



Acute Alithiasic Cholecystite, A Rare Complication of Viral Hepatitis A: About the Two Moroccan Children

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Authors' contributions

This work was carried out in collaboration among all authors. Authors OB and SB designed the study, performed the statistical analysis, wrote the protocol, wrote the first draft of the manuscript and managed the analyses of the study. Author OB managed the literature searches. All authors read and approved the final manuscript.

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Case Study

ABSTRACT

Acute acalculous cholecystitis (AAC) is an atypical and rare complication of acute viral hepatitis A which is endemic in developing countries. This can lead to gangrene and perforation of the wall of the gallbladder, which are rare compared to AAC of other origins requiring surgical intervention. Evolution is generally benign compared to AAC of other origins. We will present two cases that were diagnosed with atypical cholecystitis clinically and on ultrasound, hospitalized at the pediatric hospital of Rabat in Morocco for viral hepatitis A and they responded to conservative management.

Keywords: Acute acalculous cholecystitis; Hepatitis A virus; gallbladder wall thickness.

1. INTRODUCTION

Viral hepatitis A (VHA) is a more common infection in children in developing countries [1].

Most cases pass asymptomatic, however, cases may present with symptoms such as fever and jaundice as vomiting, nausea, diarrhea [2-5]. Acute acalculous cholecystitis (AAC) is the

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inflammatory disease affecting the gallbladder in the absence of gallstones, it is a rare disease in children, and its spectrum has not been well established [4]. It represents 50 to 70% cases of acute cholecystitis in children [6]. Clinical manifestations are: jaundice, pain typical of the bile ducts of a diffuse right hypochondrium. The diagnosis is clinically suspected and then confirmed by ultrasound [7]. The occurrence of AAC during VHA is rare and has been specifically described in the literature [8]. The aim of our work is to recall the importance of an early diagnosis of viral hepatitis A in cases of acute acalculous cholecystitis, in order to avoid unnecessary surgical intervention.

2. CASES REPORT

Case 1: This is a child aged 07 years with no particular history and no notion of taking drugs or toxic hospitalized for mucocutaneous jaundice with abdominal pain of the right hypochondrium and bilious vomiting associated with dark urine and discolored stools for 07 days all evolve in a context of fever at 38.5°C and asthenia. The glycemia was correct. The abdominal palpation finds a sensitivity of the right hypochondrium. Biological examinations revealed a prothrombin level of 47%. The serum activity of the alanine aminotransferase (ALAT) was at 2317 IU / L, that of the Aspartate Aminotransferase (ASAT) at 2317 IU / L, that of the gamma-glutamyl transpeptidase (GGT) at 161 IU/L. The protidemia (57 g / L). The search for antibodies to the hepatitis A virus (HAV) type IgM was positive. The abdominal ultrasound showed a thick-walled alithiasic vesicle (12 mm) and a normal-sized liver with a homogeneous parenchyma with non-dilated intra and extrahepatic bile ducts. Clinical and biological healing was observed spontaneously after one week.

Case 2: He is a 13 year old child, with a notion of hepatitis A in his cousin 15 days ago. He was hospitalized in a stage 3 hepatic encephalopathy with mucocutaneous jaundice and epigastric pain and right hypochondrium, associated with vomiting progressing for 05 days. The physical examination found a comatose child with a Glasgow score of 10. The glycemia was correct. The abdominal palpation showed a defense of the right hypochondrium. During his hospitalization, the child developed low hemoptysis 5 days after admission. The biological examinations revealed a serum activity of the ALAT was at 1379 IU / L, that of ASAT at

1598 IU / L, that of GGT at 121 IU / L, the prothrombin level was 10%. The protidemia (59 g / L). The search for antibodies to the hepatitis A virus (HAV) type IgM was positive. The abdominal ultrasound showed a thick-walled (10 mm) alithiasic vesicle with a laminated appearance. There was, moreover, a peritoneal fluid effusion of low abandonment. The intra- and extra-hepatic bile ducts were thin. The hepatic parenchyma was homogeneous. The child died 10 days after hospitalization in a fulminant hepatitis A scene.

