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Case Report

Acute Pancreatitis in Pregnancy: Three Case Reports

N Lemdaoui^{1,2*}, M Abdelmoumene^{1,2}, S Mammouche^{1,2}, A Bataiche^{1,2}, S Satta^{1,2}, H Boutrid³, H Rahmoune⁴ and N. Boutrid⁴

¹General Surgery Department "B", Ben Badis University Hospital, Constantine, Algeria

²Faculty of Medicine, Constantine-3 University, Algeria

³Obstetrics-Gynecology Department, University Hospital of Bab El-Oued, University of Algiers-1, Algeria

⁴LMCVGN Laboratory, Faculty of Medicine, Setif-1 University, Algeria

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ABSTRACT

Acute pancreatitis is a rare condition during pregnancy, with peculiar specificities and particular findings. We report a series of 03 cases of pregnant women, treated for acute pancreatitis from 2016 to 2020. Their average age was 34.33 years and the diagnosis was based on clinical-biological clues: epigastric pain with strong elevation of lipasemia. Biliary etiology was confirmed in all patients initially by ultrasounds. Two patients had benign pancreatitis of favorable evolution. The third patient presented with a clinically severe pancreatitis and systemic inflammatory response syndrome, multiple organ failure syndrome with maternal and fetal deaths. Treatment was mainly symptomatic (medical), followed by cholecystectomy after delivery. Acute pancreatitis during pregnancy is a real threat for both the maternal and fetal prognosis and is a differential diagnosis that must be kept in mind for prompt management.

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Introduction

Acute pancreatitis in pregnant women is rare: its incidence is estimated to be about 1 in 1,000 to 10,000 pregnancies [1]. It occurs mainly during the 3rd trimester of pregnancy or at the immediate postpartum, and its main cause is cholelithiasis [2]. The diagnosis is often difficult because the clinical symptomatology is atypical in pregnant women and the possibilities of imaging and surgery are limited. Acute pancreatitis can be managed medically, while surgery is mandatory in refractory cases. The maternal-fetal prognosis during this pathology can be seriously compromised.

Clinical Cases

We report the observations of three cases of acute pancreatitis during pregnancy admitted in our department from January 1st, 2016 to July 1st, 2020.

1st Observation

Mrs. B. S. aged 25, married, with no particular history, is pregnant at her 27th week of gestation. She presents severe epigastric pain with posterior irradiation associated with bilious vomiting. The patient was in general condition, afebrile, with an arterial pressure at 100/60 mm Hg. On physical examination, her abdomen depicted a marked epigastric tenderness on palpation. The biological assessment revealed a highly increased lipasemia at 3140 IU / l and the diagnosis of acute pancreatitis was strongly suspected and confirmed by ultrasounds revealing a distended gallbladder with multiple lithiasis, the bile duct was not dilated. The patient presented with systemic inflammatory response syndrome (SIRS) and the biological report was normal apart a mild leukocytosis. After admission, a symptomatic treatment was started with good hydration by maintenance fluids and strict exclusive parenteral nutrition. The patient's evolution was progressively improving with

*Correspondence to: Naouel Lemdaoui, General Surgery Department "B", Ben Badis University Hospital of Constantine, Faculty of Medicine, Constantine-3 University, Algeria; E-mail: lem2naouel@yahoo.fr

clinical and biologic normalization within few days. The patient was discharged and scheduled for cholecystectomy after delivery.

2nd Observation

Mrs. B. C., 44 years old, without a previous history, was pregnant at her 10th week. She presented 2 days before her admission a critical epigastric pain with bilious vomiting. The clinical examination, the patient is febrile at 38°C, her arterial blood pressure at 110/50 mm Hg with tachycardia at 120 / min. The abdomen showed a slight epigastric tenderness on palpation. The laboratory results a lipasemia which was increased to 15 times the upper limit of normal (ULN) at 600 IU / l. Complete Blood Count (CBC), Hepatic Function Tests, Renal Function Tests, lipids and Coagulation parameters were all normal; and classified as SIRS positive. The abdominal ultrasound revealed a 1 cm cholelithiasis in the gallbladder with thick bile. Magnetic Resonance Imaging (MRI) confirmed the acute lithiasic pancreatitis (stage B according to Balthazar classification) with a gallbladder sludge and a biliary lithiasis of 06 mm.

Despite close monitoring, the patient's general status deteriorated along with several hydro-electrolytical disorders (hypokalaemia and

hyponatraemia) and a drop in prothrombin time. At day 21 days after hospitalization, obstetrical examination and sonography confirmed the intra-uterine fetal death; shortly followed by a fatal multiple organ failure that could not be reversed despite adequate resuscitation.

