



ACUTE PANCREATITIS IN PREGNANCY

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ABSTRACT Pregnancy-related pancreatitis is a rare occurrence. Gallstones are the main cause influencing the incidence of cases of acute pancreatitis in pregnancy. Another cause that affects women who already have a lipid metabolism disorder is hyperlipidemia. Although there may be multiple causes, direct association with general condition is usually not found. As it is associated with pregnancy it poses risks to both mother and child. With advancement in gastroenterology, there has been improvement in early detection and management of the condition.

KEYWORDS : Acute Pancreatitis, Hyperlipidemia, Gall Stones, Pancreatitis In Pregnancy, Pregnancy

INTRODUCTION

Pancreatic inflammation is known as acute pancreatitis (AP). Upper abdominal or epigastric discomfort is the result, and it happens rapidly. Frequently the pain radiates to the back.

Pregnancy-related pancreatitis is a rare occurrence. Pancreatitis during pregnancy can occur anywhere between 1 in 1000 and 1 in 10,000 times. This wide variation in incidence is influenced by its causes especially Gallstones, which remain the main cause.¹ Most often, hyper-lipidemic gestational pancreatitis affects pregnant women who already have a lipid metabolism disorder.² More than half of all cases of acute pancreatitis in pregnant women are found in the third trimester, showing that the illness worsens with increasing gestational age, much like gallstones do.³

We describe a second-trimester case of acute pancreatitis with cholecystectomy history.

Case Report

A 30 year old woman, gravida 2 para 1, with 26 weeks of gestation, with previous history of preterm lower segment caesarean section and laparoscopic cholecystectomy presented to the casualty with complains of severe epigastric pain radiating to back for 2 days. Pain was continuous, pricking type and aggravated on taking food. She also complained of vomiting, more than 10 episodes per day, bilious non projectile, containing food particles.

On examination her temperature was 98.9°F, pulse rate was 98/min, blood pressure was 120/80mmHg and BMI 28.2kg/m². Abdominal examination revealed uterine size of 26 weeks, uterus non tense, non tender with foetal parts being felt and good fetal heart rate. Tenderness present in epigastric region with negative grey turner or Cullen sign.

Laboratory findings showed Haemoglobin 12.3mg/dl, TC 10900/mm³ neutrophils 84% lymphocytes 14%. ESR 50mm. Serum Amylase 144IU/L and Serum Lipase 297 U/L. Total cholesterol 195mg/dl and triglycerides 573mg/dl. Liver function and renal function test found within normal limits.

Ultrasound findings pancreas mildly atrophic with heterogenous echotexture with dilatation of main pancreatic duct suggestive of pancreatitis and a gravid uterus with single live intrauterine gestation of 26weeks with FHR 147 BPM.

Patient was nil per oral, started on intravenous fluids. Anti-emetics and antacids were started. After two days patients general condition improved and she was started on liquid diet followed by soft solids. Blood glucose levels were monitored and found to be elevated. Patient was started on insulin.

A course of antenatal steroids were covered. At 35 weeks patient developed labour pain and was taken up for emergency repeat lower segment caesarean section. She delivered a healthy male baby. Post-operative period was uneventful. As both mother and child were healthy, patient was discharged post operatively.



Figure: Shows Acutely Inflamed Pancreas

DISCUSSION

Rare but deadly, acute pancreatitis in pregnancy has a high risk of morbidity and mortality for both the mother and the foetus. The most common causes are gallstones, hypertriglyceridemia, and alcohol abuse.⁴ Gallstones are the most common cause of acute pancreatitis in pregnancy, accounting for almost 70% of cases. The production of cholesterol in hepatic bile increases in the second and third trimesters, in contrast to bile acids and phospholipids, leading to supersaturated bile. The risk of developing acute pancreatitis from hypertriglyceridemia, which may be a more serious form of pancreatitis than that brought on by gallstones, is highest during the third trimester of pregnancy. Under the effect of oestrogen, serum

triglyceride levels increase throughout the third trimester of pregnancy.⁵

If a pregnant woman has familial hyperlipidemia, which increases their risk of developing pancreatitis, their hypertriglyceridemia may be more significant.⁶ Preeclampsia or the HELLP syndrome, which both increase the risk of foetal mortality or premature birth, may be linked to pancreatitis during pregnancy.^{7,8,9}

