

Post-Operative Follow-Up Of Abdominal Emergencies At The Niamey National HospitalNanzir Sanoussi M^{1*}, Daddy H¹, Gagara M¹, Bachar Loukoumi O¹, Moussa BF¹, Chaibou MS¹

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Correspondence: NANZIR SANOUSSI MoutariReceived: 09 July 2024; Accepted: 15 July 2024; Published: 20 July 2024***Citation:** NANZIR SANOUSSI Moutari. Post-Operative Follow-Up Of Abdominal Emergencies At The Niamey National Hospital. AJMCRR 2024; 3(7): 1-5.**ABSTRACT**

Introduction: Digestive surgical emergency is an important public health problem in terms of morbidity and mortality. It can be seen at any age. The prognosis depends on the precocity of treatment.

Patients and Method: We carried out a prospective, descriptive and cross-sectional study involving 78 post-operative patients who underwent emergency abdominal surgery at the Niamey National Hospital over a period of one month from the 1st to March 31, 2023. Included in the study were all patients who consulted the emergency department of the HNN, who were operated on and hospitalized in the post-operative, intensive care and visceral surgery departments, during the study period. The variables studied were: Age, sex, origin, personal history and profession, treatment received preoperatively, postoperatively, evolution during treatment, duration of hospitalization and patient outcome. The data were entered and analyzed using Microsoft 2016 and Sphinx.v5 software.

Results: The frequency of surgical emergencies was 3% (n=78) of all admissions to surgical emergency departments. Male patients were the most affected with a frequency of 69.23% (n=54), and a sex ratio of 2.25. The average age of the patients was 27.37 years with extremes ranging from 04 to 74 years. The age group from 21 to 40 was the most represented with a percentage of 52.56% (n=41). The most frequent operative diagnosis was acute peritonitis in 50% (n=39) of cases, followed by acute appendicitis and intestinal obstruction in respectively 21.79 % (n=17) and 7.69 % (n =6). The operative consequences were simple in the majority of cases with a frequency of 75.64 % (n=59). The average length of hospitalization was 10.45 days with extremes ranging from 1 to 21 days.

We deplored a mortality rate of 5.12% (n=4).

Conclusion: Surgical emergencies occupy an important place in surgical pathologies in general, and mainly concern young subjects. Morbidity and mortality still remain high in developing countries. They were mainly linked to a delay in consultation and the lack of technical platforms.

Keys Words: Emergencies, surgery, acute abdomen, Niamey National Hospital, Niger.

Introduction

Digestive surgical emergency is an important public health problem in terms of morbidity and mortality. It can be seen at any age. The prognosis depends on how early treatment is received [1]. Surgical emergencies in Africa are semiologically comparable to those encountered in Europe, but they have certain particularities due mainly to a longer treatment time. In Europe, surgical emergencies are usually seen in 6 hours at most, which is exceptional in Africa, where delays can reach 48 hours or more [2]. The delay, both diagnostic and therapeutic, arises from several causes: initial diagnostic errors, the precariousness of the technical platform, the low socio-economic level, the lack of qualified personnel (anesthetists-resuscitators and surgeons), the absence of service competent in the periphery to take care of acute abdomens. The present prospective study aims to carry out post-operative follow-up of abdominal emergencies and to arrive at concrete proposals aimed at improving the management and prognosis of acute surgical abdomen in our country without prejudging the etiology.

Patients and Method: We carried out a prospective, descriptive and cross-sectional study involving 78 post-operative patients who underwent abdominal surgery at the Niamey National Hospital over a period of one month from the 1st^{to} the 31st. March 2023. Included in the study were all patients who consulted the emergency department of the HNN, who were operated on and hospitalized in the post-operative, intensive care and visceral surgery departments, during the study period. The variables studied were: Age, sex, origin, personal history and profession, treatment received preopera-

tively, postoperatively, evolution during treatment, duration of hospitalization and patient outcome. The data were entered and analyzed using Microsoft 2016 and Sphinx.v5 software.

Results: During our study 78 patients were identified. Abdominal-digestive emergencies represented 3% of total admissions to the surgical emergency departments of the Niamey National Hospital. Male patients were the most affected with a frequency of 69.23% (n=54), and a sex ratio of 2.25. The average age of our patients was 27.37 years with extremes ranging from 04 to 74 years. The age group from 21 to 40 was the most represented with a percentage of 52.56% (n=41). Based on the history, 52.56% (n=41) of the patients in our sample had no particular history. Pain was present in all patients and more localized in the iliac fossa with 32.05% (n=25) of cases. The most reported accompanying signs of pain were vomiting present in 70.51% (n=55) of patients, followed by fever and cessation of materials with respectively 58.97 % (n=46) and 44.87 % (n=35). Among our patients, 39 had hyperleukocytosis, i.e. a frequency of 50% (n=39), the white count was normal in 43.59% (n=34) of cases, however leukopenia was noted in five patients, i.e. 6, 41% (n=5). In our study, 35 patients had a normal hemoglobin level of 70.51% (n=35), but severe, moderate and mild anemia were reported in respectively 3.85% (n=3); 15.38% (n=12) and 10.26%(n=8) of cases. Hyperazotaemia was noted in 23.10% (n=18) and hypercreatininemia was reported in 7.7% (n=6) of cases. The blood ionogram was carried out in 38 of our patients or 48.71%. However, among them, an ionic disorder such as hyponatremia was observed in 23.68% (n=9). The most frequent preoperative diagnosis was acute peritonitis in 50% (n=39) of cas-

es, followed by acute appendicitis and intestinal obstruction in 21.79% (n=17) and 7.69% (n= 6). (Table I)

