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## Case Report

# Acute necrotizing pancreatitis in a pregnant female diagnosed after caesarian delivery: a case report

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### ABSTRACT

Acute pancreatitis (AP) is a rare event in pregnancy, occurring in approximately 3 in 10,000 pregnancies. The spectrum of AP in pregnancy ranges from mild pancreatitis to serious pancreatitis associated with necrosis, abscesses, pseudocysts and multiple organ dysfunction syndromes. A 21 years old, primigravida presented to labour room at 33 weeks 2 days of gestation with complaint of abdominal pain. Per vulval finding showed pin-point vagina. (patient had history of transverse vaginal septum, and was operated for the same before conception). Patient was operated for caesarian delivery and Fenton's repair done. Contrast-enhanced computed tomography showed signs of acute necrotizing pancreatitis with peripancreatic collection. AP in pregnancy remains a challenging clinical problem to manage. The general management of AP in pregnancy is supportive.

**Keywords:** Acute necrotizing pancreatitis, Pancreatitis in pregnancy, Fenton's repair

### INTRODUCTION

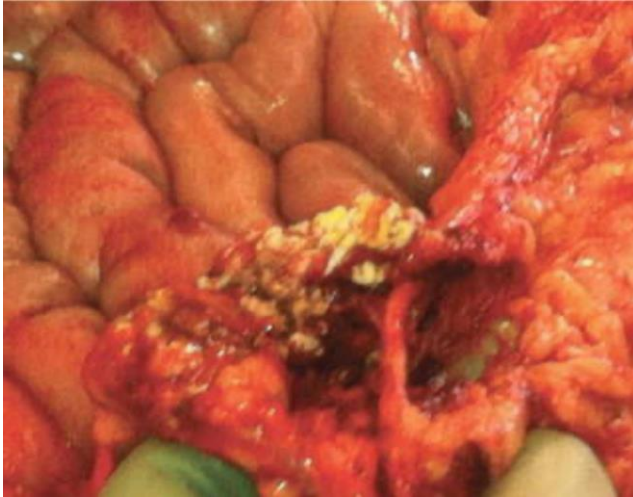
Acute pancreatitis (AP) is a rare event in pregnancy, occurring in approximately 3 in 10,000 pregnancies. The spectrum of AP in pregnancy ranges from mild pancreatitis to serious pancreatitis associated with necrosis, abscesses, pseudocysts and multiple organ dysfunction syndromes.<sup>1</sup> Older reviews of AP in pregnancy reported maternal and fetal mortality rates as high as 20 and 50%, respectively.<sup>2-6</sup> Blood amylase or lipase levels are typically elevated 3 times the normal level during acute pancreatitis. In some cases when the blood tests are not elevated and the diagnosis is still in question, abdominal imaging, such as a CT scan, might be performed. Acute necrotizing pancreatitis is rare event in pregnancy. Hence, authors present a case of 21 years old primigravida patient with 7 months 25 days of amenorrhea, presenting with abdominal pain, diagnosed with pancreatitis intra-op, confirmed by post op CECT.

### CASE REPORT

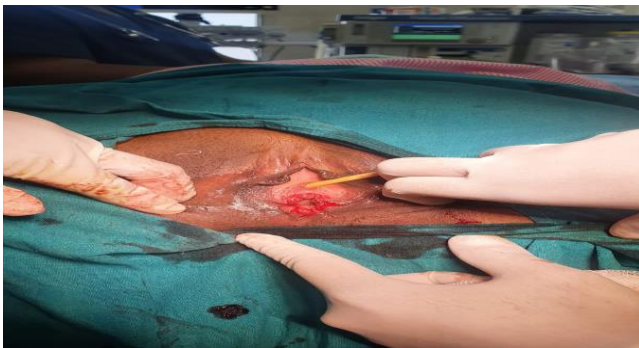
A 21 years old, primigravida presented to labour room at 33 weeks 2 days of gestation with complaint of abdominal pain. She had abdominal pain since the past 5 hours not associated with vomiting. She was conscious and oriented to time, place and person. She was afebrile with a pulse rate of 110 bpm and BP of 110/70 mmHg with SpO<sub>2</sub> 98% on room air. On examination, per abdominal finding showed 30-32 weeks of uterine fundal height and oblique lie of fetus. Fetal heart sounds were reactive by auscultation. Uterus was irritable. Per vulval finding showed pin-point vagina. (patient had history of transverse vaginal septum, and was operated for the same before conception). After proper consent and pre-operative investigations, patient was taken for caesarian delivery as she was in labour and had a pin point vagina.

