

Original Research Article

Management of Acute Pancreatitis in the Resuscitation of Aristide Chu Le**Dantec De Dakar****Barboza D¹, Fall ML², Traoré MM², Leye PA², Diaw M², Ndiaye PI², Ba EB², Gaye I², Bah D², Beye MD², Diouf E²**¹Hôpital de la paix Ziguinchor, Senegal²Mour Hôpital d'enfant Albert Royer, Senegal***Corresponding author**

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Abstract: Acute pancreatitis is a process of self-regulation of the pancreatic gland. It evolves in two phases: the initial phase or edema and the late phase or necrosis. The objective of our work was to study the frequency of acute pancreatitis and to evaluate the diagnostic, therapeutic and prognostic management in resuscitation. Patients with elevated lipase and amylase to confirm the diagnosis were included in our study. Four cases of acute pancreatitis on 823 inpatients were collected at a frequency of 0.5%. The male sex was dominant with three cases being a sex ratio to 3. The average age was 35.5 years with extremes of 29 and 42 years. Two etiologies were found: an alcoholic origin with 3 cases of male and one case biliary origin. The epigastric pain was in front of the picture. The dosage of pancreatic enzymes (lipase and amylase) was performed as soon as patients were admitted to surgical emergencies. Ultrasound was done in search of biliary stones. The CT scan allowed us to confirm the diagnosis and to determine the prognosis of acute pancreatitis with two acute pancreatitis stage A and the two other acute pancreatitis were of stage C. All our patients had been treated symptomatically for 48 hours: d A total diet, vascular filling, multimodal analgesia, gastric protection and prevention of thromboembolic disease. No patient was on antibio prophylaxis. The duration of hospitalization was 3.75 days with extremes of 2 to 6 days. The development was favorable from the second day with decreased functional signs and resumption of feeding on the third day. No deaths were reported.

Keywords: Pancreatitis, Management, Resuscitation.**INTRODUCTION**

Acute pancreatitis is an inflammatory process of self-regulation of the pancreatic gland. It is characterized anatomically in benign forms by an edema of the gland. It may progress to pancreatic or peri-pancreatic necrosis of severe acute pancreatitis. The severity of acute pancreatitis is confirmed if there is organ failure and / or local complication. Acute pancreatitis should be diagnosed at the beginning of its development with simple clinical criteria (acute abdominal pain), biological (elevated pancreatic enzymes in the blood and urine and imaging (computed tomography). Severe acute pancreatitis requires multidisciplinary management involving resuscitators, anesthetists, surgeons, gastroenterologists, radiologists, emergency physicians and biologists. It should be noted that the treatment is medical and indications for surgical treatment are well codified because of the importance of

mortality (25%) and morbidity (43%) in postoperative care [1].

Despite progress in management, the overall mortality of severe acute pancreatitis remains high between 5% and 50% [2-4]. The objectives of our work were to evaluate the frequency of acute pancreatitis and the diagnostic, therapeutic and prognostic management in our resuscitation.

MATERIALS AND METHODS

Our study was carried out at the Multipurpose Resuscitation Department of the University Hospital Center of the Aristide Le Dantec Hospital. This is a cross-sectional and descriptive study and is conducted over a three-month period from January 1, 2008 to March 31, 2008. Patients with clinical symptoms and para-clinical confirmation (lipasemia, amylase Scanner) were included. We were interested in the clinical, para-

clinical aspects, the therapeutic and evolutionary management.

RESULTS

We recorded 4 cases of acute pancreatitis during our study period on 823 patients hospitalized in intensive care units corresponding to a frequency of 0.5%. Our results are expressed as observations. Among the 4 cases of acute pancreatitis the male predominated (3 men against 1 woman) and the average age was 35.5 years with extremes of 29 and 42 years. Abdominal pain syndrome was the main reason for consultation isolated or associated with vomiting. Our 3 male patients had a history of alcoholism and the patient was AS sickle cell.

Table 1 describes the hemodynamic and respiratory parameters at admission the treatment consisted of:

- Conditioning: with a nasogastric probe in place, a standard monitoring (ECG, Fr, SAO2, PNI) and a bladder probe,
- Mask oxygenation,
- Basic hydrolysis supplies (glucose serum, isotonic saline, lactate ringer, sodium, potassium, calcium and magnesium),
- Analgesia with intravenous Tramadol (100mg 3 times

per 24 hours) and paracetamol (15 mg / kg / 6h) with pain assessment using the visual analog scale,

- Gastric protection with anti-ulcer drugs (antiH2: ranitidine: 50 mg twice / day).
- A total diet
- Injectable nicardipine-based antihypertensive therapy for patients with high blood pressure. Lipase and amylase are performed to confirm the diagnosis.

In our patients, the results were complicated: blood count, haemostasis (platelets, prothrombin and activated partial thromboplastin time, INR), transaminases (ALAT, ASAT), blood glucose, CRP, Renal function (urea and serum creatinine), serum calcium, albuminemia, blood ionography and LDH. The results are shown in Table 2. The radiological examinations performed are: abdominal x-rays without preparation, abdominal ultrasound, cardiac ultrasound and computed tomography (CT) for the Balthazar score. The abdominal X-ray without preparation (ASP) reported hydro-aerial levels of the gray type in our patient and was normal in our 3 patients. Abdominal ultrasound found uncomplicated vesicular lithiasis in one of our patients and was normal in other patients. The abdominal computed tomography with classification of Balthazar brought us 2 stage A and 2 stages C. Table 3 shows the results of the Ranson Score at admission.