Table I: Distribution of patients according to preoperative diagnosis

Preoperative Diagnosis	Effective	Percentage (%)
Acute peritonitis	39	50
Acute appendicitis	17	21.79
Abdominal contusion	6	7.69
Bowel obstruction	6	7.69
Strangulated hernia	5	6.41
Abdominal wound	5	6.41
Total	78	100

Regarding preoperative care, 66.66 % (n=52) had received hydro-electrolyte resuscitation, but only 3 patients or 3.84% had received a preoperative transfusion. (Table II)

Table II : Distribution of patients according to preoperative resuscitation measures

Preoperative Treatment	Effective	Percentage (%)
Hydro-electrolytic rehydration	52	66.66
Analgesia	47	60.25
Antibiotic therapy	41	52.56
Transfusion	3	3.84

The average length of hospitalization was 10.45 days with extremes ranging from 1 day to 21 days. The postoperative course was simple in 75.64 % (n=59) of cases. However, we deplore the occurrence of four deaths; i.e. a frequency of 5.12 %.

Table III: Distribution of patients according to surgical outcomes

Operational consequences	Effective	Percentage (%)
Simple	59	75.64
Wall infection	9	11.53
Hemorrhage	4	5.12
Evisceration	2	2.56
Death	4	5.12
Total	78	100

There is a very significant statistical link between the operative diagnosis and the occurrence of complications with a P value = 0.00000. (Table IV)

Table IV: Correlation of patients between the main diagnosis and the occurrence of complications

Diagnostic	Single suites NOT (%)	Complications NOT (%)	Statistical test
Acute appendicitis (n=17)	15(88.23)	2(11.76)	P= 0.00000
Abdominal contusion (n=6)	5(83.33)	1(16.64)	
Strangulated hernia (n=5)	3(60)	2(40)	
Abdominal wound (n=5)	4(80)	1(20)	
Bowel obstruction (n=6)	6(100)	0(0)	
Acute peritonitis (n=39)	26(66.66)	13(33,34)	
Total	59	19	

Discussion and comments: Acute surgical abdomens are common in the surgical setting, our study allowed us to have 3% of acute surgical abdomens out of all admissions to the surgical emergency department of the Niamey National Hospital. Our result is lower than that of **Iltireh AI** in Djibouti in 2021 which had regained 25%. [2]

The average age of our patients was 27.37 years. In the literature, digestive surgical emergencies concern young adults; age is not a risk factor [3]. The male sex was the majority in our series with a sex ratio of 2.25.

Schoolchildren and housewives were the most represented, with 30.77% and 16.67% respectively. This situation has no scientific value because digestive surgical emergencies are not linked to a defined professional activity. Acute peritonitis is one of the most common etiologies of acute surgical abdomens, it was the most frequent in our study with 50% of cases. This rate is higher than that of **Iltireh AI et al.** who found a frequency of 16%, lower than that of **Camara M et al.** who found a frequency of 70%. [3,4] This difference is explained by the location of the study and the number of cases of surgical abdominal emergencies. The second cause of acute abdomens in our series was acute appendicitis with 21.79% followed by acute intestinal obstructions with 7.69% and strangulated hernia in 6.41% of cases. **Camara M et al.** also found appendicitis as a second etiology. [3] In our study, abdominal pain was the most common functional sign of acute surgical abdomen in all our patients, while vomiting accounted for 70.51% of cases. This rate is statistically lower than that of **Soumah SA et al** in 2011 who found a rate of 90.9%. [5] This difference is explained by the high number of peritonitis and acute intestinal obstruc-

tions in their study. The cessation of materials and gases was found in 44.87% of our patients. Our result is statistically lower than that of **Soumah SA et al.** [5]. Ultrasound has an important place in the diagnosis of digestive surgical emergencies. During our study, it was the most performed imaging in our patients, i.e. 28.20%. She helped with diagnosis in 22 cases. But we must remember that the diagnosis of an acute surgical abdomen is primarily clinical and should not be delayed in the absence of ultrasound [6]. In our series the morbidity rate was 24.36%. These are wall infection 11.53% (6%), hemorrhage 5.12% and evisceration 2.56%. This morbidity rate is similar to that of **Soumah SA et al.** which reported a morbidity rate of 17.04%. [5] We unfortunately deplored four cases of death or 5.12% of cases, this rate is also similar to that reported by **Soumah SA et al.** which found a mortality rate of 3.4%. [5] The average length of hospitalization was 10.45 days with a standard deviation ± 6.54 with extremes ranging from 1 day to 21 days. This could be explained by the high rate of simple post-operative outcomes.

Conclusion: Surgical emergencies occupy an important place in surgical pathologies in general, and mainly concern young subjects. The etiologies are multiple and varied, but acute peritonitis remains the first, hence the need for close interdisciplinary collaboration. Delay in treatment increases the cost and length of hospitalization as well as the risk of complications. Morbidity and mortality still remain high in developing countries. They were mainly linked to a delay in consultation and the lack of technical platforms.

Conflict of interest: None

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