sites. Within the gastrointestinal tract, they occur most often in the stomach. Typically, they are described as solitary, well-defined gastric submucosal tumours in the antrum, with non-specific clinical manifestations.² Most patients are asymptomatic, but may report of ulcer-like symptoms or even suffer from gastrointestinal bleeding.^{2–3} Gastrointestinal stromal tumours (GISTs) are important in the differential diagnosis and are the most common malignant stromal tumours of the stomach. We report a rare case of a patient with a glomus tumour of the stomach.

CASE PRESENTATION

A 40-year-old, otherwise healthy man, reported about recurrent epigastric pain and heartburn over the course of several months. Treatment with proton pump inhibitors did not markedly relieve the pain. Endoscopic ultrasound examination and endoscopy revealed a submucosal tumour at the antrum of the stomach (figure 1). CT showed a sharply demarcated 4×3 cm tumour in the antrum of the stomach (figure 2), infiltrating the wall of the stomach, but not invasively, and with neither lymphatic nor distant metastases. Fine-needle aspiration (FNA) biopsy could not dismiss a GIST. Therefore a laparoscopic-assisted gastric wedge resection was performed. The postoperative course was uneventful and the patient discharged 7 days after surgery. Histopathological examination revealed the typical pattern of a glomus tumour (figure 3), and immunohistochemistry excluded a

gastrointestinal stroma tumour and neuroendocrine tumour. Ki-67 immunohistochemistry was performed, determining a proliferation rate of 2%. The tumour was positive for smooth muscle actin, as well as for vimentin.

DIFFERENTIAL DIAGNOSIS

Differential diagnoses were: neuroendocrine tumours, haemangioma, GIST and leiomyoma.

OUTCOME AND FOLLOW-UP

The patient remained asymptomatic and, 6 weeks after surgery, control endoscopy showed a healed scar in the stomach. A second follow-up examination 1 year after surgery revealed no recurrence.

DISCUSSION

Glomus tumours of the stomach are rare and can present with ulcer-like symptoms, such as epigastric pain, nausea, vomiting or even gastrointestinal bleeding.³ Although these tumours are almost always benign, preoperative differentiation from potential malignant lesion-like gastrointestinal stroma tumours can be difficult. On CT scan, these tumours appear as circumscribed submucosal masses with a homogeneous density, with or without ulceration, and may contain minute calcification.⁴ Other mesenchymal tumours, such as neuroendocrine tumours, haemangiomas and GISTs, may present similarly on CT scans. Endoscopic or FNA biopsies may distinguish glomus tumours from other gastric tumours, but may be misleading or might not contribute to the preoperative diagnosis.^{2–5–6} In these situations, a complete resection of

Figure 1 Gastroscopic appearance of the tumour.

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Figure 2 CT of the glomus tumour in the stomach (arrow indicates tumour).

Figure 3 Immunohistochemistry for smooth muscle actin and typical growth pattern.

the tumour is recommended. The surgical approach depends on the location of the tumour. In this case, a wedge resection with negative margins was the optimal treatment of a single lesion without suspicious lymph nodes.⁷ We decided against an endoscopic mucosal resection, because the diagnosis was not clear before the resection.

Complete resection allows an accurate diagnosis. Histologically, most gastric glomus tumours consist of small, uniformly rounded glomus cells, located in the walls of dilated vessels, with no nuclear pleomorphism, no mitotic figures and no necrosis.⁸ The tumours are positive for smooth muscle actin, vimentin and desmin, and negative for CD34 and c-KIT (CD117), with no cellular markers for GIST's.⁶ Although GIST's may be morphologically similar to glomus tumours, a negative immunohistochemistry of CD34 and c-KIT can exclude the possibility of a GIST in most patients.^{4 6}

Learning points

- ▶ Glomus tumours of the stomach are a rare entity and preoperative differentiation from other potentially malignant gastric tumours may not be possible.
- ▶ A complete resection of the lesion should be performed. The extent of the resection depends on the suspected diagnosis.

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