Epstein–Barr virus infection associated with acute acalculous cholecystitis in a 20-year-old woman

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A 20-year-old woman with no substantial medical history presented to our outpatient clinic with a sore throat, cough and 7 days of persistent right upper quadrant pain that worsened with movement and deep breathing. Physical examination revealed inflamed tonsils, bilateral tenderness and swelling of the posterior cervical lymph nodes, tenderness of the right upper quadrant and a positive Murphy sign. Blood tests revealed leukocytosis 17.0 [normal 5.0–8.0] × 10^9/L, 48% lymphocytes, no atypical lymphocytes) and elevated liver enzymes (aspartate aminotransferase 201 [normal 13–33] IU/L, alanine aminotransaminase 190 [normal 6–27] IU/L, alkaline phosphatase 433 [normal 115–359] IU/L and γ-glutamyltransferase 132 [normal 10–47] IU/L). Abdominal computed tomography (CT) revealed an enlarged gallbladder with a thickened wall, pericholecystic fluid collection (Figure 1A) and mild hepatosplenomegaly (Figure 1B). No stones were seen in the gallbladder, cystic duct or common bile duct, and the common bile duct was not dilated (diameter 6.0 mm). Based on these findings, we suspected infectious mononucleosis with acute acalculous cholecystitis. The patient tested positive for immunoglobulin (Ig) M and IgG antibodies to Epstein–Barr virus viral capsid antigen and negative for antibodies to Epstein–Barr virus nuclear antigen, confirming the diagnosis. Her symptoms resolved within 7 days with symptomatic treatment.

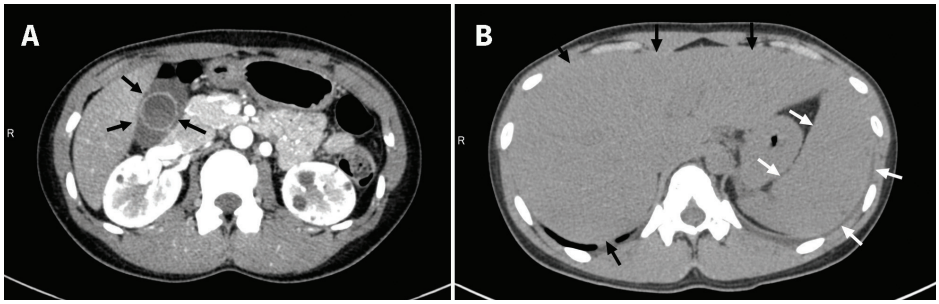

Figure 1: Abdominal computed tomography scans from a 20-year-old woman with persistent right upper quadrant pain, showing (A) an enlarged gallbladder with a thickened wall and pericholecystic fluid collection (black arrows), and (B) mild hepatosplenomegaly (white arrows show enlarged spleen, black arrows show enlarged liver). No stones are visible in the gallbladder or the common bile duct.

Acute acalculous cholecystitis is characterized by thickening of the gallbladder wall, gallbladder enlargement, pericholecystic fluid collection and the absence of stones, confirmed by ultrasound or CT.[1] It is seen infrequently in critically ill patients with trauma, shock or burns. In these cases, it has a high mortality rate and requires antibiotics, cholecystostomy or cholecystectomy.[1] Acute acalculous cholcystitis also occurs in association with some viral infections, including Epstein–Barr virus, cytomegalovirus and dengue virus.[1] Epstein–Barr virus–associated acute acalculous cholecystitis is thought to be caused by direct viral infiltration of the gallbladder mucosa and cholestasis.[2] The average age of onset is 17 years, and it occurs predominantly among women. Epstein–Barr virus–associated acute acalculous cholecystitis, unlike acute acalculous cholecystitis from other causes, has a good prognosis. Most cases resolve spontaneously without antibiotics or surgical intervention.[3]

References

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