

# Tiflitis in pediatric patient: a case report

## Abstract

We report a case of our service about typhlitis in pediatric patient, which had done hers first chemotherapy for leukemia tree days before the symptoms of pain in right lower quadrant and fever for one day. The final diagnosis was made through ultrasound and computerized tomography. The objective of this article is to emphasize the importance of images method to make differential diagnosis and achieve the correct one.

**Keywords:** colithis, typhlitis, abdominal pain, ultrasound, tomography

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## Introduction

Tiflitis, or neutropenic colitis, is an inflammatory and necrotic condition of the cecum and terminal ileum described primarily in children being treated for leukemia, but may also occur in other patients undergoing chemotherapy or corticosteroid treatment.

The objective is to report a case of typhlitis in a pediatric patient, who had performed the first chemotherapy session for treatment of acute lymphoblastic leukemia (ALL). Arrived at the prompt service with pain in the right iliac fossa and episodes of fever for 01 (one) day. It was necessary to perform ultrasonography and computed tomography with contrast for the correct diagnosis of the pathology.<sup>1</sup>

## Clinical condition

Patient came to the prompt pediatric care with complaint of abdominal pain in the right iliac fossa two days ago, associated with episodes of fever of 38.5°C. He was diagnosed with acute lymphoblastic leukemia (ALL) 10 days ago, and the first chemotherapy session was performed one day before the onset of symptoms.<sup>2</sup>

## Laboratory exams

**Hb:** 9,40g/dl Ht: 28,6%.

**Leukocytes:** 1350/mm<sup>3</sup>.

**Neutrophiles:** 864/mm<sup>3</sup>.

**Platelets:** 130000/mm<sup>3</sup>.

## Ultrasound exam

Parietal thickening of the cecum and proximal ascending colon with pericecal fat hyperrefringence (Figure 1).<sup>3,4</sup>

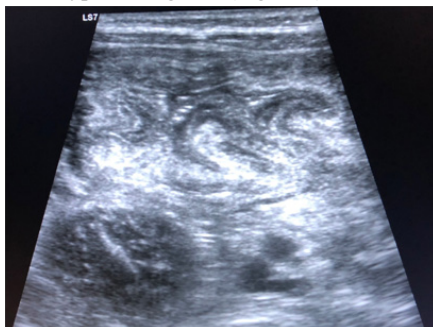


Figure 1 Ultrasound.

## Computed tomography

Parietal thickening of the intestinal loops in the terminal ileum, cecum and ascending colon, with pericecal fat blurring (Figure 2).

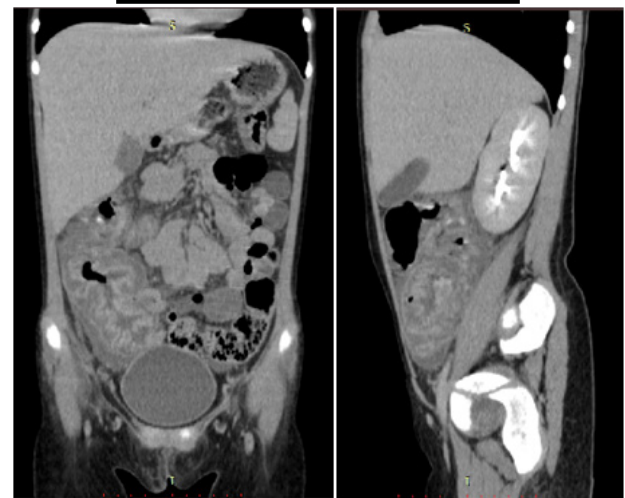
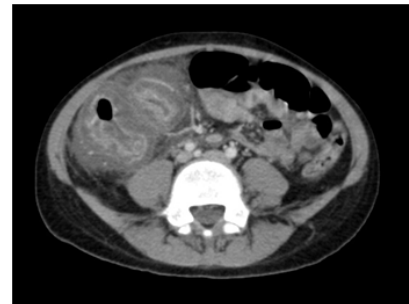


Figure 2 Computed tomography.

## Pathogenesis

The pathogenesis consists of direct mucosal injury of the chemotherapeutic agents and state of neutropenia, edema, vessel engorgement, mucosal surface interruption, distension and reduction of intestinal motility, culminating in necrosis and intramural bacterial invasion.

Major differential diagnoses include *Clostridium difficile* colitis and graft versus host gastrointestinal disease. Neutropenic colitis is the least understood complication of the intestinal wall, following

bacterial or fundic invasion. The causes remain undefined, and may be a combination of factors, such as altered immunity, toxic effect of chemotherapies, intestinal ischemia, thrombocytopenic intramural hemorrhage and even intestinal wall infiltration by neoplastic cells.

## Discussion and conclusion

A wide variety of diseases involve the ileocecal area, which includes the cecum, terminal ileum, ileocecal valve and the appendix. The conditions that affect this area tend to affect several of these segments, the diagnosis being difficult sometimes. Computed tomography is considered the best method for evaluating the ileocecal area. The most commonly isolated pathogens are cytomegalovirus (CMV) and *Cryptosporidium*, but others are also found. Abdominal pain in the right iliac fossa in neutropenic patients may be a diagnostic challenge, due to the possibility of ileocecal inflammatory pathologies and other complications of neutropenia, such as *C. difficile* infection and graft versus host disease. Therefore, imaging exams, especially computed tomography, are necessary for a correct diagnosis, in this case, typhlitis.

## Ultrasound

Parietal thickening of the cecum and proximal ascending colon with pericecal fat hyperrefringence.

## Computed tomography

Parietal thickening of the intestinal loops in the terminal ileum, cecum and ascending colon, with pericecal fat blurring.

## Acknowledgments

None.

## Conflicts of interest

The author declares that there is no conflicts of interest.

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