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Acute Pancreatitis in Second Trimester of Pregnancy

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ABSTRACT

Acute pancreatitis is an uncommon complication in pregnancy. Here we present a case of 24-year-old gravda 2 para 1 woman with an acute abdominal pain in her 24-week period of gestation. Her laboratory reports suggested the diagnosis of acute pancreatitis. However, the root cause was unidentifiable through various investigations. She was accordingly managed. Acute pancreatitis during pregnancy is rare with incidence ranging from 1 in 1,000 to 10,000. Gall stones remains the main causative factor. The exact etiology in some cases cannot be identified and hence they are referred as idiopathic pancreatitis. Although computed tomography is the gold standard investigation of choice for acute pancreatitis, they are not done routinely and ultrasonography is the safe investigation of choice especially among the pregnant patients. This investigation along with assessment of serum amylase or lipase and other enzymes can be done to diagnose the disease. Treatment includes conservative management to surgical intervention. Here, we have discussed the diagnosis of an acute pancreatitis in pregnancy and the treatment of the condition.

Keywords: Case Report; idiopathic; pancreatitis; pregnancy.

INTRODUCTION

Acute pancreatitis is a typical clinical condition characterized by enzymatic degradation and inflammation of the pancreatic parenchyma. Its severity and diagnosis protocols are based on the revised Atlanta Classification (2012).[1] The common cause are gallstones and alcohol consumption. Pancreatitis in pregnancy is an unusual event with incidence reports ranging from 1 in 1,000 to 10,000.[2] The most frequent etiology of acute pancreatitis in pregnancy is biliary cause i.e. gallstones or sludge. Frequently misdiagnosed and delayed treatment degrades the health condition of the mother and the baby accounting to 50% of perinatal mortality due to the disease reported in the previous decades.[3]

Here, we present a case of acute pancreatitis in a pregnant woman who was managed in our institution. This case report has been reported in line with the 2020 SCARE guidelines.[4]

CASE PRESENTATION

A 24-year-old multigravida (gravida 2, para 1) at 24 weeks 6 days period of gestation from Kathmandu, Nepal was brought to the Emergency Unit of our institution and later admitted with a history of abdominal pain in the epigastric region for the past 2 hours, which was acute onset, severe, radiating towards the back. Her previous pregnancy 6 years back was uneventful with the deliverly of a healthy boy through a normal vaginal route. No history of comorbidities and past surgical intervention were informed. She had no history of recent viral and bacterial infections. There was no significant family history. She was perceiving good fetal movements till her presentation. She was taking iron and folic acid medication regularly as advised. She also mentioned that she did not smoke and consume any alcoholic beverages. She reported of not taking any other medications.

On examination, the patient's general condition was ill looking, with stable vitals of pulse: 82 bpm, BP: 120/80 mm of Hg, respiratory rate: 22 breaths/min, body temperature of 97˚ F. Abdominal examination showed signs of epigastric tenderness with symphysio-fundal height of 24 cm with fetal heart rate: 130/min.

Investigations revealed hemoglobin: 8.6 gm%, with total count: 10,600 cells per mm^3, platelets: 354,000

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cells per mm^3, random blood sugar: 94 mg/dl, total cholesterol: 128 mg/dl, triglyceride: 86 mg/dl and serum calcium: 7.6 mg/dl. Serum urea and serum creatinine were 19 mg/dl and 0.73 mg/dl respectively. Liver function test showed total bilirubin: 0.27mg/dl, direct bilirubin: 0.06 mg/dl, indirect bilirubin: 0.21 mg/dl, alanine aminotransferase: 24 U/L and aspartate aminotransferase: 38 U/L. Ultrasound Sonography (USG) of the abdomen showed a fuzzy outline of a normal sized pancreas body with few tiny hypoechoic nodular structures noted in the periphery with mixed vascularity. A normal gallbladder, with no sign of intra and extrahepatic duct pathology were noted. Her serum lipase value was 9,270 U/L and serum amylase value was 1,969 U/L. Her antibody screening anti-neutrophilic antibody (ANA) for autoimmune pancreatitis was negative. Further investigations could not be done due to lack of respective facilities and patient's financial status. Based on the above mentioned laboratory and USG findings, she was diagnosed with acute pancreatitis.

The patient was initially managed with intravenous fluids, analgesics, and was kept on nil per oral. Iron and folic supplements were continued. She gradually felt symptomatically better and was kept on a liquid diet then a soft diet on the third day of admission. She was discharged following a week of hospital admission.

On regular antenatal follow up, she did not complain of having the recurrence of her symptoms..

DISCUSSION

Acute pancreatitis in pregnancy is an unusual clinical diagnosis. Zhang, et al.[5] reported that out of 16,750 obstetric patients admitted in their institution, 38 cases had pancreatitis indicating that incidence of pancreatitis in pregnancy was 2.27%. It is uncommon in the first and second trimesters of pregnancy (12%), while more cases occurring in the third trimester (50%) and early postpartum period (38%).[6] Our patient developed acute pancreatitis during her second trimester. Several perspectives on the pathophysiology of pancreatitis in pregnancy have been put forward. According to the retrospective review study by Geng, et al.[7] the cause of pancreatitis in pregnancy was biliary disease then followed by hypertriglyceridemia. Few cases were reported being idiopathic. Pregnancy increases the risk of gallstone formation through the lithogenic effect of estrogen. The enlarged uterus pushing the gall bladder can possibly cause the shift of the formed gall stones to the common bile duct causing biliary pancreatitis.[8] The exact relationship between pregnancy and pancreatitis is yet to be established.

Acute pancreatitis in pregnancy can be diagnosed by several means. Clinical diagnosis can be made by radiating severe abdominal pain to the back. Laboratory findings show an elevated serum lipase and amylase levels thrice than the normal limits. As suggested by the prospective study done by Karsenti, et al. [9] which showed no significant alteration in the pancreatic enzymes (lipase and amylase) in pregnant women compared to those in non-pregnant women. Through their study, we can conclude that an elevated level of these enzymes in pregnancy allows for the diagnosis of acute pancreatitis. The safest radiological investigation for both mother and fetus is an USG of the abdomen that helps to find the cause. Computed tomography and endoscopic retrograde cholangiopancreatography are not routinely used due to radiation hazard. Magnetic resonance cholangiopancreatography is another diagnostic modality considered safe.

In our case, the serum alanine aminotransferase level was under normal limits and the USG abdomen revealed normal liver and biliary tree, ruling out the possibility of biliary pancreatitis. The patient's serum triglyceride level was normal and the ANA was negative. The exact cause of pancreatitis in our case remained unknown.

The management of acute pancreatitis ranges from conservative to surgical intervention. Conservative management includes nil per oral, maintenance on intravenous fluids, anti-spasmodic, analgesics. Management also differs according to the cause. For patients with cholangitis and common bile duct stones, conservative management are much less successful. Surgical intervention for gallstone induced pancreatitis includes cholecystectomy, primarily laparoscopic, considered to be performed in the second trimester of pregnancy as the uterus will not be large enough to obliterate the surgical view. This allows a low risk of fetal and maternal complications.[10]

CONCLUSIONS

Acute pancreatitis in pregnancy is an uncommon entity that can be frequently misdiagnosed. The unavailability of diagnostic tests and financial limitation of the general patient limits the ability to correctly identify the cause of acute pancreatitis in pregnancy especially in resource limited settings. As most patients of acute pancreatitis recover with supportive management, early identification and management of these cases would result in better and excellent outcomes.

CONFLICT OF INTERESTS

The authors declare no conflict of interests.

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