

Original Research Article

Epidemiological Profile and Prognosis of Patients Admitted to the Intensive Care Unit of the National Hospital of Zinder

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Abstract: Resuscitation is a discipline that allows the management of patients with or likely to have one or more acute visceral failures. It is the set of measures allowing the restoration of vital functions momentarily compromised during acute medical, surgical or traumatic situations. Resuscitation patients suffer from potentially serious physiological instability. What is the epidemiological profile of patients admitted to the multipurpose intensive care unit of the national hospital in Zinder? The aim was to highlight the epidemiological profile of the patients admitted and their fate in order to improve management. This was a prospective, descriptive and analytical study conducted in the polyvalent resuscitation service of the national hospital of Zinder from January 1st, 2019 to June 30, 2019. Patients admitted directly or transferred from the hospital's internal services or from other health structures were included. Age, sex, reason for admission, history and prognosis were the variables studied. The data collection was done from the admission register, the patient file and the survey form addressed to the patient and/or the family. The data analysis was done with the computer tool, Excel. During the study period, four hundred and forty-two (442) patients were registered, 72.62% of whom were men and 27.37% women, i.e. a sex ratio of 2.6. The average age was 30, 31 years with extremes of 01 day and 86 years. The 19 to 86 years age group was the most affected with 50.90% of cases followed by the 06 to 18 years age group (33.48%). Surgical pathologies were the main reason for admission with 76.47% of cases versus 07.69% for medical ones. Surgical history represented 76.69% versus 09.04% for medical history. Arterial hypertension, diabetes and envenomation were the main medical pathologies recorded. The surgical pathologies observed were peritonitis, appendicitis, hernia, occlusion, trauma, goiter and malformation. The prognosis was favorable for 84.16% against 15.83% of death. The resuscitation service of the national hospital of Zinder received a large number of patients with limited means. Access must be put on the training of the personnel and the equipment only pledge for a better prognosis.

Keywords: Epidemiology, prognosis, patient, resuscitation.

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INTRODUCTION

Resuscitation is a medical discipline that allows the management of patients with or likely to have one or more acute visceral failures [1]. It is also defined as the set of measures allowing the restoration of vital functions momentarily compromised during acute medical, surgical or traumatic situations [2]. The term resuscitation was used for the first time in 1953 by the French physician Jean Hamburger to designate the means to ensure the return to homeostasis [2]. Patients admitted to the intensive care unit suffer from potentially serious physiological instability. What was the epidemiological and prognostic profile of the

patients admitted to the multipurpose intensive care unit of the national hospital of Zinder?

General Objective

The aim of this study was to highlight the epidemiological profile of patients admitted to the intensive care unit and their outcome in order to improve management.

PATIENTS AND METHOD

This was a prospective, descriptive and analytical study covering a period of six months from 1 January to 30 June 2019. The study took place in the

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resuscitation department of the national hospital of Zinder. It is a multipurpose intensive care unit with 15 beds out of 834 beds (2.03%) in the hospital. Patients of all ages and pathologies were admitted. The department was managed by a physician anesthetist and fourteen (14) nurses. Patients admitted to the intensive care unit were included. Patients admitted to other departments were excluded. The variables studied were age, sex, reason for admission, stay and patient outcome. Data were collected from the admission register, the patient file and the survey form addressed to the patient or to

his family if the patient was unconscious. The data analysis was done by Excel.

RESULTS

During these six months of activity, the multipurpose resuscitation service of the national hospital of Zinder registered four hundred and forty-two (442) patients, i.e. a frequency of admission of 74 patients per month. Men represented 72.62% (n=321) of the cases admitted versus 27.37% (n=121) of women. The sex ratio was 2.6. The mean age was 30, 31 years with extremes of 01 day and 86 years.