Through a Pfannenstiel incision abdomen was opened layer wise up to parietal peritoneum, yellowish colored fluid was seen and approximately 300 ml was suctioned

out. Healthy baby and placenta delivered and uterine closure was done. While assessing the posterior aspect of uterus, similar yellowish fluid was seen, aspirated and sent for cytology and culture and sensitivity. Bowel walk was suggestive of normal bowel. Traces of pus flakes with minimal fluid collection were found over greater omentum at the site of transverse colon attachment. 4 L of warm saline wash given and suction done. 2 drains were kept, one in pouch of douglas and other in Morrison's space before closure. Fenton's repair was done for transverse vaginal septum.



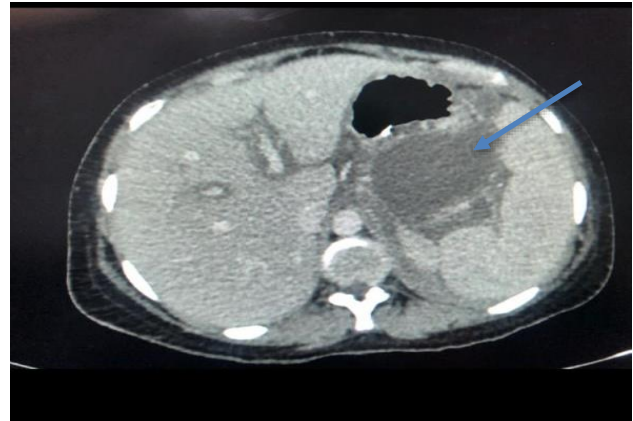
**Figure 1: Saponification.**



**Figure 2: Fenton's repair.**

The ascitic fluid amylase value was 7250 units (normal-25-115) and lipase was 31516 units (normal- 12-53 units) and showed elevated protein content- 4.8 units (normal 0-2 units), with cytology showing many pus cells and no microorganisms on culture and sensitivity.

Post operatively, patient was shifted to labor room for monitoring with Ryles tube, 2 drains and urinary catheter in situ. CECT abdomen with pelvis was done on post op day 1, which was suggestive of "acute necrotizing pancreatitis with few peripancreatic collections with largest in lesser sac and splenic vein thrombosis (CTSI Index-8)." Serum was investigated for amylase and lipase which were found to be 1239 U/L and 1695 U/L respectively.



**Figure 3: CECT of necrosis and peripancreatic collection (Blue arrow-peripancreatic collection).**

Injection octreotide was given subcutaneously twice a day for 5 days. Input-output charting was maintained strictly and strict fluid management was done, guided as per central venous pressure.

Patient's routine investigations were monitored post-operatively. On post-operative day 3, patients serum albumin was 2.1 g/dl (normal value- 3.2-4.8 g/dl), so patient was given 3 infusions of albumin over a period of 4 days with serum albumin being monitored.

Drain output was monitored and the drain fluid amylase and lipase levels were monitored. Oral feeds were started from post-operative day 3 which patient was able to tolerate without any complications. Ryle's tube was removed on post-operative day 4 and patient was given full diet. Tablet Pankreoflat was started TDS. Catheter was removed on post-operative day 6 and patient passed urine and stools normally. Drain fluid amylase and lipase levels returned to normal values on post-operative day 7 and drain output decreased. The drain kept in Morrison's pouch was removed on post-operative day 9 and the drain in pouch of douglas was removed on post-operative day 10. Serum amylase and lipase also returned to normal levels on post-operative day 7. Patient was discharged on post-operative day 11 and was clinically and vitally stable. Patient came for follow up and was advised USG which was suggestive of 19×5×6 cm thick walled collection in peri-pancreatic region, possibility of walled off necrosis. On subsequent follow up, USG was done again which showed 7×5×7 cm thick walled collection in peri-pancreatic region, thereby showing signs of resolution. Patient is currently living a healthy life without any complaints.