Due to the physiological changes during pregnancy, including increased weight, triglyceride levels, and oestrogen levels, pregnancy itself may be a cause. Hyperthyroidism, connective tissue problems, infections, and trauma—both intentional and unintentional—are additional unusual causes of acute pancreatitis.¹⁰ The criteria used to identify acute pancreatitis in pregnancy are the same as those used to diagnose acute pancreatitis in non-pregnant situations. Pregnancy does not affect the early therapy of acute pancreatitis in any way. In order to stop oral eating and block the pancreas' exocrine activity, it comprises of fluid replacement, oxygen, analgesics, and cessation of oral feeding.¹¹ In some cases heparin¹² – to increase lipoproteinlipase activity maybe useful. The chosen course of treatment is conservative management. However, the severity of the condition determines the courses of care. Prognosis in mild cases is usually good with favourable antenatal outcomes.

CONCLUSION

Pancreatitis brought on by pregnancy is still a difficult condition to treat. It is uncommon for a pregnant woman to get acute pancreatitis. Despite the possibility of various causes, there is typically no direct correlation with general state. It is crucial to rule out every potential cause of the illness, including hyperlipidemia, which is still a relatively uncommon aetiology. A prompt diagnosis may be beneficial in achieving positive perinatal outcomes. Supportive care is the main form of treatment, and antibiotic use is still debatable.

REFERENCES

1. Pitchumoni, C. S., & Yegneswaran, B. (2009). Acute pancreatitis in pregnancy. *World Journal of Gastroenterology* : *WJG*, *15*(45), 5641-5646. <https://doi.org/10.3748/wjg.15.5641>
2. Crisan LS, Steidl ET, Rivera-Alsina ME. Acute hyperlipidemic pancreatitis in pregnancy. *Am J Obstet Gynecol*. 2008;198:e57–59.
3. C. S. Pitchumoni and B. Yegneswaran, "Acute pancreatitis in pregnancy," *World Journal of Gastroenterology*, vol. 15, no. 45, pp. 5641–5646, 2009.
4. G. Ducarme, F. Maire, P. Chatel, D. Luton, and P. Hammel, "Acute pancreatitis during pregnancy: a review," *Journal of Perinatology*, vol. 34, no. 2, pp. 87–94, 2014.
5. Lippi G, Albiero A, Montagnana M, Salvagno GL, Scevarolli S, Franchi M, Guidi GC. Lipid and lipoprotein profile in physiological pregnancy. *Clin Lab*. 2007;53:173–177.
6. Achard JM, Westeel PF, Moriniere P, Lalau JD, de Cagny B, Fournier A. Pancreatitis related to severe acute hypertriglyceridemia during pregnancy: treatment with lipoprotein apheresis. *Intensive Care Med*. 1991;17:236–237.
7. K. Thulasidass and T. A. Chowdhury, "Hypertriglyceridemic pancreatitis in pregnancy: case reports and review of the literature," *JRSM Short Reports*, vol. 4, no. 8, pp. 1–3, 2013.
8. Witt H, Luck W, Hennies HC, Classen M, Kage A, Lass U, Landt O, Becker M. Mutations in the gene encoding the serine protease inhibitor, Kazal type 1 are associated with chronic pancreatitis. *Nat Genet*. 2000;25:213–216.
9. Witt H. Gene mutations in children with chronic pancreatitis. *Pancreatol*. 2001;1:432–438.
10. D.-L. Zhang, Y. Huang, L. Yan, A. Phu, X. Ran, and S.-S. Li, "Thirty-eight cases of acute pancreatitis in pregnancy: a 6- year single center retrospective analysis," *Journal of Huazhong University of Science and Technology [Medical Sciences]*, vol. 33, no. 3, pp. 361–367, 2013.
11. T. Stimac and D. ` Stimac, "Acute Pancreatitis During Pregnancy, 2012.
12. Bae JH, Baek SH, Choi HS, Cho KR, Lee HL, Lee OY, Yoon BC, Hahm JS, Lee MH, Lee DH, et al. Acute pancreatitis due to hypertriglyceridemia: report of 2 cases. *Korean J Gastroenterol*. 2005;46:475–480.