journalofclinicalcases.com

Journal of Clinical Cases

ISSN 2769-9366

Case Report

Pyogenic Liver Abscess Following Gastrectomy Performed For Benign Disease.

Rocha Cabrera Cecilia Estefania[1], Punin Neira Roberto[1],Carrión Astudillo Christian Marcelo[1], González Hernández Dolores[1], Herrera Esquivel José de Jesús[1]

[1]Division of Gastrointestinal Endoscopy, Gastrointestinal Endoscopy Department, General Hospital Dr. Manuel Gea Gonzalez, Health Secretary, Mexico City, Mexico.

Abstract

Pyogenic liver abscess (PLA) is a rare but potentially life-threatening condition that may occur following gastrointestinal infections or some surgical procedures. Although gastrectomy has been associated with an increased risk of PLA, most reported cases occur after bariatric surgery and are commonly related to anastomotic leak or infected collections. We report the case of a 62-year-old female who developed a ruptured hepatic abscess four weeks after laparoscopic subtotal gastrectomy with Roux-en-Y reconstruction performed for benign disease. The patient presented with septic shock and was found on contrast-enhanced CT to have a large left-lobe hepatic abscess without evidence of anastomotic leak. Urgent diagnostic laparoscopy was performed, which confirmed a ruptured hepatic abscess with generalized purulent peritonitis and no signs of anastomosis leak. Cultures reported Escherichia coli and Enterococcus faecalis; the patient was successfully managed with surgical source control and targeted antibiotic therapy. This case highlights that PLA after non-bariatric gastrectomy may occur in the absence of anastomotic leak and is likely multifactorial. Early recognition and prompt intervention are essential to prevent severe complications and to promote recovery.

Keywords: pyogenic liver abscess; laparoscopic gastrectomy; Roux-en-Y gastrojejunostomy; bacterial translocation; laparoscopic surgery; intra-abdominal infection.

INTRODUCTION

Gastrectomy followed by Roux-en-Y gastrojejunostomy is a widely accepted surgical approach for both benign and malignant gastric diseases, with generally favorable outcomes and low postoperative morbidity. The most common complications include anastomotic leakage, hemorrhage, and intra-abdominal infection; less frequent infectious complications may also occur.[1]

With an annual incidence of 3-4 instances per 100,00 people, pyogenic liver abscess (PLA) is an uncommon but potentially fatal disorder that usually results from biliary disease or hematogenous dissemination from the gastrointestinal system. Its presentation is often nonspecific, requiring a high index of suspicion and imagination for diagnosis.[2] Recognized risk factors for PLA include immunosuppression, diabetes mellitus, hepatobiliary disorders, and intra-abdominal infections.[2] Furthermore, studies have shown a threefold increase in incidence (about 21.6 per 10,00 person-years) following gastrectomy, which may be due to disruption of the stomach barrier and subsequent bacterial translocation[3].

We present the case of a 62-year-old woman who had a laparoscopic gastrectomy for a benign illness and thereafter developed a pyogenic liver abscess.

CASE REPORT

A 62-year-old female with a history of systemic arterial hypertension was diagnosed with prepyloric peptic stenosis and initially managed with multiple endoscopic dilatations between July and October 2002 due to persistent obstructive symptoms. Given the failure of endoscopic treatment, she underwent laparoscopic antrectomy with Roux-en-Y gastrojejunostomy on 27/11/2022. The patient subsequently developed recurrent intolerance to oral intake. Upper endoscopy on 07/11/2025 showed a gastrojejunal

***Corresponding Author:** González Hernández Dolores. Division of Gastrointestinal Endoscopy, Gastrointestinal Endoscopy Department, General Hospital Dr. Manuel Gea Gonzalez, Health Secretary,Mexico City. **Email:** dra.gonzalezh19@gmail.com

Received: 17-May-2026, Manuscript No. JOCC - 5799 **; Editor Assigned:** 19-May-2026 **; Reviewed:** 02-June-2026, QC No. JOCC - 5799 **; Published:** 16-June-2026, **DOI:** 10.52338/jocc.2026.5799.