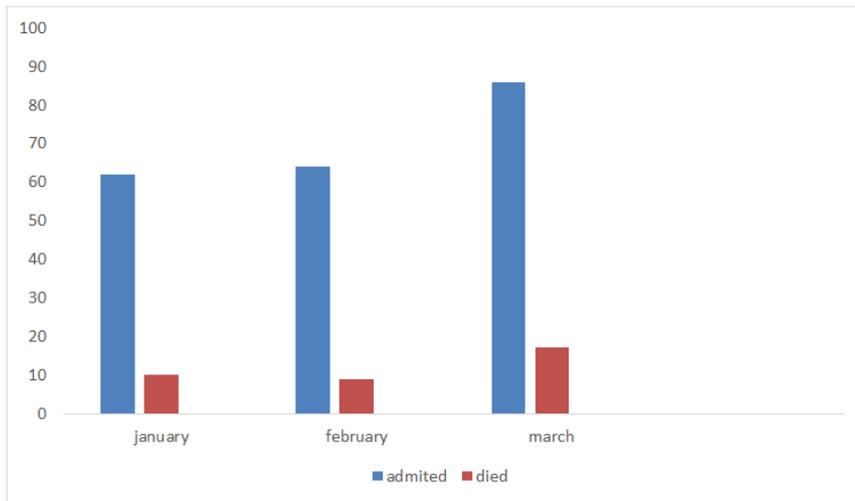


Figure 1: Admission and death of patients in the first quarter

In March the admission rate was higher with 86 patients. There were 17 deaths out of a total of 212

patients admitted, i.e. a death rate of 8.01% in the first half of the year.

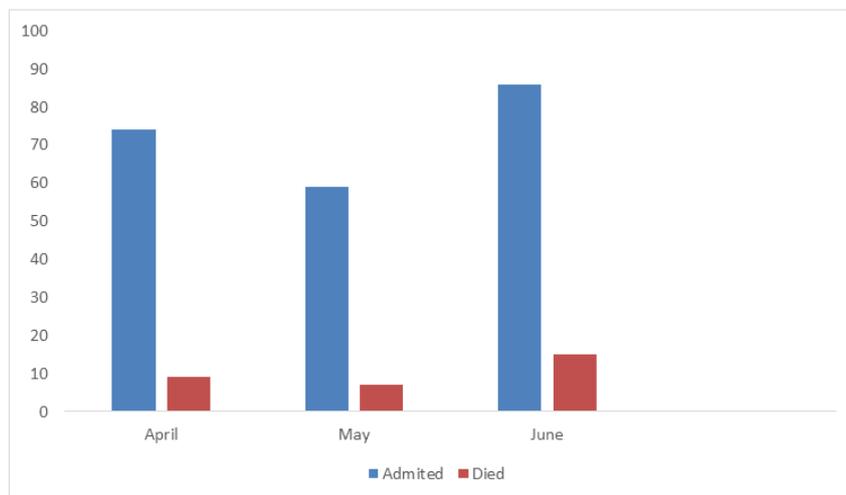


Figure 2: Admission and death of patients in the second quarter

In the second quarter, we recorded more patients in June with 86 cases, i.e. 39.26%. The number of deaths was 31 cases out of a total of 219 patients admitted, i.e. a rate of 14.15%. In the second half of the year. Almost all the patient, 85.74% had a medical and

or surgical history. Patients with a medical history represented 9.04% (n= 40) versus 76.69% (n= 339) for surgical. Various pathologies were observed in the patients. Thus, the medical pathologies observed were summarized in the figure below:

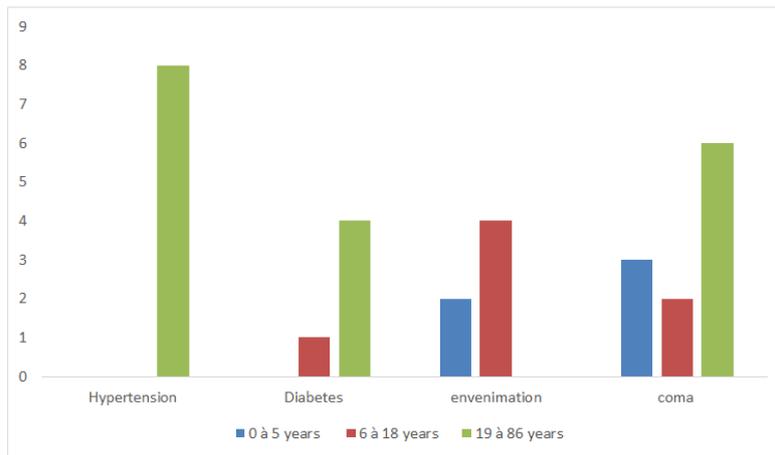


Figure 3: Distribution of medical conditions by age group

Arterial hypertension, envenomation following the snake bite and diabetes were the main medical pathologies observed. Hypertension was more prevalent

in the elderly while envenomation was more prevalent in the young patient.

