Another Face of Epstein-Barr Viral Infection: Acute Acalculous Cholecystitis and Severe Liver Lesion in Previously Healthy Five-Year-Old Girl with Primoinfection

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Acute acalculous cholecystitis (AAC) is a rare disease, particularly in children. It is mostly observed in critically ill or postsurgical patients due to dehydration, increased bile viscosity, decreased oral intake and gallbladder dysmotility. Most AACs in children are caused by infectious agents and are characterized by favorable clinical course and conservative treatment. Also, AAC is an atypical and rare complication of Epstein-Barr virus (EBV) infection. The occurrence of AAC has been described in some chronic disorders and systemic autoimmune diseases. The clinical and laboratory presentation of AAC is variable. The diagnosis is based on radiological criteria. Abdominal ultrasound typically shows distended gallbladder with thickened wall, pericholecystic fluid or edema and absence of gallstones or dilatation/obstruction of bile ducts.

We present a girl with AAC and acute severe liver lesion due to the EBV primoinfection.

Previously healthy 5-year-old-girl was admitted to the Pediatric Department (April 2020) due to jaundice, severe liver lesion and cholestasis. She was inaptenet for a week; had pruritus, pale and yellowish skin, occasional abdominal pain and one hypocholic stool. No fever, nausea or vomiting was reported. At admittance, icterus, an enlarged liver (3 cm in the medioclavicular line) and a negative Murphy’s sign were noticed. She was afebrile, HR 132/min, BP 80/50 mmHg; body height 116.3 cm (88th centile), BMI 18 kg/ m2 (93rd centile). She had no lymphadenopathy or pharyngitis.

Laboratory tests revealed severe hepatitis and conjugated hyperbilirubinemia (AST 1908 U/L, ALT 3222 U/L, GGT 51 U/L, bilirubin total 83.6 μmol/L, conjugated 68.5 μmol/L, total serum bile acids 61.2 μmol/L) with preserved synthetic and metabolic liver function and normal values of inflammatory markers. Ultrasoundography revealed mild hepatosplenomegaly, hyperechogenic liver parenchyma, normal bile ducts and slightly dilated gallbladder with thickened and layered wall, significant pericholecystic edema and the absence of gallstones. The following assessment found no elements of malignancy, autoimmune etiology, chronic primary and secondary liver diseases, dyslipidemia, bacterial or parasitic infection. Serological analysis confirmed EBV primoinfection and significant viremia (28 000 copies/ml at PCR test). Conservative treatment was followed by spontaneous clinical, laboratory and radiological regression.

We presented a rare hepato-biliary manifestation of EBV infection in children. Our aim was to highlight the importance of recognizing AAC as a differential diagnosis in children with abdominal pain and/or acute cholestasis. Radiological evaluation and monitoring as well as collaboration of gastroenterologists and radiologists is essential in management of these patients.