Acute acalculous cholecystitis following appendectomy due to acute appendicitis in a child

Palabras clave: Colecititis aguda alitiásica. Apendicectomía. Infancia.

Key words: Acute cholecystitis acalculous. Appendectomy. Childhood.

Dear Editor,

Acute cholecystitis is a rare entity in childhood (1) with up to half of the cases acalculous (2). Onset occurs in the context of various infectious conditions (2-4) (gastroenteritis, pneumonia, septicemia, otitis media, giardiasis and typhoid fever), as well as total parenteral nutrition, major burns, trauma, or abdominal surgery (6). Although it is a benign illness, a delay in the diagnosis of acute cholecystitis noticeably increases the morbidity and mortality of the condition.

We present the case of an 11-years-old girl who presented acute acalculous cholecystitis following an appendectomy for acute appendicitis.

Case report

We describe an 11-years-old girl with no relevant history who came to the emergency room for abdominal pain. She reported pain in the right iliac fossa from 8 hours earlier, accompanied by nausea and vomiting. She had no fever or other symptoms. During the physical examination, the patient presented pain on palpation in the right iliac fossa with contractions and positive Blumberg sign.

The laboratory workup showed discrete leukocytosis with neutrophilia. No significant findings were obtained from the abdominal X-ray.

Based on a diagnosis of acute appendicitis, emergency surgery was undertaken, in which the appendicitis was found to resemble an abscess and an appendectomy was performed. Histological study of the specimen confirmed the diagnosis.

On the second postoperative day, the patient presented fever of 38.5 °C and odynophagia with no symptoms. The physical examination revealed a hyperemic pharynx, but no signs of inflammation were observed near the surgical wound or the catheter line. The chest X-ray showed no significant findings. Antipyretic treatment was initiated. On the fourth day after surgery, the patient presented persistent fever of 38 °C despite antipyretics, as well as nausea, food vomiting, and spontaneous epigastric pain on palpation of the abdomen.

Based on the abdominal ultrasound, she was diagnosed with acute acalculous cholecystitis. The laboratory tests showed abnormal levels of the liver enzymes (glutamic-oxaloacetic transaminase, 281 U/L; lactate dehydrogenase, 496 U/L) and neutrophilia.

Antibiotic therapy with metronidazole 30 mg/kg/day and ceftaxime 140 mg/kg/24 h was started.

The patient progressed favorably with medical treatment and was discharged with no symptoms 11 days after surgery.

Discussion

Acute acalculous cholecystitis is a rare entity that has become increasingly more common in recent years. However, only a few cases have been reported among children following emergency surgery. Early diagnosis based on a high degree of suspicion, as well as appropriate treatment, are determining factors in decreasing its morbidity and mortality in childhood.

The etiopathogenesis of this condition in the immediate postoperative period has been related to an unusually high concentration of bile in the gall bladder, followed by sharp, rapid contractions to empty the gall bladder of sludge after the onset of oral tolerance (6). The development of acute acalculous cholecystitis during the postoperative period was first described in 1844 by Duncan (2).
Any risk factors should be identified for an accurate diagnosis and early treatment (6). There has been some debate about the pathogenesis of acute acalculous cholecystitis over the years, with the exact cause still uncertain. Multiple risk factors (prolonged fasting, sepsis and shock, total parenteral nutrition, intravenous narcotics, and multiple transfusions) have been described.

Clinical symptoms are fever, pain in the right hypochondrium, nausea, and vomiting. The examination may reveal jaundice, pain on palpation, and a mass in the right hypochondrium. The laboratory tests may show leukocytosis and abnormal bilirubin levels.

The diagnosis is based on the clinical symptoms, supported by additional imaging tests, with ultrasound the diagnostic method of choice due to its high specificity and accessibility (5).

Acute acalculous cholecystitis is rare among children, but should be considered in any who have presented infectious disease, trauma, or abdominal surgery. Only a few cases have been reported after abdominal surgery and even fewer after appendectomy with no peritonitis. The decisive factor for identification of the condition is a high level of suspicion, along with the clinical symptoms and knowledge of the risk factors (4). Ultrasound is the most reliable additional test for early diagnosis and follow-up (5). In children, nonsurgical treatment is safe and effective in most cases, although close monitoring of clinical symptoms and laboratory results will be required (6).

References