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Gangrenous Cholecystitis: A Case Report from Ignace Deen's Department of General Surgery

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ABSTRACT

Introduction: *Gangrenous cholecystitis is a rapidly developing inflammation with necrosis of the gallbladder that is common in diabetic patients. Cholelithiasis, infections, and vascular causes are often involved. Without treatment, gallbladder gangrene perforates, a terrible and inevitable complication.*

The objective was to report a rare case of gangrenous cholecystitis leading to surgery.

Clinical Case: *It's about a 26-year-old female patient presented with sudden onset of abdominal pain radiating to the back and right shoulder, accompanied by vomiting and fever for 3 days.*

History-taking revealed amenorrhea.
Physical asthenia, anorexia, and fever were noted. Generalized guarding, more pronounced in the epigastrium and right hypochondrium, was observed. Murphy's examination was positive. Abdominal ultrasound revealed gallstone-induced cholecystitis, peritoneal effusion, and an active pregnancy of 12 weeks of amenorrhea.

Laparotomy revealed gallstone-induced peritonitis with multilithiasic gangrenous cholecystitis. Uterine enlargement was observed.

We performed a cholecystectomy, abdominal lavage, and drainage.

The postoperative course was uneventful.

Conclusion: *Gangrenous cholecystitis is rare, often late-onset, and recognized as serious. The fetal-maternal prognosis of our patient was favorable thanks to prompt and effective medical and surgical management.*

Keywords
Acute cholecystitis, Gallstones, Gangrene.

Introduction
This is a severe form of cholecystitis with necrosis of the gallbladder wall. It is a serious and severe complication of acute cholecystitis, sometimes with a fulminant course [1].

The objective was to report a rare case of gangrenous cholecystitis.

Clinical Case
It's about a housewife, 26-year-old female patient, presented with abdominal pain. The onset was apparently sudden, marked by right subcostal pain exacerbated by respiratory movements, radiating to the right shoulder and back, accompanied by nausea, vomiting, and fever. She was currently 12 weeks pregnant. She is

not diabetic and has no known history of cardiovascular disease. She is multiparous.

Her general condition was poor: physical asthenia, anorexia, conjunctival jaundice, and fever of 38.8°C. Blood pressure was 110/60 mmHg, pulse rate 112/minute, and RR 20/minute. Diffuse abdominal guarding was noted, more pronounced on the right side; Murphy's sign was positive; there was a right subcostal mass.

Prehepatic dullness was preserved.
Peristalsis was audible, and the gallbladder was tender. Abdominopelvic ultrasound revealed a large, tense, multilithiasis gallbladder with a thickened wall, fluid collection, and an active pregnancy. Anemia (Hb 9.9 g/dL), leukocytosis of 11,000 with elevated CRP, as well as negative HbsAg and retroviral serology were observed. Beta-HCG was positive. Transaminases were elevated. The patient was admitted to the operating room for peritonitis.

A laparotomy revealed gallbladder gangrene, a large and tense gallbladder, a thickened and purplish gallbladder filled with gallstones of varying sizes, a cloudy fluid collection, pediculitis, and an enlarged uterus. The common bile duct was not dilated. No stones were present.

We collected the fluid for culture, performed a cholecystectomy, and performed an abdominal lavage. The cholecystectomy specimen was sent to the pathology department, which confirmed gallbladder gangrene. The patient received fluids (0.9% saline and Ringer's lactate), antibiotics (Pyocef 1 g x 2 and Flagyl 500 mg 1 fl oz x 2), and pain relievers, including Spasfon. The postoperative course was uneventful. She was discharged from the hospital on day 11, and the wound has healed. The pregnancy is progressing normally.