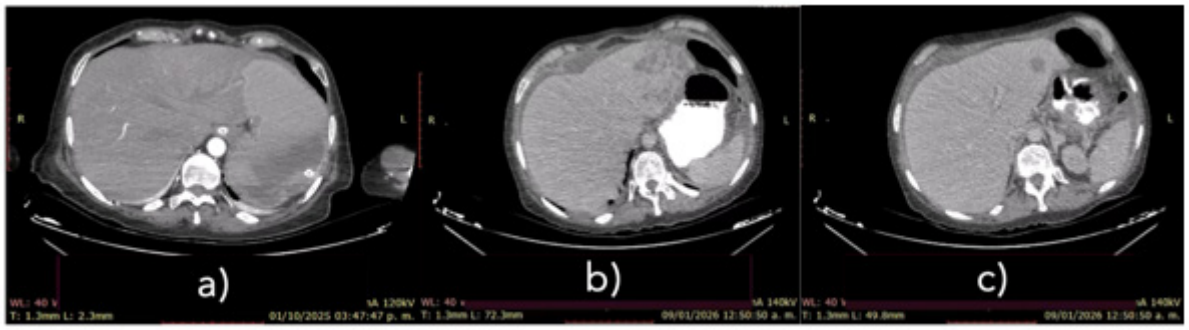
Citation: González Hernández Dolores. Pyogenic Liver Abscess Following Gastrectomy Performed For Benign Disease. Journal of Clinical Cases. 2026 June; 5(1). doi: 10.52338/jocc.2026.5799.

anastomosis stenosis with a filiform lumen, and on 13/10/2025, a fully covered self-expanding metal stent (FC-SEMS) was placed. However, symptoms – such as oral intolerance and abdominal distension - persisted. On 18/10/2025, a new endoscopy demonstrated proximal stent migration and complete anastomotic stenosis.

Definitive surgical management was performed on 02/12/2025 with laparoscopic subtotal gastrectomy and revision of the gastrojejunostomy, configuring a new anastomosis in a mechanical, linear, retrogastric, antecolic manner. Postoperative recovery was favorable, with bowel function returning on postoperative day 3. After a contrast scan showed no evidence of anastomotic leak, oral intake was restarted with satisfactory tolerance. Laboratory test at discharge demonstrated mild anemia, with otherwise unremarkable findings. The patient was discharged without complications.

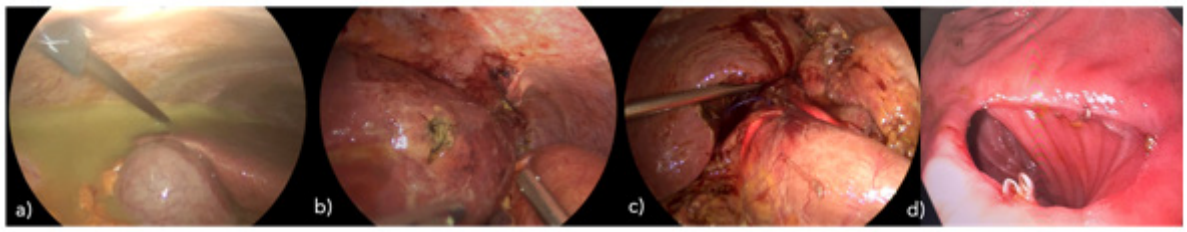
Approximately 4 weeks after discharge, she developed abdominal pain involving the upper quadrants, associated with subjective fever and nausea. On 08/01/2026, she presented to the emergency department. On arrival, she was hemodynamically unstable, with clinical features of shock, including tachycardia and hypotension. Laboratory evaluation revealed leukocytosis (18.7 x103/uL) with neutrophilia (88.2%), metabolic acidosis with elevated lactate, and acute kidney injury. Contrast-enhanced CT revealed a heterogeneous liver with multiple coalescent hypodense lesions in segment II, measuring 7.0x4.7x5.1cm, consistent with hepatic abscess. No evidence of anastomotic leak was identified. Associated free intraperitoneal fluid was noted in the perihepatic and periesplenic spaces, both paracolic gutters, and the pelvic cavity. (**Fig 1; b - c**).

