



## ACUTE PANCREATITIS AND PREGNANCY: EXPERIENCE OF MOHAMMED VI UNIVERSITY HOSPITAL MARRAKECH

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### ABSTRACT:

The association acute pancreatitis and pregnancy is rare, its diagnosis is difficult given the context of pregnancy. His maternal and fetal prognosis is still dark.

Our work is a retrospective study based on the study of the files of patients admitted for acute pancreatitis in pregnancy in the General Surgery and Maternal Resuscitation Department of Mohammed VI Medical Center of Marrakech as well as an electronic bibliographic research.

It aims to clarify the epidemiological, clinical and therapeutic features of acute pancreatitis and pregnancy as well as the risks to the mother and the fetus.

Our series includes 37 cases of acute pancreatitis and pregnancy collected over a 7-year period from January 2010 to January 2016. In terms of epidemiology the average age was 29 years with an incidence of 1/2450. Acute pancreatitis occurred more frequently in multiparous women (68%) in the third trimester (59.5%). The clinical picture was dominated by abdominal pain (100%) and vomiting (100%). The occurrence of organ failure was rare. The positive diagnosis is based on lipaseemia which was on average 20 times normal. The severity assessment was based on clinico-biological scores (Ranson score and SRIS score). Biliary origin was the main etiology in our study (54%). Management is based on hospitalization and symptomatic treatment including pain management, stopping feeding, gastric protection, rehydration and management of organ failure. Maternal complications were dominated by superinfection of necrosis (10.75%). Maternal mortality was 2.7%. Fetal complications included abortion, premature labor, and acute fetal distress.

The gravid state would be responsible for the increased risk of occurrence of acute pancreatitis and its complications. Early diagnosis and adequate multidisciplinary management considerably improve the maternal and fetal prognosis.

**KEY WORDS :** acute pancreatitis, pregnancy, lipasemia

### INTRODUCTION:

Acute pancreatitis is an acute inflammation of the pancreas secondary to pancreatic proenzyme activation within the pancreas resulting in glandular autodigestion with release of proteolytic and lipolytic enzymes in the pancreatic lodge, abdomen and bloodstream

The association acute pancreatitis and pregnancy is rare. The lithiasis etiology is the most frequent, favored by the gravidic

changes resulting in stasis and the formation of gallstones and vesicular mud. The diagnostic approach is confronted with several problems, on the one hand the nonspecific clinical picture, on the other hand, the radiological examinations, notably the abdominal CT scan indicated for most of the pregnancy. Biology confirms the diagnosis. The care is multidisciplinary including the intensive

care unit, the obstetrician–gynecologist, the surgeon visceral and the radiologist. The treatment of acute gestational pancreatitis is primarily symptomatic. The proper management of this pathology allows the improvement of morbidity and maternal–fetal mortality. The maternal prognosis is generally good, fetal complications are dominated by the risk of premature labor and acute fetal distress. [1].

**METHODOLOGY :**

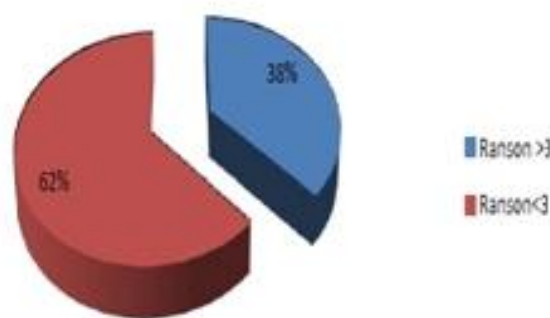
We conducted a retrospective descriptive and analytical study at the department of visceral surgery and maternal resuscitation at the Mohammed VI CHU in Marrakech, including all pregnant patients admitted for acute pancreatitis from January 2010 to January 2016.

**RESULTS:**

During these 07 years, 37 patients were admitted for acute pancreatitis on pregnancy. The average age of our patients is 29 years old with extremes between 19 and 37 years, 68% of cases were multiparous multiparous, pregnancy was monofetal in 35 patients or 93% of cases. In terms of gestational age 59.9% of pancreatitis occurs in the 3rd trimester and 24.3% in the 2nd. The functional signs are dominated by abdominal pain and vomiting present in all of our patients; clinical examination objective abdominal tenderness in 27 patients (72%) and 10 patients had uterine contractions on admission.

Biologically, the dosage of lipase was systematic, it was positive in all of our patients with extremes between 4 and 80 times normal.

In our study, the median Ranson score was 2 with extremes ranging from 0 to 6 (Figure 1).



**Figure 1 :** distribution of patients according to the Ranson score

All of our patients had an abdominal ultrasound, MRI was performed in 18 patients.

The lithiasis etiology is the dominant found in 20 patients, ie 54% (Table 1).

| etiology             | N  | %    |
|----------------------|----|------|
| gallstone            | 20 | 54   |
| preeclampsia         | 3  | 8.1  |
| hypertriglyceridemia | 1  | 2.7  |
| Unknown cause        | 13 | 35.2 |

**Table 1 :** distribution of patients by etiologies.

Treatment consisted of systematic conditioning, effective analgesia was initiated (Table 2).

| analgesic | Paracetamol | nefopam | morphine |
|-----------|-------------|---------|----------|
| N         | 26          | 17      | 8        |

**Table 2 :** use of analgesics.

In addition to analgesia, a variable number of patients required hemodynamic management in 3 patients, ventilatory support in 3 patients, treatment of renal insufficiency, gastric protection in 36 patients and thromboprophylaxis in 25 patients.

Nutritional management consisted in stopping the oral feeding of all the patients, it lasted 6 days on average with

extremes going from 3 to 10 days. 29 patients or 78.3% had received parenteral nutrition during the period of discontinuation of the oral route.

