

Non-Hodgkin lymphoma as a cause of acute intestinal obstruction/perforation in patients with adenocarcinoma of the sigmoid colon: a case report

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ABSTRACT: Report of a rare case of an 83-year-old patient with lymphoma of the terminal ileum causing obstructive/perforated acute abdomen synchronous with sigmoid colon adenocarcinoma and review of literature data about small bowel malignancies, particularly lymphomas. It seems to correspond to a rare disease (2% of all bowel cancers), more prevalent in elderly and immunocompromised patients, whose symptoms are vague and early diagnosis is difficult, often making it impossible to establish the correct therapy.

Keywords: gastrointestinal neoplasm; lymphoma; adenocarcinoma; intestinal obstruction; intestinal perforation.

INTRODUCTION

Acute abdomen refers to the group of signs and symptoms, especially pain, of an intra-abdominal disease, for which the surgical treatment is most indicated¹.

Obstructive acute abdomen is an urgent or emerging clinical situation caused by interrupted gastrointestinal flow. This condition is one of the most frequent acute abdominal diseases, associated with high morbidity and mortality rates, especially in case of late diagnosis or treatment start, and, in these circumstances, it may reach 20% mortality².

The main causes of intestinal obstruction vary with the level of obstruction, with brides and adhesions, internal hernia and large stomach tumors as causes of high obstruction, and colorectal diseases, volvulus and stenosis from intestinal inflammatory disease (terminal

ileum) as causes of low obstruction, both in order of decreasing frequency².

Perforated acute abdomen is the perforation of any hollow viscera resulting from inflammatory, infectious and/or neoplastic processes. In addition, it can have traumatic causes, including iatrogenesis.

The main intra-abdominal places of gastrointestinal tract perforation are the stomach and duodenum, followed by colons and other small bowel regions³.

Perforation of small bowel segments is considered a complication of intestinal inflammatory diseases, especially in the Crohn's disease. This complication is more common in patients with ileitis or ileocolitis, with incidence of around 23%. The infectious causes (such as tuberculosis in its intestinal form) and neoplasms (1–5% of all gastrointestinal tumors) should also be taken into account⁴.

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In patients with non-Hodgkin lymphoma, perforation or obstruction has been described, especially in the terminal ileum. However, this situation is uncommon^{2,4}.

CASE REPORT

A.A.O., male, 83 years old, white, retired farm worker, formerly a smoker, was receiving multidisciplinary outpatient care due to systemic arterial hypertension, coronary artery disease, chronic kidney disease and chronic obstructive pulmonary disease. He had history of abdominal surgery to correct an aorta aneurism.

The patient was admitted to another outpatient care in June 2008, due to a subocclusive acute abdomen, with improved conditions after a non-surgical treatment during the hospitalization, as well as episodes of hematochezia that started in January 2009.

Without following the recommendations to investigate intestinal bleeding, the patient returned to the Emergency Service of the Hospital de Base in May 2009, reporting, one day before admission, strong abdominal pain in the mesogastric region, associated with vomiting, hyporexia, non-quantified weight loss, intestinal constipation, as well as occasional episodes of hematochezia, which had started 6 months before. The patient had with him the result of a recent colonoscopy made at another service, which showed a vegetative injury in the sigmoid colon, with no biopsy result.

Three days after the symptoms appeared, the patient presented intense abdominal pain, abdominal distension and fecaloid vomiting (obstructive acute abdomen from probable neoplastic etiology), and was submitted to an emergency exploratory laparotomy. It showed neoplasm in rectum-sigmoid transition with macroscopic invasion of urinary bladder, without upstream colon distension, as well as presence of injury probably from the secondary graft in the terminal ileum, at approximately 15 cm from the ileocecal valve, associated with the obstruction, distension of the loops of small intestine and blocked perforation. The selected treatment was right-side enterocolectomy (Figures 1 to 3) and production of a Mickulicz ileotransversostomy, as well as exhaustive wash of the peritoneal cavity with physiological solution. The rectum-sigmoid transition injury was not addressed due to the patient's emergency situation, bladder size and invasion and as it was not the cause of the acute abdomen observed. The patient to the Intensive Care Unit in the immediate postop-

