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Acute pancreatitis in pregnancy: An unresolved issue

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Abstract

Management of acute pancreatitis in pregnancy is based on expert opinion only, due to geographic and ethic variations. Nonbiliary causes should be sought as they are associated with worse outcomes. Alcohol as a cause of acute pancreatitis is not rare. Hemoconcentration as a marker of fluid deficit and severity should be predicted with caution and fluid resuscitation should be done carefully by closely monitoring the central venous pressure, cardiac and respiratory system. Hypercalcemia of hyperparathyroidism may be falsely lowered due to hypoalbuminemia or suppressed by magnesium tocolysis.

Key words: Acute pancreatitis; Pregnancy; Sedation; Nonbiliary cause

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TO THE EDITOR

We read with interest the article "Acute pancreatitis in pregnancy" by Pitchumoni *et al*[1] in December 7, 2009 issue of *World Journal of Gastroenterology*. We agree that recommendation for management of acute pancreatitis is based on expert opinion only, due to geographic and ethnic variations. There are few points which need to be added regarding hyperlipidemic and alcoholic pancreatitis, as well as hemoconcentration as a marker of severity, analgesics and antibiotics dosage in pregnancy.

Nonbiliary causes of acute pancreatitis should be sought as they are associated with worse outcomes. Alcohol as a cause of acute pancreatitis is not rare. Eddly *et al*[2] studied 89 cases of acute pancreatitis among 305 101 deliveries, and found that alcohol is an etiological factor associated with increased rates of recurrence, 12.3% of patients are in preterm delivery and pseudocyst, and 43% of patients are in the third trimester of pregnancy, 37% of women are nulliparous and 64% have one or more children. The average maternal age at presentation is 26.2 years and higher in patients with alcoholic pancreatitis.

Hyperlipidemic pancreatitis patients account for 4%-6% of all acute pancreatitis patients and have a poor outcome[3]. Omega-3 fatty acids may prevent recurrent hypertriglyceridemia during pregnancy[4].

During pregnancy, the maternal blood volume is increased progressively till the 30th wk of gestation, which is 50% greater than normal[5]. This volume expansion is due to the effects of steroid hormones and elevated plasma levels of aldosterone and renin leading to dilution of red blood cells. So the hemoglobin level for hemoconcentration as a marker of fluid deficit and severity should be predicted with caution and fluid resuscitation should be done carefully by closely monitoring the central venous pressure, cardiac and respiratory system.

Meperidine and fentanyl are the preferred analgesic during pregnancy[6]. In case of necrotizing pancreatitis, antimicrobial therapy with imipenem/cilastin is often started in view of its high morbidity. The pharmacokinetics of imipenem will change during pregnancy with a larger volume of distribution and faster total clearance from plasma[7]. The dose adjustment during pregnancy should be considered.

The diagnosis of acute pancreatitis may be com-

plicated during pregnancy due to a mild physiological elevation of amylase, and magnetic resonance cholangiopancreaticography helps to detect acute pancreatitis and its complications[8]. Very uncommonly, disseminated intravascular coagulation (DIC) can occur in acute pancreatitis. Tang *et al*[9] studied 103 patients with acute pancreatitis during pregnancy, and found that 1 out 3 patients with DIC would die in the third trimester of pregnancy.

A comprehensive search for causes should be taken even when the cause of pancreatitis is obscure. It has been reported that triglyceride level declines with bowel rest and hydration, and hypercalcemia of hyperparathyroidism may be falsely lowered due to hypoalbuminemia or suppressed by magnesium tocolysis[10]. γ-glutamyl transpeptidase (GGTP) levels either are unchanged or fall slightly during gestation. An elevated GGTP level can help us to evaluate the history of alcohol use during pregnancy as patients might not be coming forth, due to stigmata associated with it[11].

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