3rd Observation

Mrs. G. H., 34 years old was pregnant at her 31st week. She was admitted to the surgery department for marked epigastric pain with typical posterior irradiation. She also had bilious vomiting without evident jaundice. Her somatic examination found a patient in good general status, non-febrile, with normal blood pressure at 120/60 mm Hg. The abdomen presented with epigastric tenderness. Biological assessment found an elevated lipasemia at 191 IU /l., normal CBC and normal hepatic and renal function tests; she was classified as SIRS negative. The abdominal ultrasound showed a normal-size pancreas, with a gallbladder with a thin wall and full of multiple micro-lithiasis, the bile duct has a normal diameter. The patient was admitted in intensive care. with continuous hydration by intra-venous (IV) maintenance fluids and exclusive parenteral nutrition. The surgical intervention took place just after her delivery and cholecystectomy was carried out with good post-operative results. Table 1 summarizes the three patients' observations.

Table 1: The three cases summary.

Case	Age/Years	Trimester	Pain	Other signs	Ultra-Sounds	Maternal status	Fetal status	Term delivery
1	25	3	Typical	Emesis	Gallstones	Well	Well	Yes
2	44	2	Atypical	Emesis + Fever	Gallbladder sludge	Death	Death	No
3	34	3	Typical	Emesis	Gallstones	Well	Well	Yes

Discussion

Acute pancreatitis (AP) is a rare condition during pregnancy with an estimated incidence around 1/1000 to 10,000 pregnancies [1]. Despite this rarity, potential complications are the double when compared to non-pregnant women [2]. AP on pregnancy is notable scarce during the first 6 months of pregnancy (12%) and occurs mainly during the third trimester (50%) or the immediate postpartum period (38%) [1]. Symptoms such as epigastric pain, nausea and/or vomiting, anorexia and fever are considered to be the most common [1, 3]. Severe epigastric pain and vomiting were encountered in our three patients. The dramatic increase of amylasemia and lipasemia must be interpreted carefully as for women outside of pregnancy [1]. Increase of more than 03 times the ULN are significant. Such elevated lipasemia was found in all our reported cases.

Regarding its etiology, biliary pancreatitis is the most frequent (65-100%) [2]. In this small study of 03 patients, all of the pregnant women had gallstones or biliary sludge. In fact, abdomen ultrasound to explore the biliary tree is a mandatory first-step diagnosis imaging in patients with AP and has a better sensitivity for the diagnosis of gallstones than computerized tomography (CT scan) [1, 4]. Magnetic reasoning imaging (MRI) is a powerful modern technique investigating abdominal pain in pregnant women, notably in non-conclusive ultrasounds and it can assess the AP severity (Balthazard score) in pregnant women with a comparable reliability versus CT scan [5, 6]. Management of AP during pregnancies is mainly supportive and medical, including fasting in patients with biliary pancreatitis, hydric and electrolytes correction and

IV analgesics, and subsequent progressive and prudent refeeding after pain sedation [4, 7].

The benefit of antibiotic prophylaxis is not proven, and the use of antibiotics is currently restricted to complicated cases such as infection/necrosis, pancreatic abscess, cholecystitis or cholangitis [8]. Management since the initial stage of the disease is mandatory including hyperhydration; and surgical treatment have to take into account both maternal and fetal risks (due to hazards of radiation during endoscopic retrograde cholangiopancreatography, general anaesthesia and laparoscopy) [1, 4, 9]. The management of pregnant women with AP caused by gallstones is conservative, the surgery being suggested mainly for refractory/non-responsive cases; and cholecystectomy might be delayed after childbirth [10]. If surgery is indicated before delivery and the fetus is alive, initial supportive care with symptomatic treatment up to the 32nd week is the rule to avoid premature induction of childbirth [1]. In our series, the cholecystectomy was performed after delivery in one patient. Maternal prognosis has greatly evolved in the last decades: AP during pregnancy was considered to be extremely dangerous for the mother and fetus dyad [11, 12]. Maternal and perinatal mortality was estimated between 0-37 and 11-37% respectively. Major improvements in AP prognosis are nowadays widely reported [2, 13, 14].

One patient in our study depicted a fatal AP with multiple organ failure. The fetus is highly impacted and prematurity and in utero fetal death are potential risks associated with AP in pregnancy [1]. Notably, patients who developed AP in the first trimester have high risks of fetal loss and preterm delivery (20% and 16% respectively) [15]. In our study,

pancreatitis was complicated by in utero fetal death in a patient with multiple organ failure, and AP was successfully managed in two other cases.

Conclusion

Acute pancreatitis during pregnancy is a major differential to consider in pregnant women with emesis associated to typical or atypical abdominal pain. Its diagnosis is essentially based on elevated lipase and suggestive imaging. Management is mainly symptomatic, with subsequent cholecystectomy in biliary AP.

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