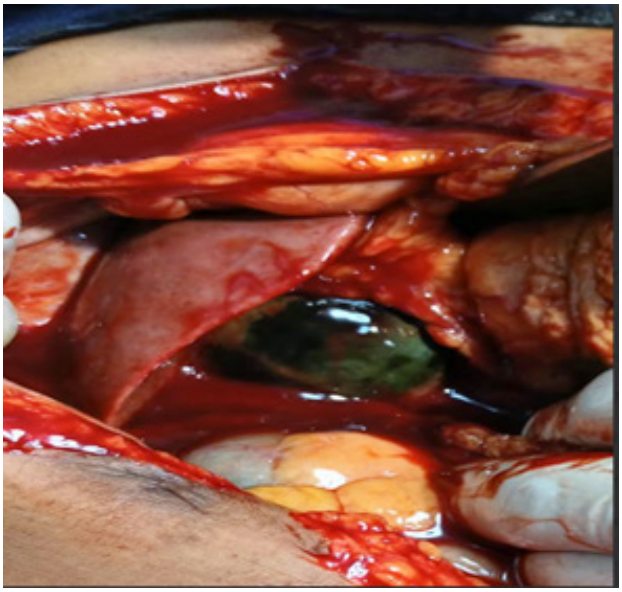

Figure 1: Intraoperative image.

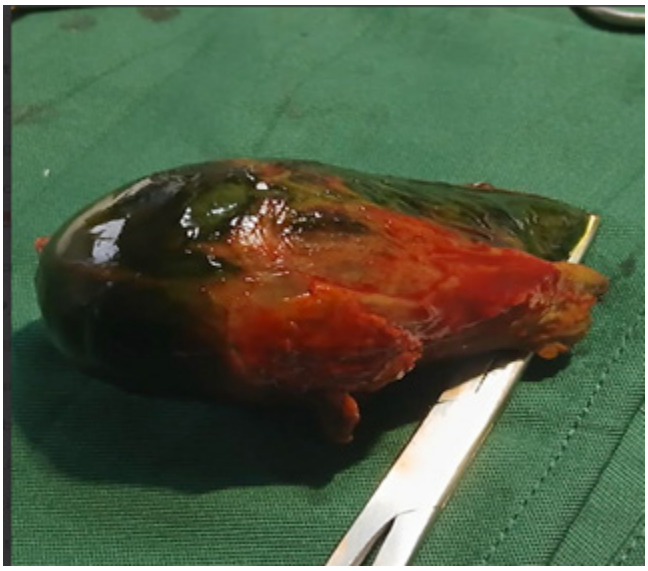

Figure 2: Surgical specimen of necrotic gallbladder.

Discussion

Gangrenous cholecystitis is a rare and underestimated emergency [2]. It is a rare emergency. Its incidence ranges from 2 to 30%. It is more common in men, the elderly, immunocompromised individuals, and diabetics [3].

It is a severe and serious form of acute cholecystitis, characterized by infection accompanied by ischemia and hemorrhagic necrosis of the gallbladder wall. This irreversible lesion is characterized by rapid, profound, and massive destruction of the gallbladder wall following ischemia of inflammatory and infectious origin. Necrosis results from the progression of gallbladder inflammation [4].

This is a rare and serious condition. Arterial ischemia is the main cause, and infection with Clostridium perfringens, an anaerobic organism such as E. coli or anaerobic streptococci, explains the production of gas in the gallbladder wall. Anaerobic germs such as Klebsiella, E. coli, streptococcus, and staphylococcus are often involved [3].

In our case, obstruction of the cystic duct by gallstones led to ischemia and loss of vascularization of the gallbladder. Gangrene most often occurs deep in the bile ducts due to impaired vascularization. Therefore, prompt and effective management is necessary. Antibiotic therapy targeted against anaerobic germs and urgent surgery are required due to the high incidence of perforating peritonitis.

A case was reported in a 92-year-old woman with diabetes and ischemic heart disease. The authors reported cases of acalculous gangrenous cholecystitis occurring in patients hospitalized in intensive care after surgery [1]. Ultrasound and computed tomography are the most sensitive examinations for the diagnosis of gangrenous cholecystitis. CT is effective and can detect serious

complications by detecting the presence of air in the peribular fat [5-7]. Acalculous gangrenous forms are potentially more fatal, with a higher risk of perforation than gallstone forms [8].

Conclusion

Gangrenous cholecystitis is an inflammatory and infectious destruction of the gallbladder. Treatment must be prompt, and cholecystectomy is the standard treatment.

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