CASE REPORTS

Posterior Perforation of Gastric Ulcer with Giant Retroperitoneal Abscess – a Rare Case

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Abstract

Spontaneous perforation of a gastric ulcer is a rare entity and can often be overlooked considering the frequently silent clinical picture. The posterior erosion of the ulcer through the omental bursa in the retroperitoneal space determines local inflammation which, together with the fibrosis of the retroperitoneal tissue facilitates the enclosure of the gastric content. We present the case of a 49-year old patient investigated for pain in the upper abdomen. The endoscopy performed one month before the admission described a retractile area with a central ulcer on the posterior surface of the stomach, adjacent to the lesser curvature. Given the fact that the abdominal x-ray was normal, a CT scan was performed and a voluminous retroperitoneal cystic lesion was discovered. Combining all the preoperative information the diagnosis was of retroperitoneal abscess by posterior perforation of a gastric ulcer. Surgical intervention was performed, the abscess was evacuated and its wall was completely resected; because of local conditions a distal hemigastrectomy with Roux en Y gastro-enteroanastomosis was chosen over gastrorhaphy and omentoplasty.

Keywords: ulcer, gastric,abscess, retroperitoneal, perforation.

Rezumat

Perforația spontană a unui ulcer gastric reprezintă o entitate rară şi de multe ori poate fi trecută cu vederea din cauza tabloului clinic frecvent silențios. Eroziunea posterioară a ulcerului prin bursa omentală în spațiul retroperitoneal generează inflamație locală ce împreună cu fibroza de la nivelul țesutului retroperitoneal facilitează izolarea ulcerului, acesta disecând la nivel retroperitoneal şi crescând insidios. Prezentăm cazul unui pacient în vârstă de 49 ani investigat pentru durere în etajul superior abdominal. Endoscopia digestivă superioară efectuată cu o lună anterior internării descria o zonă retractilă cu ulcer central pe fața posterioară gastrică adiacent micii curburi. Radiografia abdominală pe gol fiind fără modificări patologice s-a decis efectuarea unui examen imagistic CT abdomino-pelvin ce a decelat o formațiune voluminoasă chistică dezvoltată retroperitoneal. Îmbinând toate datele preoperatorii a fost pus diagnosticul de abces retroperitoneal prin ulcer gastric perforat posterior. S-a intervenit chirurgical şi s-a practicat evacuarea abcesului cu rezecția completă a peretelui abcesului; având în vedere condițiile locale s-a decis efectuarea unei hemigastrectomii distale cu gastro-enteroanastomoză pe ansă în Y tip Roux în detrimentul gastrorafiei cu omentoplastie.

Cuvinte cheie: ulcer, gastric, abces, retroperitoneal, perforație.

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INTRODUCTION

Peptic ulcer is a very common pathology in the general population and surgical management has remained reserved for serious cases, unresponsive to drug treatment or those discovered late in evolution, at the stage of complications. Peptic ulcer can become complicated in approximately 10-20% of cases; one of these complications is represented by perforation, which usually occurs in the anterior wall of the duodenum.[1] Perforation of a gastric ulcer is very rare, only 5-8% of ulcers being located in the posterior wall.[2] The perforated posterior gastric ulcer can evolve asymptomatically for a long period of time, therefore the diagnosis can be delayed or even missed, resulting in severe consequences.

CASE PRESENTATION

We present the case of a 49-year-old patient, without other associated pathologies, who came to the hospital for pain in the epigastrium for approximately 3 months. Clinical examination of the patient revealed a slight pain at palpation in the epigastrium. Usual blood tests showed slight inflammatory syndrome. One month before the admission the patient underwent an upper gastrointestinal endoscopy that revealed a grade A esophagitis and a retractile area with a central ulcer-crater of 2-2,5 cm diameter in the vicinity of the small curve, on the posterior surface of the stomach, situated approximately 10 cm from cardia. The endoscopic appearance could not be fully described due to the position of the ulcer. Abdominal X-ray showed no signs of perforation. It was decided to carry out a CT examination that described an intergastro-pancreato-splenic mass of approximately 22 cm diameter with compression on the stomach, pancreas, spleen and left kidney, with loss of the cleavage plane with the splenic vein.