Antibiotic therapy was instituted in 7 patients for acute cholecystitis, it was based on amoxicillin + clavulanic acid (3g / day for 10 days). Antibiotic therapy based on C3G (2g / day for 10 days), metronidazole (500mg \* 3 / day) and gentamicin (160mg / day for 3 days) for angiocholitis in 4 patients and superinfection of necrosis in 3 patients.

Regarding the etiological treatment:

Biliary etiology:

17 patients or 46% had a cholecystectomy (Table 3).

| Time for cholecystectomy | Acute cholecystitis | Single gallstone gallbladder |
|--------------------------|---------------------|------------------------------|
| T1                       | 1                   | 0                            |
| T2                       | 1                   | 0                            |
| T3                       | 0                   | 0                            |
| post partum              | 2                   | 0                            |
| far from the term        | 3                   | 10                           |

**Table 3 : time of cholecystectomy.**

Patients operated during pregnancy were treated by the costal route.

Those operated postpartum were approached by laparoscopy.

4 patients had angiocholitis with perendoscopic sphincterotomy with delayed cholecystectomy.

The management of hypertriglyceridemia, in our work, was based on a treatment with fibrates associated with dietary and lifestyle measures

The treatment of pre-eclampsia was based on the treatment of arterial hypertension with injectable nicardipine, magnesium sulfate. The etiologic treatment was based on fetal extraction.

In terms of evolution, the average duration of hospitalization was 7.2 with extremes

between 5 and 22 days. One patient died due to septic shock, 3 patients (10.75% aborted), 2 patients (5.4%) gave birth prematurely.

**DISCUSSION :**

In term of frequency the pancreatitis on pregnancy remains a rare affection varies according to the studies between 1/1000 and 1/10000 - [1], in our work it was estimated to 1/2450.

In our study, the average age of the patients was 29 years, which corresponds to the average found in several studies [2]. 2/3 of the patients were multigestes [3].

Our study joins the literature in terms of gestational age of occurrence of pancreatitis, the risk increases with the advancement of pregnancy [4].

Abdominal pain [5] and vomiting [3] are the 2 functional signs found in the majority of parturients. The clinical examination finds an abdominal pain that must eliminate an abdominal emergency and the obstetric examination must elucidate any threat to the pregnancy.

Recent studies [6] have shown that the serum lipase assay is of more interest.

Radiologically, and because of the gravid context, it is preferable to have recourse initially to other less irradiating imaging means; abdominal ultrasound

remains the radiological reference examination to diagnose a biliary etiology, the abandonment of CT because of its possible teratogenic risk remains controversial. In our study, no patient received a CT scan. Due to its cost, its still difficult access, the MRI remains an alternative to the CT scan, moreover it can appreciate quantitatively the prognosis of the lesions by transposing the tomodensitometric severity score [7].

Since its proposal by Ranson et al. [8] In 1974, the Ranson score remained the

most used in practice to assess the severity of pancreatitis, however the only score currently used to assess the severity of BP is SRIS [9]. It must be done at admission and at 48 hours.

In terms of etiology, biliary origin is the most reported cause of acute pancreatitis during pregnancy [2], and so is our series. Hypertriglyceridemia is a rare but often reported cause [4]

Acute pancreatitis can be a complication of pre-eclampsia. [10], may be secondary to hyperparathyroidism, hypercalcemia [11], infection [12], alcoholism [13], drug intake (thiazide diuretics, furosemide and tetracyclines) [12], and finally idiopathic pancreatitis and this would be due to the missing data and the pathophysiology of the various causes not yet fully elucidated.

The management of patients should be done in hospital, the average duration of hospitalization varies between 8 and 8.5 days [3]. Analgesia is the first pillar of management, the resting of the digestive tract, indeed fasting is required because of pain and digestive intolerance [14]. Maintenance of satisfactory blood volume is highly recommended, so hyperhydration should be done as soon as possible. [15] and the use of macromolecules is only necessary in case of shock [16]. Oxygen therapy is possible in order to maintain oxygen saturation at more than 95%. Antibiotic therapy is justified only in case of documented infection, in front of septic shock, cholangitis, cholecystitis or nosocomial infection. [16].

For biliary etiology, the 2nd trimester seems the most appropriate for an operative cholecystectomy and / or ERCP with sphincterotomy [17].

Pancreatitis secondary to hypertriglyceridemia The introduction of dietary and lifestyle measures seems to be effective. In cases of hypercalcemia IV hyperhydration decreases serum calcium, Bisphosphonates, loop diuretics and calcitonin are also used [11]. Interruption of pregnancy will be discussed in case of severe acute pancreatitis or in case of indication related to pre-eclampsia and its complications. [10].

Acute pancreatitis should not influence the management of pregnancy High levels of cytokines during acute pancreatitis sometimes causes the appearance of uterine contractions, tocolysis is then considered. The interruption of pregnancy is never justified in the first or second trimesters, it does not improve the prognosis of the pancreatic affection [18].

The maternal prognosis has improved markedly it is essentially related to the etiology, to the anatomical type of the pancreatitis, to the occurrence of its complications and to the gestational age, the rate of death varies according to the studies of null [19] at 37% [20] ours was 2.7%. With regard to fetal prognosis, in utero mortality is 15–20% and can reach 60% in case of recurrent biliary BP and perinatal mortality is 10–20%., The incidence of preterm delivery is high by compared to the general population.

#### **CONCLUSION :**

Acute pancreatitis is one of the diagnoses that need to be made about acute abdominal pain that occurs during pregnancy.

Therapeutic management solicits a multidisciplinary team.

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