Acalculous cholecystitis is thought to occur in patients with a severe systemic illness or during long periods of intravenous nutrition. We discuss a case of acalculous cholecystitis secondary to Epstein-Barr virus detected by bedside ultrasound. We hope to alert clinicians who are actively using bedside ultrasound of an important, yet not commonly discussed, association. [West J Emerg Med. 2011;12(4):481-483.]
and bili direct 0.6 mg/dL on admission. Her serum lipase was normal.

A monospot was sent from the ED based on the patient’s signs and symptoms of a diffuse viral illness with signs of acalculous cholecystitis. After surgical consultation, the patient was eventually admitted to the medical service for supportive therapy and confirmatory testing. The patient was started on antibiotics (Zosyn 3.375 mg intravenously every 6 hours) based on the uncertain cause of the acalculous cholecystitis without confirmatory viral testing.

During the patient’s hospital stay, the Epstein-Barr viral antigen IgG returned negative, but the viral antigen IgM was positive, indicating an acute infectious process. Her hospital course was uneventful, consisting of supportive therapy, with the patient discharged after 5 days.

**DISCUSSION**

Acalculous cholecystitis secondary to an Epstein-Barr virus (EBV) infection is an uncommon entity, with only 4 previous cases (all since 2007) being reported in the general medical literature.¹ Our case is the first to be detected in the ED with the aid of bedside ultrasound. Generally, acalculous cholecystitis occurs secondary to sepsis, total parenteral nutrition, or gallbladder dysmotility due to primary gallbladder infection (ie, *Salmonella, Staphylococcus, Brucella*, cytomegalovirus, or cryptosporidium).² ³ Rarely occurring in previously healthy young adults, acalculous cholecystitis can be a diagnostic challenge for the clinician unfamiliar with its association with EBV.

A paucity of information is available detailing the mechanism of EBV-induced acalculous cholecystitis. The presumed mechanism is thought to be either EBV-associated bile stasis with resultant gallbladder inflammation or direct viral gallbladder invasion.⁴ ⁵ Ultrasound findings of acalculous cholecystitis include gallbladder wall thickening (greater than 4 mm) and/or pericholecystic fluid.¹ Emergency physicians commonly searching for gallstones when performing a gallbladder examination should be aware of subtle findings of acalculous cholecystitis when evaluating patients with suspected gallbladder disease, especially young patients with signs and symptoms of a diffuse viral illness and a mild to moderate transaminitis. Historically, acalculous cholecystitis is treated with antibiotics and/or cholecystectomy, but no clear treatment plan exists for viral acalculous cholecystitis. Antibiotic therapy is not recommended after viral confirmation but may not be clear to the emergency provider during the initial evaluation. Also, in all previous cases, patients required inpatient admission without surgical intervention, but these guidelines are based on only 4 cases, and repeat ultrasounds to determine resolution of disease may be prudent.¹ ⁴

With an increasing number of emergency physicians integrating bedside ultrasound into their practice, we hope to alert the clinician of an unrecognized cause of acalculous cholecystitis. Acalculous cholecystitis can be a critical condition in seriously ill elderly patients, but minimal outcome data have been reported in acute viral episodes in previously healthy young individuals. Currently, early detection and supportive therapy may be the mainstay of treatment once the etiology is determined, since all reported cases have not needed surgical intervention. Emergency physicians should be aware of the association of acalculous cholecystitis and EBV infection when performing bedside ultrasound in the evaluation of the patient with abdominal pain.

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**REFERENCES**

2. McChesney JA, Northup PG, Bickston SJ. Acute acalculous cholecystitis associated with systemic sepsis and visceral arterial hypoperfusion: a