



## International Journal of Surgery Case Reports

journal homepage: [www.casereports.com](http://www.casereports.com)Unexpectedly ease surgery for a worrisome abdominal mass:  
Pedunculated GISTs

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## ABSTRACT

**INTRODUCTION:** Discovery of abdominal masses often poses significant diagnostic difficulties. GISTs are mesenchymal masses, with specific histological features. Dimensions may vary from millimeters to giant tumours. We would like to present our case, which had an unexpectedly easy operative course which was easily handled with a simple surgical excision with a short operative duration.

**PRESENTATION OF CASE:** A 38 years old female patient was diagnosed to have an abdominal heterogen mass of 15 cm × 12 cm × 10 cm in dimension. Abdominal computed tomography revealed the solid mass between the stomach and pancreas corpus and tail, possibly originating from the pancreas. With the preoperative diagnosis of locally invasive distal pancreas cancer the patient underwent laparotomy, following the dissection, the mass was observed to be originating from the posterior gastric wall, extending exophytically with a peduncle of 5 cm in width, without any visual evidence for peritoneal invasion and metastasis. The tumour and the peduncle was resected with stapler device. Total operation time was 30 min. Postoperative course was uneventful. Pathologic diagnosis was gastrointestinal stromal tumour (GIST).

**DISCUSSION:** Pedunculated large GISTs are not frequent and they can enlarge as 15 cm in diameter and compress the neighbouring organs. When they were huge, it is difficult to differentiate the origin of the masses. GISTs should be considered in differential diagnosis of giant abdominal masses.

**CONCLUSION:** When GISTs are huge and pedunculated, it can be difficult to differentiate the origin of the masses. This case report presents unexpectedly ease surgery for a worrisome abdominal mass.

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## 1. Introduction

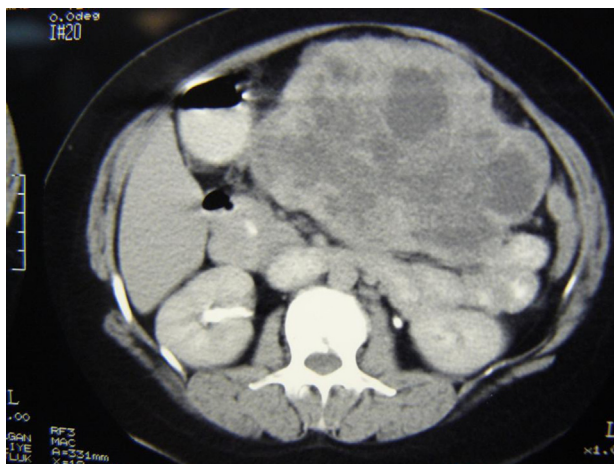
Discovery of abdominal masses often poses significant diagnostic difficulties. Surgeons ask questions themselves such as “what investigations might help to determine the nature of the mass?”, “what is the probable diagnosis?”, “what is the origin of the mass?” and “is there any chance of curative resection?”.<sup>1</sup> We asked all these questions ourselves when we diagnosed a worrisome abdominal giant solid tumour in a 38 years old lady. However, we surprised during the surgery that the tumour was easily handled with a simple surgical excision with a short operative duration.

## 2. Case

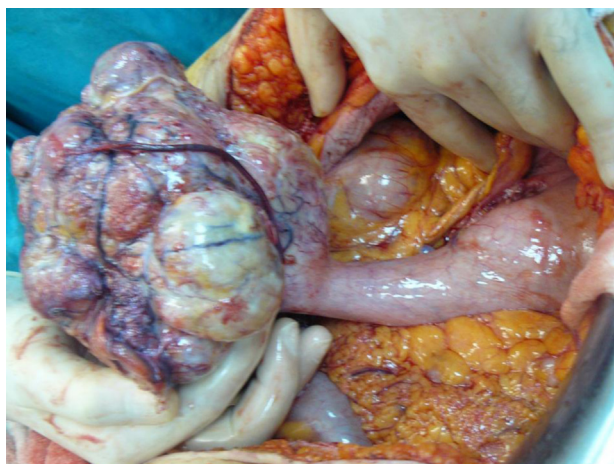
The patient was admitted with complaints of abdominal pain, swelling, nausea, vomiting, weakness and loss of appetite developing in 2 months with increasing severity. Her medical history did not reveal any finding describing her symptoms and physical examination determined a left upper quadrant palpable mass with tenderness. Liver and renal function tests, urine sample analysis results and 2 tumour marker levels were within normal range. Among complete blood count tests, haemoglobin level was 10.1 g/dL, haematocrit was 32.8%, platelet count was  $452 \times 10^3$  m/L and leucocyte count was  $8.84 \times 10^3$  m/L. Abdominal computed tomography revealed a lobulated solid mass of 15 cm × 12 cm × 10 cm diameters, located between the stomach and pancreas corpus and tail, possibly originating from the pancreas (Fig. 1). Compression on posterior gastric wall was observed with upper gastrointestinal endoscopy. We did not perform needle biopsy in order to prevent the risk of tumour dissemination. Our preoperative diagnosis was locally invasive distal pancreas cancer and we planned an extensive cancer surgery if it was possible. The patient underwent laparotomy and following the dissection of the gastrocolic ligament, the mass was observed to be originating from the posterior gastric wall of the great curvature and extending exophytically with a peduncle. Peduncle was long and 5 cm in width.