## DISCUSSION

Acute pancreatitis in pregnancy remains a challenging clinical problem to manage, with a relatively limited but expanding evidence base. The most common predisposing cause of pancreatic symptoms during pregnancy is cholelithiasis (i.e., gallstones that block the

pancreatic duct). A second common scenario noted in pregnancy is hypertriglyceride-induced pancreatitis. This hypertriglyceridemia can be attributed to increased estrogen due to pregnancy and the familial tendency for some women toward high triglyceride levels. Lipids and lipoprotein (including triglycerides) levels are increased during pregnancy, which increased three-fold peak in the third trimester. Drugs, specifically tetracycline and thiazides (not commonly used in pregnancy), as well as increased alcohol consumption, can also cause pancreatitis. Signs and symptoms of acute pancreatitis usually include epigastric pain, left upper quadrant pain radiating to the left flank, anorexia, nausea, vomiting, decreased bowel sounds, low-grade fever, and associated pulmonary findings 10% of the time (unknown cause). The most common misdiagnosis of pancreatitis in the first trimester is hyperemesis. In women presenting with severe nausea and vomiting in the first trimester, consider obtaining amylase, lipase levels, and liver function tests, which when elevated are diagnostic for pancreatitis. Diagnostic blood tests for AP include serum amylase and lipase, as well as triglyceride levels, calcium levels, and a complete blood count. Amylase levels in pregnancy range from 10 to 160 IU/L in some labs. These values vary depending on each laboratory. Lipase, another enzyme produced by the pancreas, has norms ranging from 4 to 208 IU/L (these also vary depending on laboratory). Amylase levels can also rise with cholecystitis, bowel obstruction, and ruptured ectopic, as well as other conditions. Amylase levels do not correlate with disease severity. Elevated serum lipase levels remain elevated longer than amylase following an episode of pancreatitis. Conservative medical management of pancreatitis includes intravenous fluids, nasogastric suctioning, bowel rest, use of analgesics and antispasmodics, fat restriction with total parenteral nutrition, and antibiotics. Management includes management of underlying cause-management of gallstones. Laparoscopic cholecystectomy is ideally performed in the second trimester when the risk to fetus is the least and only limited technical problems exist as a result of an enlarging uterus. No formal recommendations exist for gestational hypertriglyceridemia treatment in pregnancy at present. Treatment of hyperlipidemic AP is mostly supportive. Lipoprotein apheresis and plasmapheresis are therapies known to decrease serum triglyceride levels.<sup>7</sup>

Few limited studies suggest that octreotide may help relieve pain and reduce the risk of exacerbation. Octreotide and other anti-secretory medications may decrease the volume of fistula output, but they have not shown a consistent benefit in shortening the time to fistula closure.<sup>8</sup>

Traditionally, a primary laparotomy was performed for necrosectomy, even early in the clinical course of necrotizing pancreatitis, but this practice has now largely been abandoned. Today surgical or endoscopic intervention is postponed when clinically feasible until

walled-off necrosis (with full encapsulation) is documented on CECT, a process that usually takes 3 to 4 weeks. Waiting for full encapsulation and delaying intervention reduces morbidity and mortality when compared to early intervention in the first 2 weeks, most likely because encapsulation facilitates effective necrosectomy while reducing the risk of complications such as bleeding and perforation. In the acute (early) phase, there is no indication for intervention of sterile collections, because drainage of sterile collections carries a risk of introducing infection, thereby increasing the risk of morbidity and mortality. Several minimally invasive intervention strategies are available for drainage and/or debridement of infected necrotizing pancreatitis: percutaneous catheter drainage, percutaneous necrosectomy, VARD, laparoscopic necrosectomy, and endoscopic transluminal drainage and necrosectomy.<sup>9</sup>

## CONCLUSION

While a rare event, acute pancreatitis does occur in pregnancy. AP in pregnancy remains a challenging clinical problem to manage. The general management of AP in pregnancy is supportive. The outcome of pregnant patients with AP has substantially improved with technical advances in imaging and therapeutic endoscopy.

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