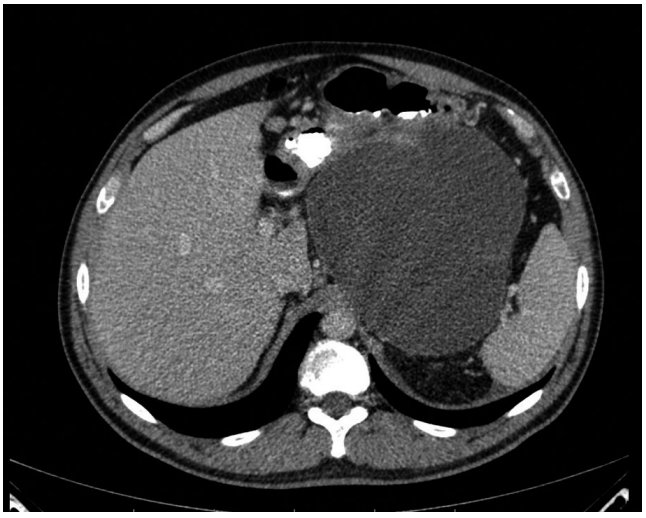

Figure 1. CT image of the retroperitoneal abscess (transversal section)

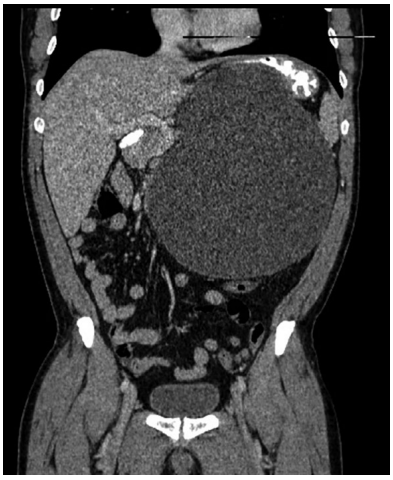

Figure 2. CT image of the retroperitoneal abscess (coronal section)

Given the prior endoscopy and the images of the abdominal CT, the preoperative diagnostic of posterior gastric ulcer perforated in the retroperitoneum was made and the decision for surgical intervention was taken. We discovered intraoperatively a voluminous abscess delimited by a relatively thick wall that pushes the pancreas and the splenic pedicle anteriorly, with development in the depth of the peritoneum; its upper pole communicated with the posterior wall of the stomach. A gastrotomy was decided in order to identify precisely the ulcer crater. The abscess was evacuated and its wall was completely resected, followed by a distal hemi-gastrectomy with Roux en Y gastro-enteroanastomosis. The postoperative evolution of the patient went well, without complications; he was discharged on the 7th postoperative day.

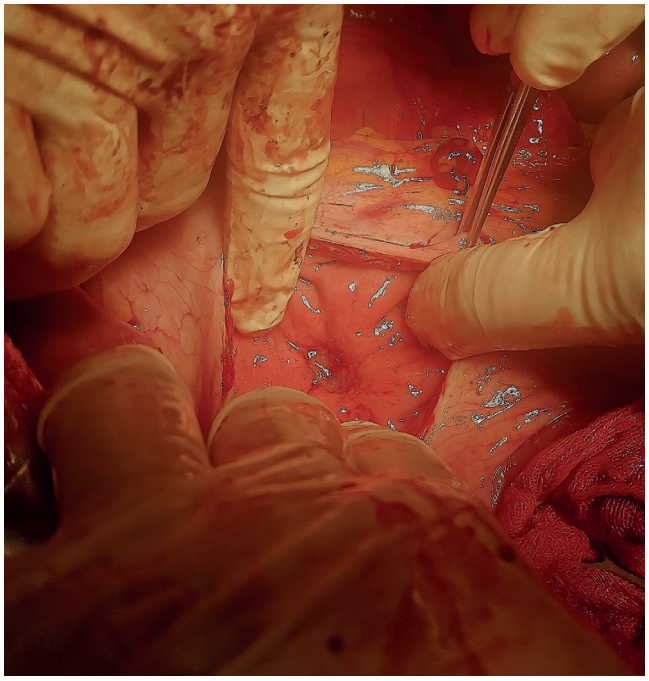

Figure 3. Ulcer crater (intraoperative aspect)

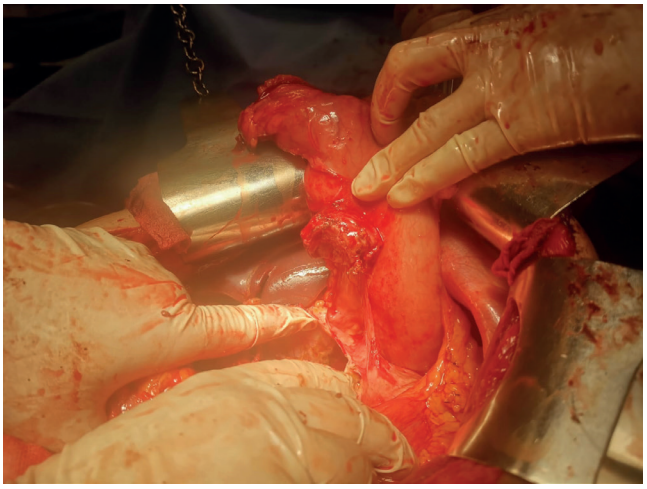

Figure 4. Area of perforation on the posterior wall of the stomach (intraoperative aspect)

The histopathological examination of the resection specimen described the aspect of a perforated gastric ulcer with necrosis of the retroperitoneal adipose tissue and granulomatous inflammatory reaction with a cystic appearance, without elements of malignancy.

