Acute Acalculous Cholecystitis (AAC) is rarely associated with Epstein Barr Virus (EBV) infection in the pediatric population. The typical causes of AAC are systemic infections, trauma, and certain autoimmune diseases. Our report focuses on a 6-year-old female who presented with abdominal pain in the setting of URI symptoms and was diagnosed with EBV associated AAC.

CASE PRESENTATION

A 6-year-old female was admitted with a 4-day history of progressively worsening epigastric abdominal pain associated with 1-day history of fever (101 F). She also complained of 4 days history of sore throat, nasal congestion, itchy eyes and swollen eyelids. She had visited a local urgent care clinic prior to presentation and was prescribed with Amoxicillin-Clavulanate for bronchitis. She had no history of abdominal trauma, abdominal surgery, hepatitis or autoimmune conditions.

Physical Exam:
Vital Signs: BP 90/75, HR 100, RR 20, Temp. 98.3 F
General: + fatigued.
ENT: + swelling of eyelids, +rhinorrhea. - Scleral icterus. - Pharynx injection.; - bilateral tonsillar hypertrophy
Cardiopulmonary: Regular rhythm, Clear to auscultation bilateral lungs
Abdomen: + epigastric abdominal tenderness to palpation. Liver and spleen were 3 and 2 fingerbreadths beneath the ribcage, respectively. Soft and non-distended. Murphy’s sign was negative.

Significant Labs: Leukocytosis with >50% lymphocytic predominance and thrombocytopenia, elevated liver enzymes and total bilirubin. Mono Test +. Smooth muscle antibody + with 1:80 titer. EBV viral capsid antigen (VCA) IgM > 160.0 U/mL and EBV DNA PCR 261,252 copies/mL. Of note, VCA-IgG and EBA IgG were negative (Table 1).

Pertinent Negative Labs: viral hepatitis panel, cytomegalovirus IgM, HSV IgM, HIV Ag/Ab, ANA, Anti liver-kidney IgG, and ferritin level. A urine drug screen and Acetaminophen toxicity level were both unremarkable.

Imaging: Abdominal CT and ultrasound showed gallbladder wall thickness 6.9 mm, common bile duct at 2.3 mm, pericholecystic fluid, and absent gallstones. Abdominal CT showed hepatosplenomegaly (Fig. 1 and Fig. 2).

DIFFERENTIAL DIAGNOSIS

Viral hepatitis (CMV, HSV, HIV, EBV)
Autoimmune hepatitis
Hemophagocytic Lymphohistiocytosis, Drug toxicity, Sepsis and Malignancy

LEARNING POINTS

- Acute Cholecystitis is a rare disease in the pediatric population. Its incidence in infancy, childhood and adolescence has been reported to be between 0.15% and 0.22%.
- Physicians and allied health professionals who care for children should be aware that AAC attributable to EBV is a diagnosis of exclusion.
- Pediatric patients with incidental findings of AAC may benefit from additional workup to rule out other underlying causes, such as, but not limited to Kawasaki’s, Hemophagocytic Lymphohistiocytosis, Macrophage Activating Syndrome, Malignancy, Autoimmune Disease and HIV.
- Unlike surgical management of AAC in the adult population, AAC is managed conservatively in the pediatric population.

REFERENCES

Lube T. Cholecystitis in Children. Seminars in Pediatric Surgery; Volume 9, Issue 4, 2000; 170-176