Figure 1. A) preoperative contrast-enhanced CT demonstrated a homogeneous liver without focal lesions or evidence of hepatic abscess. The stomach was distended with distal narrowing. B-C) Contrasted-enhanced CT showing coalescent hypodense lesions in the left hepatic lobe consistent with hepatic abscess and a patent gastrojejunal anastomosis without evidence of leak.



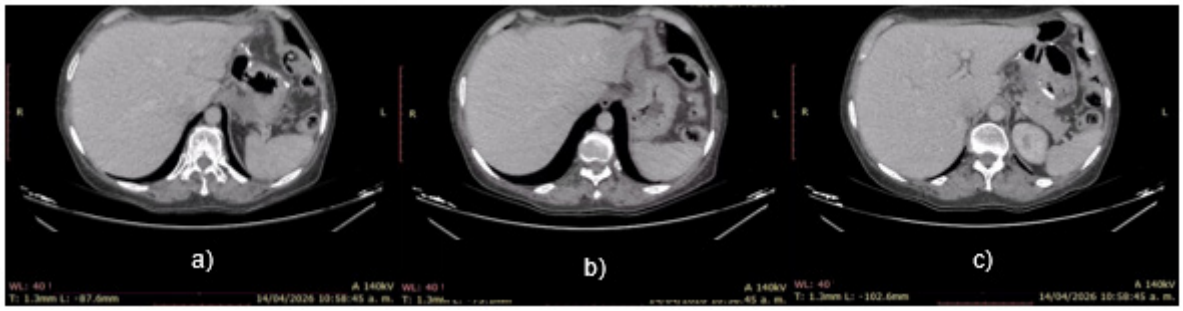
Urgent diagnosis laparoscopy revealed generalized purulent peritonitis (1000 mL) secondary to a ruptured left hepatic abscess (segments II-III), and no signs of anastomotic leak; intraoperative upper endoscopy confirmed a negative leak test. (**Fig 2; a-d**).

Figure 2. A) Generalized purulent peritonitis. B) Ruptured left hepatic abscess. C) gastrojejunal anastomosis without evidence of leak. D) intraoperative upper endoscopy.



Intraoperative fluid cultures reported Escherichia coli and Enterococcus faecalis. The patient was treated with meropenem and ampicillin, with progressive clinical and biochemical improvement. She was discharged after a total hospital stay of 19 days. The patient underwent a follow-up abdominal CT scan with contrast 3 months after surgery, in which remission of the liver abscess was observed. (**Fig 3; a-c**).

Figure 3. a-c) Remission of the liver abscess, 3 months after surgery.



DISCUSSION

A rare but possibly fatal consequence following gastric surgery is a pyogenic liver abscess. The information now available indicates that gastrectomy is associated with an increased risk; Tsai et al. reported an incidence approximately three times that of the general population [1]. Several mechanisms have been proposed, including reduced gastric acid secretion, bacterial overgrowth, and impairment of the mucosal barrier, all of which may facilitate bacterial translocation into the portal circulation[1,2].

Most published cases have been reported after bariatric procedures, particularly laparoscopic sleeve gastrectomy. Abscess formation in this patient is often associated with infections, postoperative collections, or staple-line leaks [3,4]. However, not all cases follow this pattern. As reported by Kataoka et al., hepatic abscesses may develop even in the absence of anastomotic leakage, suggesting that other mechanisms should be considered [5].

In our patient, neither imaging nor intraoperative examination revealed any signs of anastomotic leak. This finding is clinically relevant, as it shifts the focus away from a direct leak-related origin. The isolation of Escherichia coli and Enterococcus faecalis supports an enteric source, most likely through hematogenous dissemination. Although a transient or microscopies leak cannot be completely ruled out, bacterial translocation remains a plausible explanation in this setting [2].

