



Laparoscopic cholecystectomy for acute cholecystitis caused by a giant gallstone

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ABSTRACT

Gallstone-related acute cholecystitis is the most common reason for cholecystectomy, with laparoscopic cholecystectomy being the current gold standard approach. Gallstones larger than five centimeters, known as 'giant gallstones,' are quite rare. Data on the safety of laparoscopic cholecystectomy in cases with giant gallstones are limited. In this case presentation, we discuss the emergency laparoscopic cholecystectomy performed for acute cholecystitis due to a giant gallstone.

Keywords: Cholecystitis, Gallstones, Laparoscopy

Introduction

Acute cholecystitis is one of the complications of cholelithiasis and the most common indication for emergency cholecystectomy. With increasing experience, laparoscopic approaches are accepted as the gold standard for cholecystectomy, but inflammatory changes and the increasing size of gallstones often lead to more conversions to open surgery. Gallstone sizes generally do not exceed 2-3 cm; gallstones larger than 5 cm are rarely found.^[1]

Case Report

A 49-year-old male patient presented with abdominal pain lasting 3 days. Physical examination showed tenderness in the right upper quadrant. Abdominal USG detected a 47 mm solitary gallstone in the gallbladder, increased gallbladder wall thickness, and pericholecystic band-style fluids. Blood tests revealed WBC: 21400/ μ L, CRP:

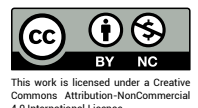
287 mg/L; liver function tests were normal, and bilirubins were minimally elevated. Computerized Tomography showed a solitary giant gallstone in the gallbladder and pericholecystic inflammation (Fig. 1).

Emergency laparoscopic cholecystectomy was performed using 4 ports. During laparoscopic exploration, it was observed that the gallbladder contained a solitary giant gallstone (Fig. 2). Although manipulating the gallbladder was difficult during the operation due to this gallstone, the operation was completed laparoscopically. The gallbladder was removed with the help of an endobag by extending the upper left quadrant port site by approximately 4 cm (total incision length was 5 cm). The solitary gallstone measured 10.5 cm longitudinally. The patient did not develop any complications in the postoperative follow-up and was discharged on the 2nd day after surgery. Written informed consent was obtained from the patient for this case report.



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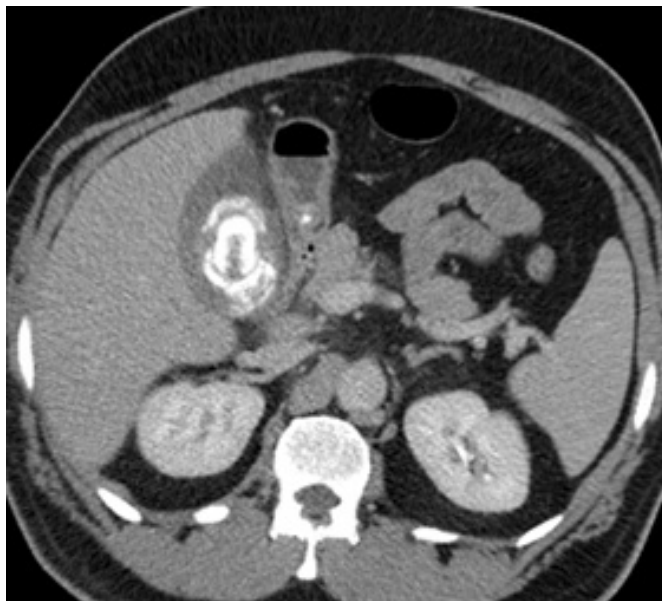


Figure 1. Solitary giant gallstone filling whole gallbladder in abdominal computerized tomography.

Discussion

With increasing experience and advancements in acute cholecystitis, laparoscopic cholecystectomy has become the standard treatment. However, large calculi in the gallbladder or severe acute cholecystitis are reasons for some centers to opt for open surgery from the beginning. In this case, we would like to point out that such cases can be completed laparoscopically in experienced centers.^[2-5] If there is a need for an open approach, conversion to open surgery is always an option. In cases of giant gallstones that cannot be extracted from the port site, an appropriate area can be determined preoperatively. We extended the epigastric port incision and removed the gallbladder from the epigastric area. Therefore, in such cases, it is better to plan the gallbladder removal according to preoperative imaging results.

In cases of acute cholecystitis, the operation can be performed laparoscopically even with a giant calculus in the gallbladder. Additionally, it is beneficial to determine preoperatively the area where the gallbladder will be removed.

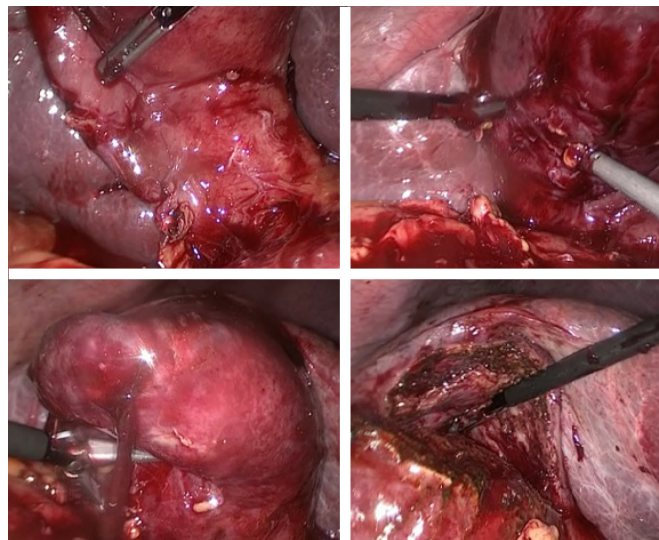


Figure 2. Operative images taken during laparoscopic cholecystectomy.

Disclosures

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

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References

1. Stinton LM, Myers RP, Shaffer EA. Epidemiology of gallstones. *Gastroenterol Clin North Am* 2010;39:157-69.
2. Ekici Y, Yagmurdu MC, Moray G, Haberal M. A giant gallstone. *Turk J Gastroenterol* 2007;18:133-4.
3. Al Zoubi M, El Ansari W, Al Moudaris AA, Abdelaal A. Largest case series of giant gallstones ever reported, and review of the literature. *Int J Surg Case Rep* 2020;72:454-9.
4. Igwe PO, Diri ON. Laparoscopic cholecystectomy for giant gall stone: Report of two cases. *Int J Surg Case Rep* 2020;67:207-10.
5. Singh Y, Mohammed S, Hosein A, Ramoutar K, Naraynsingh V. A giant gallstone: The largest gallstone removed laparoscopically in the world. *Cureus* 2020;12:e7933.