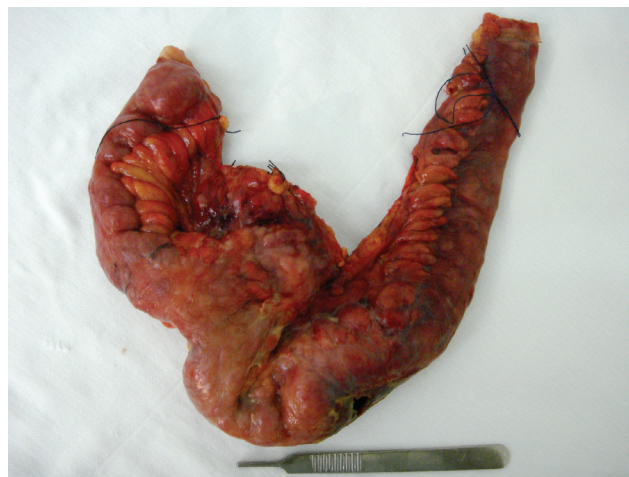


Figure 1. Resected terminal ileum segment, with apparent area of secondary graft.

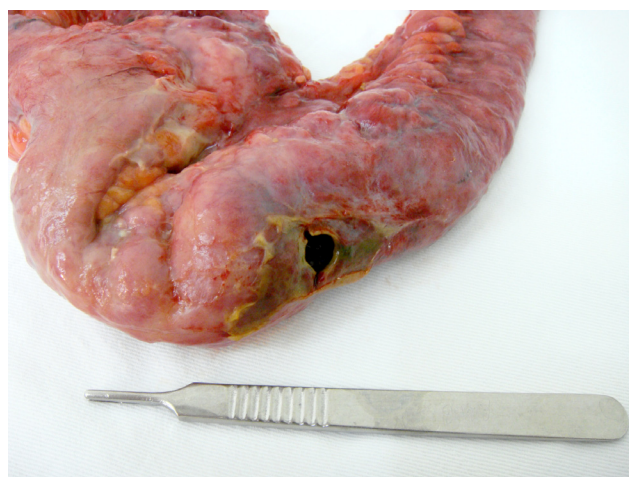


Figure 2. Region of previously blocked perforation.



Figure 3. Intraluminal aspect of the injury.

erative period, progressed with clinical decompensation of comorbidities and died on the second postoperative day.

The anatomopathological exam of the vegetating injury of the sigmoid observed in the colonoscopy showed a very differentiated and ulcerated tubular adenocarcinoma and the anatomopathological and immunohistochemical exams (Figure 4) of the injury in the distal ileum showed diffuse large B-cell lymphoma expressing immunophenotyping (CD20+).

DISCUSSION

The small bowel is rarely the place of neoplastic injuries, which represent only 1 to 5% of all gastrointestinal tract tumors⁴. The incidence of malign neoplasm is even lower, around 1 to 2%⁵. The terminal ileum is where malign injuries occur more frequently (50%), with the others equally occurring between the duodenum and the jejunum. In contrast, the frequency of benign tumors seems to increase starting at the duodenum towards the ileum^{4,6}.

Only 10% of the large intestine tumors are symptomatic and the frequency of benign injuries is ten times the frequency of malign injuries⁴.

Lymphomas are some of the malign neoplasms of the small bowel (7–25%). Primary lymphomas correspond to less than 2% of all intestinal tumors, with prevalence of intestine infiltration by neoplastic cells from other locations. The terminal ileum is the most common place of lymphoma occurrence, due to the higher concentration of lymphoid tissue associated with the intestine. The main

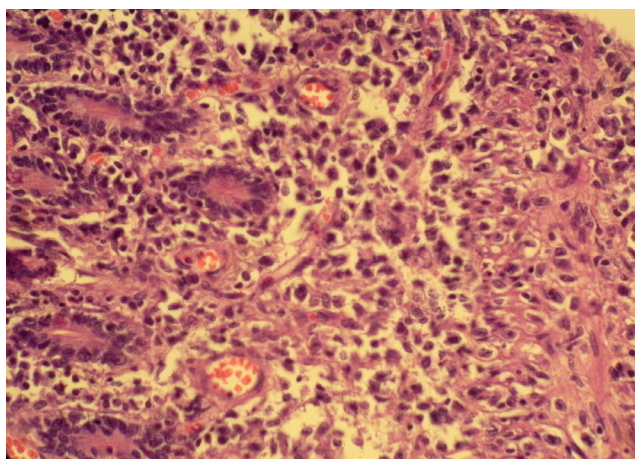


Figure 4. Histopathological aspect of the lymphoma in the terminal ileum.

risk factor to be considered is the immunosuppression, especially the one caused by the human immunodeficiency virus (HIV), chemotherapies and/or corticotherapy. In addition, celiac disease presents increased risk for the development of primary lymphomas^{3,5}.

