

Necrotizing Pancreatitis as an Unusual Cause of Severe Abdominal Pain during Pregnancy

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Abstract

Acute pancreatitis is an uncommon cause of abdominal pain during pregnancy that may become severe and rarely progresses to a necrotizing form with a high maternofetal mortality even in young patients.^{1,2} A small number of pregnant women with acute pancreatitis have an associated hyperlipidemia, usually hypertriglyceridemia while in all these cases, pancreatitis is mild in severity and is responsive to conservative medical management.^{2,3} We present a case of necrotizing pancreatitis in a 25 years old pregnant woman at 34 weeks of gestation, who presented with acute abdominal pain, nausea and vomiting that required operative management.

Keywords: Necrotizing pancreatitis; Severe abdominal pain; Pregnancy

Introduction

Acute pancreatitis is an uncommon cause of abdominal pain during pregnancy that may become severe and rarely progresses to a necrotizing form with a high maternofetal mortality even in young patients.^{1,2} A small number of pregnant women with acute pancreatitis have an associated hyperlipidemia, usually hypertriglyceridemia while in all these cases, pancreatitis is mild in severity and is responsive to conservative medical management.^{2,3} We present a case of necrotizing pancreatitis in a 25 years old pregnant woman at 34 weeks of gestation, who presented with acute abdominal pain, nausea and vomiting that required operative management.

Case Report

A 25 years old Afghanian woman (gravida 3, para 1, abortion 1, living 0) at 34 weeks of gestation was referred with upper abdominal pain, nausea and vomiting since one day prior to her admission. One year

prior to admission, she underwent laparoscopic cholecystectomy due to symptomatic gall stones. She had no history of diabetes mellitus, smoking or alcohol consumption before or during her pregnancy. Her family history was unremarkable.

On arrival, the patient was afebrile, tachypnic (25/min) and tachycardic (120/min). Abdominal exam revealed mild generalized tenderness more in epigastric area without guarding or rebound tenderness with a normal gravid uterus. Fetal cardiography was normal. Selected laboratory data consisted WBC: 13 (10^3 cell/L), Hct: 26%, platelet: 250 (10^3 cell/L), glucose: 190 mg/dL, LDH: 410 u/L, AST: 350 u/L, Ca: 7/8 mg/dL, base deficit: 8 mg/L, amylase: 357 IU/L, lipase: 405 IU/L, PO2: 65 mmHg, triglyceride: 1416 mg/dl and total cholesterol: 1170 mg/dL.

Abdominal and antenatal ultrasound results showed mild to moderated ascites, a normal liver, heterogeneous pancreas with diffuse enlargement, peripancreatic edema without any evidence of common bile duct stone or dilated intra or extra hepatic bile ducts and absent gall bladder due to a previous cholecystectomy. She had a single alive fetus with acceptable amniotic fluid and a placenta previa.

The patient was transferred to the Intensive Care Unit of Faghihi Hospital affiliated to Shiraz University of Medical Sciences and was under close observation by surgeons and obstetricians for non-surgical

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conservative management and was treated with intravenous hydration, paracetamol, fasting, nutritional supplementation via parenteral route and a prophylactic antibiotic. The patient was hemodynamically stable with a decreased abdominal pain, acceptable urine output and good arterial blood gas values. In the 3rd day of admission, she had a recurrence of severe abdominal pain with tensely distended abdomen. She was confused, tachycardic (140/min), tachypnic (28/min) with a low O₂ saturation and decreased PO₂. The patient had a Ranson's score of 7 and Apache II score 14. Abdominal CT scan showed moderate ascites in para colic gutter and lesser sac, an edematous pancreas with peripancreatic fluid, fat stranding with necrosis and pseudocyst formation in the tail of pancreas (Figure 1).

A diagnosis of non-infected necrotizing pancreatitis based on clinical laboratory and imaging studies was made due to clinical instability of the patient, refractory medical management and cardiac deceleration of fetus.

A multi-disciplinary decision encouraged us to do an exploratory laparotomy and cesarean section. Then via long midline incision, laparotomy was performed and about 2 liters of fluid was evacuated. Cesarean section was done and a healthy premature female neonate weighting 2100 g with apgar scores of 4 and 8 at 1 and 5 min was delivered. Exploration showed a severe pancreatic edema, diffuse saponification, necrosis of peripancreatic fat and a necrotic segment within the tail of pancreas. Necrosectomy and debridement of pancreas were done, intra operative cultures were undertaken, abdomen was irrigated and 2 large mushrooms drain was inserted in the retroperitoneal area.

After the operation, the patient was transferred to ICU and passed 3 stable post-operation days in ICU with a total disappearance of abdominal pain. She was transferred to the ward with an acceptable hemodynamic status. Biochemical tests were restored and

plasma lipid levels were within normal limits. She resumed enteral feeding and tolerated a low fat diet without any evidence of abdominal pain. The patient was discharged from hospital with administration of an anti-hyperlipidemic agent.

Discussion

The complaint of abdominal pain during pregnancy is still common; however emergency abdominal surgery in this group was relatively uncommon. The most common indications for abdominal surgery during pregnancy are appendicitis and cholelithiasis.^{4,5} In constant, acute pancreatitis during pregnancy is uncommon with an incidence of 1 case per 1000-3000 pregnancies, usually late in the third trimester or in early post-partum period and rarely progresses to the necrotizing form of the disease in this clinical setting.^{6,7}

Gall stones are clearly the most common cause of pancreatitis during pregnancy. Of the small percentage of women who develop acute pancreatitis during pregnancy, an even small percentage have an associated hyperlipidemia as the second most common cause of pancreatitis.⁸ Conservative medical management of acute pancreatitis in pregnancy should initially be similar to management in non-pregnant patients, including nasogastric suctioning, intravenous hydration, analgesics, bowel rest, nutritional supplementation via either parenteral or enteral routes, antibiotics, fat restriction and slow progression to low fat diet.⁸ There are controversies on the use of prophylactic antibiotics in necrotizing pancreatitis. Recent clinical evidences of meta-analysis of randomized controlled trials have shown that prophylactic intravenous antibiotic cannot reduce the rate of infected pancreatic necrosis and mortality in patients with diagnosis of acute necrotizing pancreatitis,⁹ but other clinical experiences demonstrated that early antibiotic administration seems promising.^{8,10}

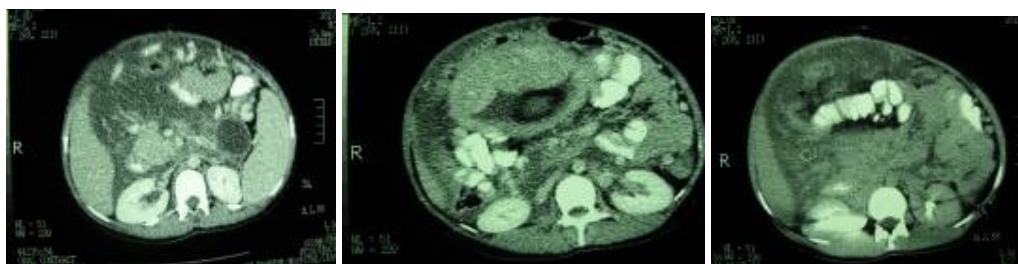


Fig. 1: Features of patient's CT scan

Non-surgical conservation treatment and vaginal delivery may be an option to reduce the maternal risk of infection in cases of sterile necrotizing pancreatitis.¹ However surgical intervention is indicated in documented infections or in cases refractory to medical

management, such as the woman presented in this report. Cesarean section should be considered when fetal distress is encountered.

Conflict of interest: None declared.

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