

A Case of Acute Pancreatitis Identified During her Treatment of Threatened Preterm Labor

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ABSTRACT

Acute pancreatitis during pregnancy is an extremely rare condition with an estimated incidence rate of 1 case per 1000 to 10000 pregnancies. The disease often emerges during the third trimester of pregnancy or the early postpartum period, and symptoms like upper abdominal pain, nausea or vomiting, anorexia, fever and elevated serum amylase or lipase activities are experienced. We experienced a case of acute pancreatitis identified during her treatment of threatened preterm labor which had a favorable course thanks to urgent diagnosis and rapid intensive care. Early diagnosis and rapid treatment contributes to good prognosis though the condition may lead to serious courses.

Keywords: Acute pancreatitis during pregnancy; Elevated serum amylase; Early diagnosis; Rapid treatment

INTRODUCTION

It is often pointed out that acute pancreatitis during pregnancy is an extremely rare condition with an estimated incidence rate of 1 case per 1000 to 10000 pregnancies [1,2]. Acute pancreatitis during pregnancy is a very severe illness accompanied by a high maternal-fetal mortality, which has recently declined due to early diagnosis and intensive care improvement [3,4].

The disease often emerges during the third trimester of pregnancy or the early postpartum period, and symptoms like upper abdominal pain, nausea or vomiting, anorexia, fever and elevated serum amylase or lipase activities are experienced [5]. Deliberate actions are required because there are restrictions with radiological imaging examination and treatment.

We report a case of acute pancreatitis identified during her treatment of threatened preterm labor, furthering medical literature.

CASE REPORT

A 30-year-old primigravid woman at 30 weeks 4/7 days of gestation was admitted to a previous emergency room with sudden abdominal pain. Since she complained of severe uterine contraction though there was no evidence of placental abruption and shortening of cervical length, she was diagnosed as threatened preterm labor and intravenous administration of both ritodrine hydrochloride and magnesium sulfate was begun. The next morning she had a fever of 38 degrees and her blood chemical examination demonstrated

a leukocyte count of 19400/microliter and CRP of 2.15 mg/dL. Though she had no symptoms of a cold and there was no sign of premature rupture of the membrane, she was transferred to our hospital for the purpose of further examination and follow-up observation.

On admission, her blood chemical examination demonstrated a leukocyte count of 20100/microliter and CRP of 6.36 mg/dL, which was slightly higher than the previous result, with extremely elevated amylase (2520 units/L) and normal transaminase values (Table 1).

A careful medical interview revealed that she had episodes of unexplained abdominal pain. Though computerized tomography demonstrated no abnormal findings associated with acute

Table 1: Blood chemical examination on admission.

WBC	20100/ μ L	AST	16 U/L
RBC	3.99×10^6 / μ L	ALT	14 U/L
Hb	10.5 g/dL	ALP	321 U/L
Ht	32.3%	LDH	221 U/L
Plt	317×10^3 / μ L	AMY	2520 U/L
Na	133 mEq/L	PT-INR	1.0
K	3.8 mEq/L	APTT	29.5 second
Cl	103 mEq/L	Fibrinogen	448 mg/dL
BUN	8 mg/dL		
Cr	0.4 mg/dL	CRP	6.36 mg/dL

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pancreatitis, repeated abdominal pain and remarkable rise of amylase strongly suggested acute pancreatitis during pregnancy. We, therefore, transferred her to a higher medical facility for intensive care. Intensive care with gabexate mesilate and massive infusion recover her condition and she was transferred to a local medical center at 32 weeks of gestation. Magnetic resonance cholangiopancreatography revealed no abnormal findings of biliary and pancreatic disease. Culture test of blood, urine, vaginal discharge, and nasopharyngeal swab showed no significant findings.

DISCUSSION AND CONCLUSION

Acute pancreatitis during pregnancy is an extremely rare condition with an estimated incidence rate of 1 case per 1000 to 10000 pregnancies [1,2]. It frequently emerges during the third trimester of pregnancy or the early postpartum period [2,5].

The causes of acute pancreatitis in pregnant women can be different, as they are in non-pregnant patients. The most common identified causes of acute pancreatitis in pregnancy are gallstones (65% to 100%), alcohol abuse (5% to 10%), idiopathic (15%) and familial hypertriglyceridemia-induced pancreatitis (5%) [6,7].

The diagnosis of acute pancreatitis can be difficult since pregnancy-linked hematological and biochemical alterations might have a repercussion on the interpretation of the blood chemical examination. Elevated serum amylase or lipase level higher than three times normal has a good positive predictive value for the diagnosis of acute pancreatitis in pregnant women [7]. Our case satisfies a highly elevated amylase level with repeated abdominal pain, which indicates pancreatitis during pregnancy.

The fetal risks from acute pancreatitis with pregnant women are threatened preterm labor, prematurity and intrauterine fetal death [7]. Since acute pancreatitis with pregnant women is a serious disease accompanied by a high maternal-fetal mortality rate (37% and 60%, respectively) according to previous publications, it requires urgent diagnosis and treatment though the latest researches demonstrates decreased maternal and fetal mortalities [8-11] owing to some maternal and neonatal intensive care improvement [3,4].

In conclusion, we experienced a case of acute pancreatitis identified during her treatment of threatened preterm labor. Early diagnosis and rapid treatment which contains transportation to higher

medical facilities for intensive care contributes to a good prognosis though the condition may lead to a serious course.

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CONFLICT OF INTEREST

The authors have no conflicts of interest.

REFERENCES

1. Pitchumoni CS, Yegneswaran B. Acute pancreatitis in pregnancy. *World J Gastroenterol.* 2009;15:5641-5646.
2. Igbiosa O, Poddar S, Pitchumoni C. Pregnancy associated pancreatitis revisited. *Clin Res Hepatol Gastroenterol.* 2013;37:177-181.
3. Augustin G, Majerovic M. Non-obstetrical acute abdomen during pregnancy. *Eur J Obstet Gynecol Reprod Biol.* 2007;131:4-12.
4. Hernandez A, Petrov MS, Brooks DC, Banks PA, Ashley SW, Tavakkolizadeh A. Acute pancreatitis and pregnancy: A 10-year single center experience. *J Gastrointest Surg.* 2007;11:1623-1627.
5. Ramin KD, Ramin SM, Richey SD, Cunningham FG. Acute pancreatitis in pregnancy. *Am J Obstet Gynecol.* 1995;173:187-191.
6. Papadakis EP, Sarigianni M, Mikhailidis DP, Mamopoulos A, Karagiannis V. Acute pancreatitis in pregnancy: An overview. *Eur J Obstet Reprod Biol.* 2011;159:261-266.
7. Ducarme G, Maire F, Chatel P, Luton D, Hammel P. Acute pancreatitis during pregnancy: A review. *J Perinatol.* 2014;34:87-94.
8. Eddy JJ, Gideonsen MD, Song JY, Grobman WA, O'Halloran P. Pancreatitis in Pregnancy: A 10 year retrospective of 15 Midwest hospitals. *Obstet Gynecol.* 2008;112:1075-1081.
9. Sun L, Li W, Geng Y, Shen B, Li J. Acute pancreatitis in pregnancy. *Acta Obstet Gynecol Scand.* 2011;90: 671-676.
10. Date RS, Kaushal M, Ramesh A. A review of the management of gallstone disease and its complications in pregnancy. *Am J Surg.* 2008;196:599-608.
11. Geng Y, Li W, Sun L, Tong Z, Li N, Li J. Severe acute pancreatitis during pregnancy: Eleven years experience from a surgical intensive care unit. *Dig Dis Sci.* 2011;56:3672-3677.