Hepatic retraction during laparoscopic surgery is another aspect that might have had a role in this occurrence. Retractor-related live injury has been described, particularly affecting the left lobe, where compression can lead to localized ischemia [6]. These changes are often not noticeable in a clinical setting but may make it easier for a secondary infection to happen. In our case, the abscess developed in segments II-III, which are typically exposed to retraction during upper gastrointestinal procedures. A similar mechanism has been described by Tamhankar et al., who reported severe left-lobe necrosis associated with retractor use during laparoscopic gastric surgery [7]. Even though our patient did not exhibit overt necrosis, it is plausible that prior subclinical damage contributed to the development of an abscess.

Compared with previously reported cases, the clinical course in our case was more severe, progressing to septic shock and generalized peritonitis following abscess rupture. In contrast, several reports describe successful management with antibiotics and percutaneous drainage in stable patients [3,4]. In this case, hemodynamic instability and diffuse contamination justified urgent surgical exploration, which also confirmed a gastrojejunal anastomosis without evidence of leak or dehiscence.

Taken together, this case supports a multifactorial origin, in which gastrectomy, bacterial translocation, and possible retractor-related hepatic injury may have acted synergistically. Gastrectomy has been associated with an approximately threefold increased risk of pyogenic liver abscess, and this risk appears to be further increased in the presence of comorbidities such as hypertension, suggesting a cumulative effect between surgical and patient-related factors [3].

CONCLUSION

Pyogenic liver abscess after non-bariatric surgery, even in the absence of an anastomotic leak, Roux-en-Y gastrectomy can cause serious complications. In our case, a combination of factors – including prior gastrectomy, bacterial translocation, and possible retractor-related hepatic injury-may have contributed to its development, with comorbidities potentially increasing susceptibility. Early imaging is crucial for diagnosis, as the clinical presentation may be modest at first. Timely recognition and appropriate source control remain essential to avoid progression to sepsis and adverse outcomes.

Author contributions

All authors contributed to the study conception, writing, and design. All authors read and approved the final manuscript.

Conflict of interest statement

None declared.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethical considerations

Every participant in this study either gave their consent or waived it.

REFERENCES

1. Kataoka N, Oura S, Makimoto S. Liver abscess and prolonged postoperative intra-abdominal free air without anastomotic leakage after laparoscopic gastrectomy. Case Rep Gastroenterol. 2022;16(2):351–6. doi:10.1159/000524728.

2. Wichmann D, Königsrainer A, Schweizer U, Archid R, Nadalin S, Manncke S. Pyogenic liver abscesses caused by acute appendicitis: Frequency and diagnostic and therapeutic recommendations. Surg Infect (Larchmt). 2021;22(3):253–7. http://dx.doi.org/10.1089/sur.2019.366.

3. Tsai MS, Lin CL, Jeng LB. Gastrectomy is associated with an increased risk of pyogenic liver abscess: a 13-year nationwide cohort study. Sci Rep. 2016;6:33788. doi:10.1038/srep33788.

4. Abdelhady MH, Salama AF, Karam M, Bashah M. Solid organ infections: rare complications after laparoscopic sleeve gastrectomy: a report of four cases. Obes Surg. 2017. doi:10.1007/s11695-017-2609-6.

5. Elsherif SB, Sharma SK, Nguyen QH, Vicenty-Latorre F, Gopireddy DR, Kumar SP, et al. A rare complication of pyogenic hepatic abscess after laparoscopic sleeve gastrectomy—case report and literature review emphasizing the role of imaging. Clin Imaging. 2022;81:143–146.

6. Tamhankar AP, Kelty CJ, Jacob G. Retraction-related liver lobe necrosis after laparoscopic gastric surgery. JSLS. 2011;15(1):117–120.

7. Orr KE, Williams MP. MDCT of retractor-related hepatic injury following laparoscopic surgery: appearances, incidence, and follow-up. Clin Radiol. 2014;69:606–610. doi:10.1016/j.crad.2014.01.008.