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**Fig. 1.** Abdominal computed tomography scan revealing the mass located between gastric posterior wall and the pancreas.



**Fig. 2.** Tumour originating from the posterior gastric wall with an peduncle.

The mass did not invade any neighbouring organ. There was not any visual evidence for peritoneal invasion and metastasis. With a macroscopically visible 3 cm of tumour free surrounding tissue, the peduncle was resected using a 60 mm stapler device (Fig. 2). Total operation time was 30 min. The patient's postoperative course was uneventful and she was discharged on postoperative day 4. Histopathological examination of the mass with a weight of 1233 g and a dimension 14 cm × 13 cm × 10 cm, containing partial necrotic and haemorrhagic tissues was reported a diagnosis of gastrointestinal stromal tumour (GIST). The tumour was found to comprise spindle-shaped tumour cells with one mitosis in 50 high-power fields. Immunohistochemical stains were positive for CD 17 and CD34, negative for desmin S100 and alpha SMA. According to the Fletcher classification the patient was at high risk and therefore imatinib was prescribed postoperatively and computed tomography scans on postoperative 1st and 6th months did not reveal any significant finding reminding local recurrence. The patient is in postoperative 8th month and still under out-patient follow-up without any event.

### 3. Discussion

GISTs are mesenchymal masses, primarily located in gastrointestinal system and abdomen with specific histological features. They origin from the interstitial cells of Cajal, occurring throughout the smooth muscle layer of the gastrointestinal system. These

tumours are most frequently gastric (70%) in origin and represent 1% of the gastric tumours. Except stomach they are located in small intestine (20–30%), colon-rectum (10%) or oesophagus (5%).<sup>2</sup> Usually tumour is located in the gastrointestinal wall and extend from the serosal surface through the abdominal cavity. Dimensions vary from millimeters to 35 cm.<sup>2</sup> Here, our preoperative diagnosis was not GIST of stomach. Radiologically the wall of the stomach was not enlarged and there was no intramural tumour in the gastric wall. Pedunculation of the GIST was the main reason of this misdiagnosis. The tumour of our case had originated from the posterior gastric wall, extending to the pancreatic corpus, resembling a pancreatic mass in preoperative radiological evaluation. Pedunculated large GISTs are not frequent and they can enlarge as 15 cm in diameter and compress the neighbouring organs. When they were huge, it is difficult to differentiate the origin of the masses. GISTs should be considered in differential diagnosis of giant abdominal masses. Immunohistochemically, these tumours are often positive for CD 117 and c kit.<sup>2</sup> In our case immunohistochemical stains were positive for CD 17 and CD34, negative for desmin S100 and alpha SMA. We reviewed the pedunculated gastric GISTs of the last year of the medical literature. The authors of those studies found that most of these cases were huge abdominal masses (12–15 cm) and did not cause severe symptoms.<sup>3–5</sup> The only main physical finding was well defined spherical masses. Some studies could not determine the origin of the mass and the diagnosis was confirmed during surgery.<sup>4</sup> In most cases, surgical excision were not complicated and in all cases the masses were resected with free surgical margins.<sup>3–6</sup> Gross dimensions and location presented in computed tomography scans may result in worrisome preoperative expectations. However, patients and surgeons can sometimes be lucky that the operative findings can be far from the preoperative plans. We aimed to present here that such a mass may be excised with a diagnosis of pedunculated GIST originating from the stomach without any difficulty in surgical technique.

### Conflict of interest statement

None.

### Funding

None.

### Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

### Authors contributions

Dr. Adil Baskiran contributed in data collection, writing.  
Dr. Emrah Otan contributed in writing.  
Dr. Cemalettin Aydin contributed in writing.  
Dr. Cuneyt Kayaalp contributed in writing.

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