



## **PANCREATITIS IN PREGNANCY - A CASE REPORT**

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### **Abstract :**

Pancreatitis is a rare event in pregnancy and is a serious condition. It is often related to gall stones and is of acute onset. We reported a case of 28 year old primigravida with 8 months amenorrhoea presented with epigastric pain, nausea and vomiting for 7 days. She has elevated blood pressure. After thorough clinical examination and laboratory investigations she was diagnosed to have pancreatitis which was managed conservatively.

**Keyword :** Pancreatitis, Gallstones.

### **INTRODUCTION**

Pancreatitis is a common problem in general population and its annual incidence is 5 to 80 in 1,00,000 persons. Acute pancreatitis is an uncommon complication of pregnancy. Its incidence is 1 in 1000 to 1 in 3333 births. It presents with abdominal pain, nausea and vomiting. It should be diagnosed early to provide proper treatment. Here we reported a case of pancreatitis in a primigravida with associated preeclampsia

### **CASE REPORT:**

A 38 year old primigravida with 8 months amenorrhoea, was admitted in our hospital at 33 weeks of gestation, with complaints of epigastric pain, vomiting and heart burn for one week. She had swelling of both legs for one month and reduced urine output for one day. Her last menstrual period was 22/2/12. She had same complaints 10 days back for which she was treated at Private Nursing Home with antacids. On admission she was afebrile, anaemic, icteric with bilateral pedal edema. Her admission BP was 160/110 mm of mercury.

Investigations on the day of admission were Hb : 7.9 gms/dl, Platelets : 2.4 lakhs/mm<sup>3</sup>, Serum uric acid : 3.9mg/dl, Serum bilirubin: 8.2 mg/dl, SGOT : 85 IU/L, SGPT : 46 IU/L, SAP : 175 IU/L, Serum fibrinogen : 330 mg/dl, Serum amylase : 286 IU/L, Serum lipase : 863 IU/L, serum calcium : 9.3mg/dl, Lactate dehydrogenase 523 IU/L. HBsAg : negative and Anti HCV titre within normal limits. Abdominal ultrasonogram showed dilated pancreatic ducts with multiple calculi and normal

appearing liver with no dilatation of intrahepatic bile duct and common bile duct. Patient was treated conservatively with intravenous fluids and antihypertensives. Since she had persistently elevated liver function tests and oliguria she was induced with prostaglandin E<sub>2</sub> gel and patient delivered an alive, preterm boy baby of 1.5kg by labour natural. After delivery she was followed up with liver function tests, serum amylase and lipase which showed decreased level after 10 days.

## DISCUSSION

Acute pancreatitis in pregnancy (APIP) is rare and occurs in approximately 1 in 1,000<sup>1</sup> to 1 in 3333 births<sup>2</sup>. The commonest reason of APIP is biliary disease (congenital or acquired). Cholelithiasis (ie) stones that block pancreatic ducts is the first common cause<sup>3</sup>. It accounts for 70% of cases. More than half of the cases occur in the second trimester.<sup>4</sup> Parity and current or previous oral contraceptive use were both associated with increased risk of biliary stasis and subsequent gallstone formation. This is mainly attributable to elevation of the biliary cholesterol, saturation index, reduction in the nucleation time, generalized relaxation of the biliary tree, and decreased response to cholecystokinin stimulation induced by estrogen and progesterone.

Hypertriglyceridemia is the second most common cause of pancreatitis. Hyperlipidemia in pregnancy account for 4 – 6% of acute pancreatitis<sup>5</sup> that results in poor outcome. Pancreatitis secondary to hyperlipoproteinemia has an estimated incidence of 1 in 25,000 births.<sup>6</sup> There is relationship between micro circulation disturbance and hyperlipoproteinemia. Amount of fatty acid derived from degradation of blood triglyceride by high pancreatic lipase causes pancreatitis by pancreatic ischemia and necrosis. The placental lactogen produced by syncytiotrophoblast in pregnancy can disassociate fat and release free fatty acids which cause acute adipose infiltration of acinar cells and fat embolism of pancreatic vessels leading to pancreatitis and necrosis