Table 1: Hemodynamic and respiratory intake parameters

Patients	FR	FC	T°C	PA	SpO ₂	physical examination
Patient 1	28	148	37°2	112/65	95	Normal
Patient 2	24	108	37°	160/100	98	Normal
Patient 3	18	129	37°5	150/90	94	Colic angle pain
Patient 4	22	164	37°7	140/90	98	normal

FR (cycles/min), FC (battements/min), PA (mmHg), SpO2 (%)

Table 2: The results of biochemistry

Patients	lipasemia UI/L	amylasemia UI/L	bilan of hémostase	function renal	CRP mg/L	calcémie mg/L	Albuminémie g/L
Patient 1	873	151	normal	normale	192	103	32
Patient 2	976	144	normal	normale	116	102	32
Patient 3	570	558	normal	normale	358	85	33,6
Patient 4	727	342	normal	normale	354	98	30

Table 3: Score of Ranson à l'admission

Patients	Age (Years)	Glycemia (mmol/L)	GB (éléments/mm ³)	LDH (mg/L)	ASAT (UI/L)	Score
Patient 1	30	3	9.200	240	17	0
Patient 2	41	4,95	12.040	224	35	0
Patient 3	42	6,44	16.800	654	41	2
Patient 4	29	7,6	15.500	748	75	0

COMMENTS

Acute pancreatitis has a very variable frequency. We noted a frequency of 0.5%. In a study conducted by Niang [5] it had a much lower frequency of 0.15%. The Taïb survey in Algeria records a frequency of 3% of all hospitalizations in the resuscitation services of the country [6]. Severe acute pancreatitis appears to be rare in our practice but is a major cause of hospitalization in intensive care. The age limit of 55 years is used as a risk factor as part of the Ranson score. This is the mean age most found in the literature. The average age of our patients was 35.5 years with extremes ranging from 29 to 42 years. In the study of Taïb [6], the mean age was 51.15 years. In the work of Niang [5], the mean age was 49.3 years. This very young age can be explained by the existence of genetic factors such as sickle cell patients in our patients.

In our study, we find one woman for three men, showing a male predominance of acute pancreatitis. Two etiologies were found in our patients: alcohol poisoning and vesicular lithiasis. These two pathologies account for more than 80% of the causes of acute pancreatitis [7]. Pancreatitis of alcoholic origin was more frequent in the male subject. In our work, 3 pancreatitis were of alcoholic origin and one of biliary origin in a woman. In our study, patients were mostly diagnosed in the emergency department on the basis of clinic and biology and within an average of 36 hours to be secondarily transferred to intensive care. It should be noted that this delay is slightly longer than that found in most studies that was between the 8th and the 48th hour [8-10]. As in all studies, abdominal pain is the main and constant sign of the disease, and is the most common reason for consultation [6, 11-13]. The diagnosis is made by lipase and amylase in all our patients. Lipasemia is more apt than total amylasemia to diagnose acute pancreatitis in this setting [14].

In all our patients the Ranson score on admission was less than or equal to 2. Biology thus occupies a prominent place in the diagnosis of acute pancreatitis. Severity, etiological research and surveillance must be performed in intensive care [9, 15]. This prompts us to think about pancreatitis and to make our diagnosis as quickly as possible before the complications arise. Apart from any search for complications, the role of imaging is to supplement a biology that is not very useful for the diagnosis of gravity [16]. In our study, all of our patients had received ultrasound within 48 hours, but the CT was systematic at admission to intensive care. If ASP does not contribute effectively to the diagnosis of acute pancreatitis, it may, however, eliminate other abdominal surgical emergencies. The abdominal and thoracic CT scan showed two stage C pancreatitis, one in stage D and one in stage A. Our morphological examinations were not repeated because of the good clinical evolution of our patients but also the cost of this exploration. None of our patients had received MRI because it was not essential.

The search for an ulcerative complication is systematic as well as the realization of the ECG in search of a myocardial infarction in the framework of the differential diagnosis. The management of our patients was multidisciplinary (surgeons, anesthetists, resuscitators, radiologists). Hemodynamic and respiratory parameters were monitored: pulse, blood pressure, diuresis, respiratory rate, temperature, pulsed oxygen saturation and capillary blood glucose. Treatment was symptomatic. In our study, no patient was given parenteral nutrition, but a resumption of enteral feeding after 48 hours, initially liquid and then solid as described, was established [17-19]. Our patients did not benefit from antibiotic therapy as recommended [9, 20]. In our study, only one patient presented a complication including pulmonary involvement with pleural effusion.

The evolution was favorable in our patients after 48 hours of treatment in resuscitation with a suitable treatment this may be related to the limited number of cases but also to the relatively early management. Severity is not necessarily linked to the cause of acute pancreatitis but also to the delays of management before the complicated stages. The objective is to evaluate the severity of the severe patient early and to refer the patient to an intensive care unit [15]. We have not had any deaths although the mortality remains high (20 to 60%) in the literature because the extension of the necrotic process and infection are the main causes [21].

CONCLUSION:

Severe acute pancreatitis, genuine diagnostic and therapeutic urgency; With a severe prognosis with an overall mortality rate of 25% depending on the series, up to 60% and even 80% in very severe patients. Hence the interest of an early management especially in our conditions where the means of resuscitation are limited.

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