



# Acute Cholecystitis in the Elderly Patient: How Is It Different?

# 63

Andrea J. Hladik and Matthias Barden

## Pearls and Pitfalls

- The diagnosis of acute cholecystitis, while common in elderly patients, is often missed on initial presentation, and treatment may be delayed.
- A high index of suspicion and a broad differential diagnosis should be employed when evaluating elderly patients with vague complaints.
- Computed tomography may be the better initial test in evaluating these patients.
- Once the diagnosis is made, treatment is dependent on the patient's overall condition and comorbidities. Initial cholecystostomy with drain placement may be advantageous over immediate surgical intervention in some patients.

The “classic” presentation of acute cholecystitis includes right upper quadrant abdominal pain with nausea, vomiting, and fever. Elderly patients commonly present atypically with vague and nonspecific symptoms; therefore, providers should approach this population with a high index of suspicion [1]. Elderly patients with abdominal pain experience greater morbidity than their younger counterparts, with a higher rate of admission (up to one-half) and a greater need for surgical intervention (one-third of those admitted) [2, 3].

The incidence of cholecystitis increases with age due to an increased prevalence of gallstones, increased lithogenicity of bile, and reduced gallbladder motility. Complications, such as acalculous cholecystitis, emphysematous cholecystitis, and gallbladder perforation, are more likely in elderly patients, and mortality rates are higher [2]. The greater morbidity and mortality among the elderly are due in part to an increased prevalence of comorbid diseases [4].

Elderly patients with acute cholecystitis are harder to diagnose because.

1. Differences in pain perception can lead to delays in seeking medical care.
2. Physiologic changes of aging and the use of a polypharmacy may lead to fewer vital sign abnormalities.
3. Vomiting, leukocytosis, and a positive Murphy's sign occur less frequently [5].

Due to the limitations of the physical exam and laboratory testing in the elderly, providers should take a more aggressive approach with imaging. The American College of Radiology recommends ultrasound (US) as the most appropriate diagnostic modality in patients with right upper quadrant pain [1], but computed tomography (CT) is indicated in the evaluation of nonspecific abdominal pain and, therefore, may be the more appropriate initial imaging modality in elderly patients. While US is more sensitive and specific for determining the presence of gallstones, CT is more sensitive for detecting gallbladder wall thickening, pericholecystic fluid, pneumobilia, and gall bladder perforation [6, 7]. It can also demonstrate ductal dilation [7] and often helps identify alternate diagnoses.

The geriatric population has the same morbidity and mortality as the general population for symptomatic cholelithiasis without concurrent infection when treated with elective, outpatient cholecystectomy [8]. However, elderly patients with acute cholecystitis have an increased morbidity and mortality when undergoing cholecystectomy compared to the general population [8]. Thus, elderly patients found to have gallstones may benefit more from undergoing expedited/semi-elective surgery before complications such as acute cholecystitis develop [8].

Elderly patients with acute cholecystitis should have intravenous antibiotics initiated upon diagnosis and receive early surgical consultation. While the definitive treatment for acute cholecystitis is cholecystectomy (typically laparoscopic), it is associated with increased morbidity and

A. J. Hladik (✉) · M. Barden  
Department of Emergency Medicine, Eisenhower Medical Center,  
Rancho Mirage, CA, USA  
e-mail: [ahladikpotz@emc.org](mailto:ahladikpotz@emc.org)

mortality in the elderly, the severely ill, and those with significant comorbidities [4, 5, 9]. Thus, some favor a less invasive initial approach with intravenous antibiotics +/- either percutaneous cholecystostomy or endoscopic intervention [10–12]. After antimicrobial treatment and gallbladder decompression, poor surgical candidates can be optimized for delayed or interval cholecystectomy. Optimal timing and management strategies remain controversial [13].

#### Suggested Resources

- Abdominal pain in the elderly. EM:RAP C3 Project. Sept 2012. <https://www.emrap.org/episode/september2012/c3project1>
- Cholangitis: deadly cause of right upper quadrant abdominal pain. emDocs. Feb 2016. <http://www.emdocs.net/cholangitis-deadly-cause-of-right-upper-quadrant-abdominal-pain/>
- Geriatric gastroenterology: series #19 – Biliary disease in the elderly. Practical gastroenterology. Sept 2008. <http://www.practicalgastro.com/pdf/September08/ShahArticle.pdf>

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