

## Gall Bladder Empyema Due to Xanthogranulomatous Cholecystitis Presenting as a Giant Gall Bladder

Nunley M<sup>1</sup>, Smith J<sup>2</sup>, Kaushik P<sup>3</sup> and Marak C<sup>4\*</sup>

<sup>1</sup>Department of Internal Medicine, House Staff, Northeastern Health System, Tahlequah

<sup>2</sup>Department of Surgery, Oncology Division, Northeastern Health System, Tahlequah

<sup>3</sup>Department of Medicine, Rheumatology, Northeastern Health System, Tahlequah

<sup>4</sup>Department of Medicine, Pulmonary and Critical Care Medicine, Northeastern Health System, Tahlequah

### \* Corresponding author:

Creticus Marak MD,  
Department of Medicine, Pulmonary and Critical  
Care Medicine, Northeastern Health System,  
Tahlequah, E-mail: creticus@hotmail.com

Received: 26 Mar 2022

Accepted: 12 Apr 2022

Published: 18 Apr 2022

J Short Name: JCFMI

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### Citation:

Creticus Marak MD, Gall Bladder Empyema Due to Xanthogranulomatous Cholecystitis Presenting as a Giant Gall Bladder. J Clin Med Img. 2022; V6(6): 1-2

### 1. Clinical Image

A 71-year-old male with no significant past medical history presented to our hospital with 3 weeks history of fevers, nausea, vomiting, abdominal pain, decreased oral intake, and weight loss of about 30 pounds. He also noticed a swelling in the right upper quadrant of 2 weeks duration. Physical examination revealed a large visible mass in the right upper quadrant that was tender and firm to palpation [Figure 1]. His initial WBC was 17,000 with a left shift; ALP was 250, ALT was 170, and AST was 100 with a total bilirubin of 0.6. CT of the abdomen revealed an angry-looking sizeable hydropic gall bladder with inflammatory changes but no calculi or dilatation of the hepatobiliary tract; the gall bladder wall was thick with hypoattenuating lesions [Figure 2]. Emergent laparotomy revealed an inflamed giant gall bladder adherent to the lateral abdominal wall, transverse colon, and duodenum. The gall bladder was decompressed with drainage of 1500 cc of frank pus, and after carefully dissecting it out from the surrounding structures, a subtotal cholecystectomy was successfully performed. Careful intraoperative examination revealed no calculi in the cystic duct or the hepatobiliary tract. He developed respiratory failure and septic shock post-operatively, requiring mechanical ventilation, fluid boluses, intravenous Meropenem, and Norepinephrine. His liver function normalized after the surgery making us believe that the elevation of the liver enzymes was due to Mirizzi's syndrome.

The culture of the purulent fluid grew *Klebsiella pneumoniae*; his antibiotic regimen was adjusted accordingly to the sensitivity report. Histopathologic examination of the resected gall bladder revealed findings consistent with xanthogranulomatous cholecystitis [Figure 3]. He responded well to medical treatment and was eventually discharged home in stable condition. Xanthogranulomatous cholecystitis is a chronic benign inflammatory disease of the gall bladder with unique imaging and pathological features. Characteristic histopathology findings include gall bladder wall infiltration by chronic inflammatory cells, giant cells, fibroblasts, foamy macrophages, and lipid droplets. A *giant gall bladder* has historically been defined as an enlarged gall bladder with a volume greater than equal to 1500 cc (the average weight of the liver is 1500 gm). A giant gall bladder complicating xanthogranulomatous cholecystitis has not been previously described in the literature. Gall bladder empyema complicating xanthogranulomatous cholecystitis is an exceedingly rare phenomenon. Gall bladder empyema is a surgical emergency with associated high morbidity and mortality. Elderly, immunocompromised, and patients with significant medical problems like diabetes have a poor outcome with increased postoperative complications (postoperative respiratory failure, sepsis, septic shock, acute kidney injury, bleeding, wound infection, subhepatic abscess, bile duct injury, and cystic duct stump leak), and mortality. If treated early, the outcome is better for healthy patients.

Figure 1



Figure 2

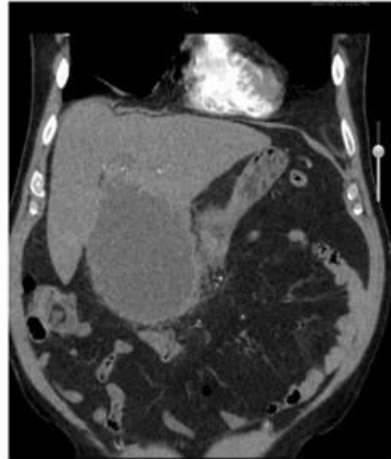


Figure 3