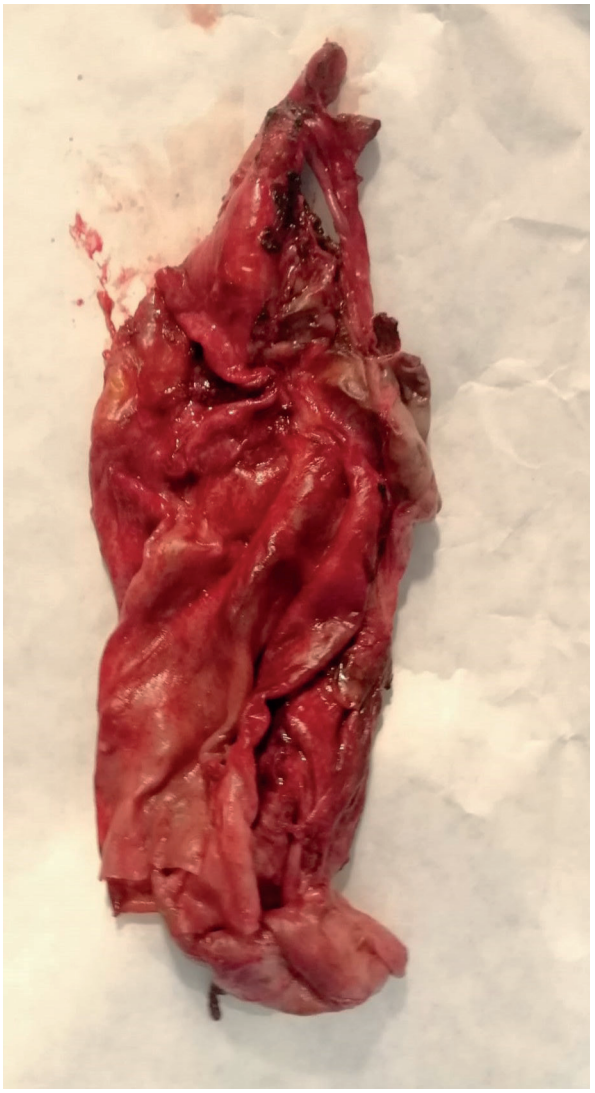

Figure 5. Fibrous shell of the retroperitoneal abscess completely resected

DISCUSSION

The posterior perforated gastric ulcer usually penetrates at the level of the omental bursa, thus accumulating gastric fluid which is later evacuated through the foramen Winslow in the peritoneal cavity, causing peritonitis, clinically presenting as an acute abdomen. The formation of a retroperitoneal abscess is more specific to the perforation of pyloric or duodenal ulcers which, once they perforate in the retroperitoneum, cause an inflammatory reaction and fibrosis of the surrounding retroperitoneal tissue with isolation of the gastric content and silent evolution. In this case, although the ulcer perforated at the level of the poste-

rior gastric wall, its trajectory was retroperitoneal with abscess formation.[3,4]

In patients with acute abdominal pain in the upper abdomen, the imagistic investigation of first intention is represented by the chest x-ray in supine position, with the aim of detecting the pneumoperitoneum, which is pathognomonic for gastric or intestinal perforation.[5] If the x-ray does not reveal pneumoperitoneum, CT examination is recommended, which besides the higher accuracy in detecting pneumoperitoneum, can also detect intraabdominal collections.[6] In this case, no signs of pneumoperitoneum were present, therefore an abdominal CT was decided, which proved essential in the diagnosis of the retroperitoneal abscess. The differential diagnosis of a collection located retroperitoneally includes conditions such as: retroperitoneal cystic tumor ,where the diagnosis is established following the histopathological result, pancreatic pseudocyst, which usually appears after an episode of pancreatitis, the pseudocyst fluid containing high levels of amylase, polycystic disease, hydatid cyst diagnosed with the ELISA test by detecting anti-Echinococcus Granulosus antibodies or even a mesenteric lymphangioma, a rare benign tumor that can develop in the retroperitoneum.[7] Retroperitoneal abscesses can have various starting points, therefore the differential diagnosis may include perinephric, retrocolic, pancreatic or colonic abscesses.[8] In this case, the endoscopy performed prior to hospitalization had an essential role in establishing the cause that determined the development of the abscess.

In the last decades, the surgical approach of perforated ulcers has varied quite a lot, with gastrorrhaphy and omentoplasty being preferred over gastrectomy; however, some studies did not show any difference in terms of mortality between the two techniques, gastric resection still representing an option to be taken into consideration in the surgery of perforated ulcer.[9,10] Considering the increased size of the ulcer, risk of malignancy and local conditions, in this case, a gastric resection was the chosen procedure.

CONCLUSION

In the era of proton pump inhibitors gastric ulcers complicated with perforation, without acute surgical abdomen, are extremely rare and can represent a diagnosis that can be overlooked considering the insidious evolution and without prompt surgical treatment can have a severe evolution.

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