

Billroth II Gastrectomy for Perforated Gastric Lymphoma

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Primary gastric lymphoma (PGL) is a relatively rare condition and easily underdiagnosed due to its nonspecific symptoms and signs.

Perforation is an unusual complication; it is life threatening and leads to considerable morbidity from sepsis, multiorgan dysfunction, mortality and delay in the beginning of chemotherapy.

Perforation predicts advanced disease and poor prognosis.

Surgery is reserved for PGL complications and is no longer the standard of care.

The prognosis of the disease is dependent on the histopathological subtype and stage at the time of diagnosis.

Keywords: Primary Gastric Lymphoma; Surgery; Gastrointestinal Tract

Introduction

The gastrointestinal tract is the most common extranodal presentation of malignant lymphoma and accounts for 7 to 20% of lymphomas. Primary gastric lymphoma is the most frequent in the gastrointestinal tract [1-4].

Primary gastric lymphoma is relatively rare and easily underdiagnosed due to its nonspecific symptoms and signs [2,5].

Perforation is a serious life-threatening complication of lymphomas involving the gastrointestinal tract that can occur either at diagnosis or during treatment. Gastric perforation in the absence of chemotherapy is extremely rare [4].

Authors here present a case report of an elderly man who presented at the emergency department with an incidental diagnosis of a perforated gastric lymphoma.

Surgery is indicated as primary radical treatment, as urgent treatment of patients with severe bleeding or perforation and as palliative treatment [2,3].

The prognosis of the disease is dependent on the histopathological subtype and stage at the time of diagnosis [2].

Case Report

93-year-old man with personal history of a giant inguinoscrotal hernia requiring cystostomy due to the surgical risk associated with hernia repair.

Admitted at the emergency department for sudden onset abdominal pain, located in the right groin.

In the objective examination: abdomen painful especially on palpation of the lower quadrants. Irreducible right inguinal hernia.

From the study carried out, stands out

CT scan: Pneumoperitoneum; perforation of the anterior aspect of the gastric body. Large right inguinal hernia with 5 cm of neck, whose contents are ileum, ascending colon and sigmoid colon; no signs of intestinal ischemia (Figure 1 and 2).

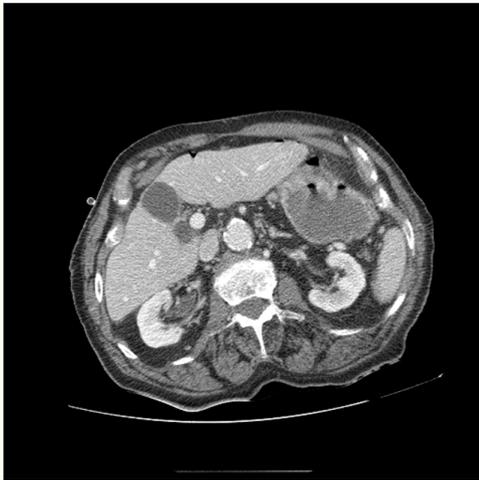


Figure 1: Axial view of CT scan.



Figure 2: Sagittal view of CT Scan.

Emergent surgery was proposed to the patient. Intraoperatively we identified a gastric body tumor. Patient was submitted to subtotal gastrectomy with reconstruction in Billroth II. The specimen was sent for pathological anatomy and revealed the presence of a

diffuse large cell B lymphoma. Discharge was postponed until day 10 of surgery due to a peri splenic collection that was resolved under conservative treatment. Patient was referred for a Hematology appointment.

Discussion

- Primary gastric lymphoma represents 35% of all extranodal lymphomas, 60% of all gastrointestinal lymphomas and 1-5% of primary gastric neoplasms [2,3,5,6].
- PGL is more frequent in patients older than 50 years and in males [2].
- In case of perforation there is no difference in the ratio of men to women [6,7].
- About 90% of the PGL are of B-cell lineage (60%). The predominant subtypes are mucosa-associated lymphoid tissue (MALT) and diffuse large B-cell lymphoma (DLCL) [2,5].
- There are few potential risk factors associated with the pathogenesis of PGL, including infection by *Helicobacter pylori*, Human Immunodeficiency Virus (HIV), Epstein-Barr virus, Hepatitis B virus, and Human T-Cell Lymphotropic virus 1. Celiac disease, inflammatory bowel disease have also been associated with PGL [2].

The initial symptoms are usually nonspecific

- The most common symptoms are weight loss, nausea, vomiting, abdominal fullness and indigestion. Gastric obstruction and perforation, fever, hepatomegaly, splenomegaly and lymphadenopathy are rare [2]. B symptoms are uncommon in contrast to nodal lymphomas [5].
- The physical examination is unremarkable in about 60% of patients.
- The nonspecific symptoms and lack of signs on physical examination contribute to the delay in the diagnosis. The clinical picture of the patient with gastric perforation is similar regardless the etiology, therefore the diagnosis is often made post-operatively.
- Perforation is an unusual complication; it is life threatening and leads to considerable morbidity from sepsis, multiorgan dysfunction, mortality and delay in the beginning of chemotherapy [4].
- Perforation is reported in 5-9% of gastric cancer and predicts advanced disease and poor prognosis [4,6,8,9].

- Perforations in elderly patients, with a longer duration of symptoms and in the middle or upper third of the stomach are more likely to be related with malign etiology. Gastric wall thickness or mass lesion can be identified in 85% of cases by image while lymphadenopathy only in about 50% [2,10].
 - Perforation occurs seldom in patients receiving chemotherapy (0.9% to 1.1%) and spontaneous perforation is rare [3-5,7,9,10].
 - Primary resection is no longer the standard of care. Surgery is reserved for PGL complications and mortality rate reaches 8% [1-3,5,6].
 - The type of surgery is dictated by patient age and comorbidities, hemodynamic stability, sepsis, tumor burden and location of the disease [3,5,8,9].
 - Peritoneal contamination does not adversely affect survival but remains to be clarified whether intraperitoneal cancer cells represent an independent prognostic variable [8,10].
 - Simple closure of the perforation is associated with poor results [9].
 - Oncological surgical approach is the ideal and avoids the risk of recurrent tumor perforation and associated high mortality. However a definitive R0 resection and lymphadenectomy may not be possible due to the hemodynamic instability of the patient and local conditions [9,10].
 - Mortality in patients with gastric perforation is high (10-40%) [7,8,10].
 - Patients submitted to R0 gastrectomy have better long-term survival (median 75 months) compared to patients who had simple closure procedures [10].
 - Survival rate is better for patients with R0 resections regardless the extent of lymphadenectomy [10].
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Conclusion

Spontaneous perforation PGL is rare but is life threatening [3-5,7,9,10].

The management of a gastric perforation in the setting of a tumor poses several challenges to both the patient and surgeon [10].

Mortality in patients with gastric perforation is high (10-40%).

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