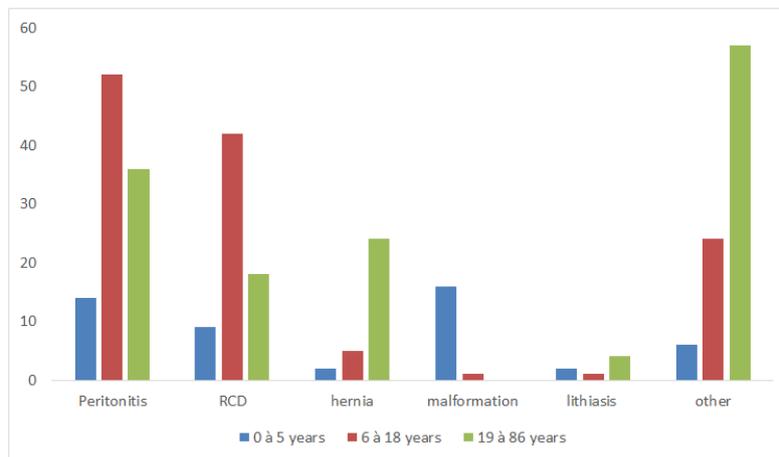


Figure 4: Distribution of patients according to surgical pathologies and by age group

Surgical pathologies dominated by abdominal surgery were the main reason for admission to the intensive care unit. Peritonitis and other pathologies (appendicitis, hernia, occlusion, goiter) were in the majority. For all patients, the evolution was favorable for 84.16% (n= 372) and unfavorable for 15.83% (n= 70). Death attributed to medical pathologies represented 77.42% (n= 50) of deaths versus 28.57% (n= 20) for that related to surgery.

DISCUSSION

During the study period, 442 patients were admitted, i.e. a monthly frequency of 74 patients. The intensive care unit had 15 beds out of the 834 beds in the hospital, which represented 2.03%. Some authors such as TSHISUT [2] have made the same observation. This lack of beds in the intensive care unit could influence the occurrence of death. It could be explained by a high demand in view of the number of the population. Indeed, the region of Zinder was the most populated in Niger. The average age of our patients was

30, 31 years. Authors such as Chaibou [3] in Niamey and Diouf [4] in Dakar had recorded an average age of 34.63 and 30.47 years respectively. The 18 to 86 year old age group was the most concerned in our series, whereas in that of STHUSUT [2] the 26 to 46 year olds were more concerned. This showed that the population admitted to the intensive care unit in certain geographical areas was young. We recorded an extreme age ranging from 01 day to 86 years. The same observation was made by the DIOUF team [4] in Dakar where the extreme age was 1 year and 91 years. The admission of the active population would not be without socio-economic consequences. The sex ratio was 2.6 in favor of men. This same observation has been made by some authors [2-5]. We recorded a predominance of emergency admissions. The same observation was made by authors such as Diouf, Chaibou, Kahan [2-6]. This could be justified by the fact that the intensive care unit is open 24 hours a day. Therefore, access to a physician was easier. Surgical abdomens were the most recorded in our survey. Indeed, the majority of the

population lives in rural areas and is illiterate. This situation exposes them to water-borne diseases and wards such as peritonitis. The evolution was favorable for 84.15% (n= 70) of the patients, nevertheless we deplored 15.83% of deaths. Medical pathologies were the most lethal with 77.42% of cases (n=50) versus 28.57% for surgical ones.

The same observation was made by the team of Tshisuz [2] in the Congo DRC, who recorded a mortality rate of 30.86%, 33.78% of which were attributable to surgical pathologies and 47.61% to medical ones. This could be explained by the delay in consulting the doctor, poverty, the seriousness of the disease on admission and the lack of resources in the service. Hence the need for our countries to train qualified personnel and to create equipped resuscitation services in order to ensure quality care for our populations.

CONCLUSION

The resuscitation service in our countries is characterized by high admissions of precarious patients of all ages. The means are limited and the qualified personnel insufficient. Emphasis must be placed on the training of personnel and the equipment of these structures. This is the way to provide quality care to this population that needs it so much.

Conflicts of Interest: The authors declare no conflicts of interest.

Author Contributions: All authors contributed to the development of this study.

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