3. DISCUSSION

The diagnosis of acute alithiasic cholecystitis due to viral hepatitis A was accepted due to the history, clinical presentation and positivity of the anti-HAV IGM. Hypoalbuminemia, absent from our observations, can lead to vesicular edema responsible for a thickening of the wall, in hepatitis A. However, the pathogenesis of acute cholecystitis during viral hepatitis A seems to be linked to a direct effect of the virus by the invasion of bile cells [9].

Acute a lithiasic cholecystitis can also be a complication of systemic infections (mainly salmonellosis and AIDS), digestive parasitosis, general illnesses (cystic fibrosis, Kawasaki disease, knotty periarteritis, hemolytic uremic syndrome, leukemia) and resuscitation medical and surgical [10].

Acute cholecystitis generally associates fever of varying intensity with pain with defense of the right hypochondrium. However, the presence of fever or leukocytosis is not essential for diagnosis [11]. A vesicular ultrasound aims at a thickening of the wall of the gallbladder (> 3.5 mm), distension of the gallbladder, accumulation of perivesical fluid, no acoustic shadow or biliary mud and no dilation of the intra and extrahepatic bile ducts. The sensitivity of ultrasound for the detection of AAC is 88.9%, and the specificity and precision are respectively 97.8 and 96.1% [7]. The results of ultrasound of the gallbladder in children suspected of acute inflammatory disease of the acalculous gallbladder may lead to better results [7]. In one study, 39 children hospitalized for hepatitis A infection were evaluated by ultrasound and operated; gallbladder walls with a striation of 10 mm or more were found in 10 patients [12]. All of their abnormalities returned to normal within 4 weeks. The most common complications of viral hepatitis A are cholestatic hepatitis and relapsed hepatitis.

Fulminant or subfulminating liver failure is rare, but potentially serious [13]. Extrahepatic complications of hepatitis A are most often hematological (bone marrow aplasia, peripheral thrombocytopenia) and nephrological (acute renal failure, glomerulonephritis), while vesicular complications are rare [14]. However, it is important to look for viral hepatitis A in any patient with acute acalculous cholecystitis to avoid unnecessary cholecystectomy. The treatment is initially conservative, except in cases of gangrene or perforation of the vesicular wall, an urgent cholecystectomy will be necessary [7].

Black et al. [15] reported the case of a 6-year-old child with HAV infection complicated by gangrenous cholecystitis. Ultrasound showed a distended gallbladder containing echogenic bile. Laparotomy revealed a distended gallbladder with areas of necrosis. Dalgic et al. [16] the case of an 11-year-old child presented with an acute HAV infection with acalculous cholecystitis. No surgery was indicated. Repeated imaging after 4 days of admission with regression of ultrasound results. Kayabas et al. [17] described a 15-year-old patient with acute cholecystitis due to HAV infection. Ultrasound showed a thickening of the wall of the gallbladder. the treatment was conservative with clinical and radiological bone evolution. Arroud et al. [18] the case of an 11-year-old child admitted for viral hepatitis A was reported. Ultrasound showed a thickening of the wall of the gallbladder at 11mm. the treatment was conservative with clinical and radiological bone evolution.

Currently, acute infection with the hepatitis A virus (HAV) is common in developing countries, especially in children [3]. In our country, the prevalence of HVA in children is high [19,20], which leads to recommend vaccination against the hepatitis A virus for children and young adults who have to go to countries where the virus is very endemic.

4. CONCLUSION

Viral hepatitis A, when symptomatic, can simulate a picture of acute cholecystitis. It is however important to exclude viral hepatitis A in any patient with acute acalculous cholecystitis to avoid unnecessary cholecystectomy, the conservative therapy may be adequate.

CONSENT

As per international standard informed and written parental consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard written ethical permission has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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