The intestinal invasion by lymphomas may not present specific symptoms and remain silent for a long time. Their initial manifestation can be obstruction or perforation (25%). In general, they present vague symptoms, common to other histopathological types: unclear abdominal pain, nausea, alteration to the intestinal rhythm, anorexia and weight loss⁷.

Gastrointestinal tract lymphomas are most of non-Hodgkin type. The diffuse lymphoma of large B cells corresponds to the most frequent histopathological and immunohistochemical type⁸, more prevalent in people in their 70s and older.

The preoperative diagnosis is difficult, considering the insidious clinical manifestations that many times cause late search for specialized medical attention. In addition, given the similar symptoms and signs to other common diseases in the digestive tract, the correct diagnosis can only be obtained after the histomorphological and immunohistochemical analysis of the injury, many times after the patient is submitted to a surgical procedure.

In contrast, the distinction between primary lymphomas and the secondary infiltration of the gastrointestinal tract can be made through a biopsy of the bone marrow or other organs under suspicion of being affected by the disease. When this procedure is not possible, the consolidated and accurate criteria of Dawson⁹ can be used: non-palpable peripheral lymphadenopathy, normal thorax radiography, leukometry with differential showing no alterations, injury affecting particularly the gastrointestinal tract – only regional lymph nodes, and not the liver or spleen. The presence of these four criteria indicates the primary origin of lymphomas.

The case reported refers to an elderly patient with intermittent symptoms, suggesting a malign intestinal disease, confirmed through complementary exams (colonoscopy with biopsies). Emergency laparotomy showed the disease already well advanced locally in the sigmoid colon, as well as injury suggesting distance metastasis (terminal ileum), with signs of intestinal obstruction and perforation. The

anatomopathological analysis of the resected intestinal segment showed a terminal ileum lymphoma synchronous with adenocarcinoma of the sigmoid colon. With no proper time for further investigations of the patient's conditions and with the criteria of Dawson described above, we concluded that the lymphoma in the reported case was a primary lymphoma of the gastrointestinal tract, since it fulfilled all criteria established, and was synchronous with the neoplasms presented by the patient.

Synchronization between intestinal neoplasms is frequent, especially in the case of sigmoid colon adenocarcinoma, and it should always be investigated^{10,11}. The incidence of a second synchronous neoplasm with sigmoid colon adenocarcinoma, regardless of the histological type and the location in

the gastrointestinal tract, ranges between 1 and 6.8% in general population¹⁰.

CONCLUSION

Small bowel neoplasms are rare, and the benign type is more frequent. Gastrointestinal tract lymphomas are among the malign injuries, primary or secondary to a neoplastic infiltration. The most frequent place of incidence is the terminal ileum, considering its histological peculiarities.

Signs and symptoms are vague and unspecific, which makes early diagnosis and accurate treatment more difficult. However, these diseases should always be remembered and considered in the differential diagnosis of the various intestinal syndromes.

RESUMO: Relato de caso raro de um paciente de 83 anos, com linfoma de íleo terminal causador de abdome agudo obstrutivo/perfurativo sincrônico à adenocarcinoma de cólon sigmoide e revisão dos dados disponíveis na literatura acerca das neoplasias de intestino delgado, em especial os linfomas. Constata-se que corresponde a uma afecção rara (2% de todas as neoplasias intestinais), mais predominante em pacientes idosos e imunodeprimidos, cuja sintomatologia é vaga e o diagnóstico precoce difícil, fato que impossibilita muitas vezes a instituição da terapêutica correta.

Palavras-chave: neoplasia gastrointestinal; linfoma; adenocarcinoma; obstrução intestinal; perfuração intestinal.

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