# Unique Presentation of Perforated Gallbladder and Gangrene in an Advanced Pregnancy: Management and Other Considerations

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## Introduction

Acute cholecystitis is a common general surgery procedure in the United States. However, acute cholecystitis in pregnancy presents significant risks to both fetal and maternal health, especially in the third trimester. There are conflicting viewpoints on the appropriateness of conservative versus surgical management in gravid patients with acute cholecystitis. This is a report of a woman in advanced pregnancy with complicated acute perforated cholecystitis and signs of preterm labor who successfully underwent laparoscopic cholecystectomy and later had an uncomplicated term vaginal delivery.

## Case Presentation

**Background:** Pt is a 41-year-old female, G3P2-0-0-2, with past medical history of diet-controlled gestational diabetes currently at 34 weeks gestation who presented from outside facility due to concerns for acute cholecystitis and preterm labor.

**Exam:**

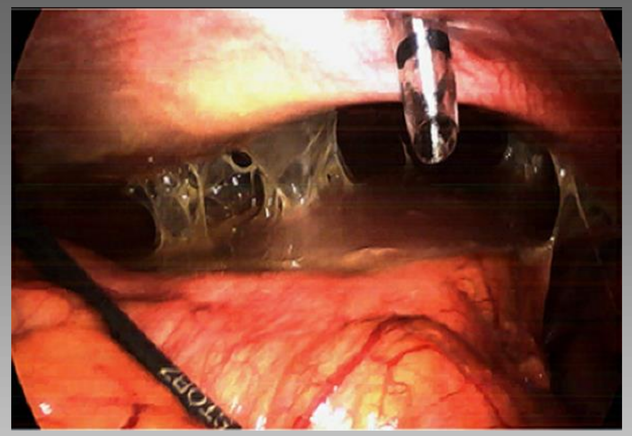
- General: Appeared septic and endorsed 10/10 RUQ pain and nausea
- Abdominal: Abdominal tenderness, worst in RUQ, and diffuse peritoneal signs
- OB/GYN: regular contractions with cervical dilation from 1-3 cm

**Labs:** WBC 15.5, ALT 23, AST 19, ALP 248

**Hospital course:** Pt was promptly given betamethasone and piperacillin/tazobactam. General surgery was consulted and recommended laparoscopic cholecystectomy on day 1 of admission with the OB team available in the OR. A subtotal cholecystectomy was performed due to gallbladder perforation and difficulty identifying the cystic duct. ERCP performed on post-op day 3 with sphincterotomy and stent placement due to increased bilious output from drain. Contractions ceased after surgical management. Pt remained at 3 cm dilated with no further progression. Discharged on post-op day 4 on antibiotic prophylaxis and weekly postpartum fetal surveillance. Pt completed pregnancy at 37 weeks after induction. No maternal or fetal complications.




Preoperative ultrasound image depicting shadowing of gallstones and biliary sludge without biliary dilation of the common bile duct.



Operative image depicting extensive inflammation around the gallbladder with perforation and purulent drainage noted.

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## Discussion

- Acute cholecystitis during pregnancy can lead to serious complications, including gallbladder suppuration, perforation, cholangitis, and pancreatitis
- Fetal health is not only risked by maternal infection, but also surgery and general anesthesia
- Current guidelines are unclear on the surgical management of acute cholecystitis during pregnancy, especially advanced pregnancy
- In 2017, the SAGES released their guidelines that laparoscopic cholecystectomy is safe in pregnancy during any trimester and poses no significant risk to mother or fetus; however, there is no standardized protocol at this time
- We believe that multiple factors, including trimester, symptom severity, and comorbid medical and obstetrical conditions should be considered by providers when determining the initial treatment modality and timing of intervention
- **Patient Perspective:**
  - **“I am extremely grateful to have been in the area at that time, so that I could go to the hospital and get the procedure done. I feel as if I would have been left to die if I was in Mexico at the time the pain and other symptoms were at their worst. My baby and I are now healthy and safe, and I hope that my story can help others in the future.”**

## Conclusion

- Risks and benefits of surgical management of complicated acute cholecystitis during late-term pregnancy should be individualized after careful discussion between the patient and a multidisciplinary team, including general surgeons and OBGYNs
- Current literature fails to provide straight-forward guidelines for treatment of acute cholecystitis with perforation, however, this report supports the safety of laparoscopic cholecystectomy during any trimester

**References:**

1. 1 Gallaher JR, Charles A. Acute Cholecystitis: A Review. JAMA 2022;327:965–75.
2. Pearl JP, Price RR, Tonkin AE, et al. SAGES guidelines for the use of laparoscopy during pregnancy. Surg Endosc 2017;31:3767–82..