In addition pancreatitis could be due to obstruction of sphincter of Oddi resulted from high level of mental stress in pregnancy. Triglyceride levels over 1000mg/dl are necessary to cause pancreatitis. The total serum triglyceride level during pregnancy is usually less than 300 mg/dL. Frederickson's type I, IV, and V hyperlipoproteinemias have been most commonly associated with acute pancreatitis. Very rarely pancreatitis is associated with preeclampsia-eclampsia or HELLP syndrome in pregnancy.<sup>7,8</sup>

Pregnancy itself is a risk factor for gallstone formation. Obesity and hormonal changes during pregnancy predispose women to gallstone formation. Changes in hepatobiliary function occur during pregnancy create a lithogenic environment which include gall bladder stasis, secretion of bile with increased amount of cholesterol and decreased amount of chenodeoxycholic acid. The pregnant uterus which compresses pancreatic and biliary duct is a key factor for the development of pancreatitis in pregnancy.

The symptoms of pancreatitis are mild epigastric pain, left upper quadrant pain radiating to the left flank, anorexia, nausea, vomiting, decreased bowel sounds, low grade fever, and associated pulmonary findings. Pulmonary signs often include hypoxemia, which can lead to adult respiratory distress syndrome. Other symptoms may include jaundice, abdominal tenderness, muscle rigidity and hypocalcemia. The most common misdiagnosis of pancreatitis in the first trimester is hyperemesis. Raised serum amylase and lipase concentration is used to

confirm the diagnosis.<sup>2</sup> False negative reports occur in cases of haemorrhagic pancreatitis with massive necrosis and if blood is taken 24 to 48 hours after the attack.

Abdominal ultrasound is the imaging technique of choice for pregnant women because it can distinguish a normal appearing pancreas from one that is enlarged and it can also identify gallstones. A CT scan is used in cases for severe cases to delineate areas of pancreatic necrosis<sup>2</sup>, but its use is limited due to fetal radiation hazard.

Conservative medical management of pancreatitis includes intravenous fluids, nasogastric suctioning, total parenteral nutrition, use of analgesics and antispasmodics, fat restriction and antibiotics. Conservative treatment is associated with a high recurrence rate.<sup>9</sup> To lower serum triglyceride levels lipoprotein apheresis and plasmapheresis are therapies used. Endoscopic retrograde cholangiopancreatography (ERCP) and endoscopic sphincterotomy are techniques used to treat gallstone related pancreatitis. Fetal shielding can be used in which a lead apron is placed over the maternal abdomen and fluoroscopy is limited to less than one minute. ERCP can be safely performed during pregnancy.<sup>10</sup> Second trimester is thought to be the ideal time for endoscopic retrograde cholangiopancreatography to avoid any possible teratogenic effects of radiation. Visualisation of the structures are easier when it is performed in the second trimester. It can be conducted for biliary stenting and subsequent clearance after deliveries. Serum amylase levels are often elevated transiently following this procedure. As conservative management has high recurrence rate, some have recommended early aggressive surgical intervention. The combination of MRCP, nonradiation ERCP and immediate laparoscopic cholecystectomy can provide definite treatment and is ideally performed in the second trimester.

There is increased risk of perinatal mortality and morbidity. Preterm labour is associated with an acute episode of pancreatitis resulting in low birth weight neonates. Preterm labour is more common with hyperlipidemic pancreatitis. Patients receiving antepartum surgical or endoscopic intervention had lower rates of premature delivery and recurrence than those receiving conservative treatment.<sup>11</sup> If acute pancreatitis occurs in the first trimester it is associated with Disseminated Intravascular Coagulation later in third trimester of pregnancy. Because of the presence of calculi in the pancreatic ducts the diagnosis of pancreatitis was made otherwise this can be presented as a case of atypical HELLP syndrome.

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