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Reasons for Referral of Children aged 0 to 15 years to the Multipurpose Emergency Department of the Mali Hospital

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Abstract

Introduction: A child is defined as "any human being under the age of 18, unless majority is reached earlier due to the legislation applicable to them. In reality, initial care is also found in multipurpose or adult emergency departments. In France (Seine-Saint-Denis), out of 390 children rescued by the Emergency Medical Assistance Service (SAMU) in 2004, 77% of child deaths were medicalized by the Regional Emergency Medical Service (SMUR). all-rounders of the department. As a result, at the hospital in Mali, many children are referred to the emergency department, while there is no pediatrician in the SAU and the technical platform is not well suited to their care,hence the objective of this work.. ***Methods and Materials:*** We conducted a prospective, longitudinal study over a period of 12 months from January 1, 2019 to December 31, 2019 at the emergency department of the hospital in Mali. The study involved patients aged zero (0) to fifteen (15) years The parameters studied were socio- demographic and clinical variables ***Results:*** During the study period, we collected 458 children aged 0 to 15 out of 6517 visits to the service, i.e. a frequency of 8.12%. The age group of 10 to 15 years was the most representative with 39% of cases. The male sex represented 58% of cases with a sex ratio of 1.36. The patients were uneducated in 10% of the cases, the workers represented 28.8% among the fathers and 54.8% of the mothers were housewives. Children belonging to families with more than three children accounted for 50.9% of cases and 39.5% of patients lived outside Bamako, the capital. Our study shows that 53.9% of patients were admitted between 8 a.m. and 4 p.m., 54.8% of patients came to the service by taxi, vehicle or motorbike and admissions by referral/evacuation represented 60.3% of case. AVP accounted for 48.7% of cases After the initial examination on admission, 36% of patients were classified as category three according to the Clinical Classification of Emergency Patients (CCMU3). ***Conclusion:*** The grounds for recourse of children from 0 to 15 years old to the general-purpose SAU of the Hospital of Mali are multiple. Accidents remain the most frequent reason for recourse in the service.

Keywords: Multipurpose Emergency reasons for referral of children.

INTRODUCTION

A child is defined as "any human being under the age of 18, unless majority is reached earlier due to the legislation applicable to them" [1]. Ideally, the care of children in emergency situations requires a pediatric care facility, and therefore specialized equipment and personnel. In reality, initial care is also found in multipurpose or adult emergency departments [2]. In France (Seine-Saint-Denis), out of 390 children rescued by the Emergency Medical Assistance Service (SAMU) in 2004, 77% of child deaths were medicalized by the Regional Emergency Medical Service (SMUR). all-rounders of the department [3]. In Mali, according to a study carried out by GOITA. A in 2009, out of 23,516 patients admitted to the Emergency Reception Service

of the Gabriel TOURE hospital, 14.2% of these patients were under 15 years old [4]. As a result, at the hospital in Mali, many children are referred to the emergency department, while there is no pediatrician in the SAU and the technical platform is not well suited to their care. Despite the high attendance of emergency services by children, few studies have been conducted on this subject in Mali; it is for this reason that we wanted to know the grounds for appeal of children aged 0 to 15 in our service.

METHODS AND MATERIALS

We conducted a prospective, longitudinal study over a period of 12 months from January 1, 2019 to December 31, 2019 at the emergency department of the hospital in Mali. The study involved patients aged zero (0) to fifteen (15) years. The parameters studied were socio- demographic and clinical variables. Our data were analyzed with SPSS version 21 software and entered with Microsoft Office Word 2013 software. $P < 0.05$ is considered significant for all procedures.

RESULTS

During the study period, we collected 458 children aged 0 to 15 out of 6517 visits to the service, i.e. a frequency of 8.12%. The age group of 10 to 15 years was the most representative with 39% of cases. The male sex represented 58% of cases with a sex ratio of 1.36. The patients were uneducated in 10% of the cases, the workers represented 28.8% among the fathers and 54.8% of the mothers were housewives. Children belonging to families with more than three children accounted for 50.9% of cases and 39.5% of patients lived outside Bamako, the capital. Our study shows that 53.9% of patients were admitted between 8 a.m. and 4 p.m., 54.8% of patients came to the service by taxi, vehicle or motorbike and admissions by referral/evacuation represented 60.3% of case. AVP accounted for 48.7% of cases as shown in Table 1.

Table 1

Reason for admision	Patience	Percentage
AVP	223	48 ,7
AcVC	159	34,7
Pain	22	4,8
Blows of wounds	14	3,1
Dyspnea	7	1,5
Aeration of consciousness	13	2,8
Fever	13	2,8
Seizures	7	1,5
Total	458	100,0

Surgical emergencies accounted for 87.3% of cases. After the initial examination on admission, 36% of patients were classified as category three according to the Clinical Classification of Emergency Patients (CCMU3). Wounds and abrasions were found the most with 34.4% of cases, malaria represented 33.3% of cases. Patients who received medical treatment accounted for 62.2% of cases. Patients who stayed less than 24 hours in the SAU represented 67% of cases. The average length of stay was 23.23 hours with extremes ranging from 0.17 hour to 140 hours. We recorded 5.2% deaths as shown in Table 2.

Table 2

Become	Patience	Percentage
Healing (exit)	259	56,6
Complicated (transfer to hospital)	118	25,8
Reference	49	10,7
Death	24	5,2
Discharged against medical advice	8	1,7
Total	458	100,0

There was a correlation between length of stay and exit mode with $P < 0.0001$ as shown in Table 3.

Table 3

Become	Duration of stay >				Total
	< 24H	24H-48H	48H-72H	72H	
Exact	215	31	10	3	259
Transfer	36	41	22	19	118
Death	18	2	1	3	24
Discharged against medical advice	4	2	1	1	8
Reference	34	10	2	3	49
Total	307	86	36	29	458

DISCUSSION

Our study involved 528 patients admitted to the SAU of the Mali Hospital. It accounted for 8.12% of admissions. This result is lower than that of OUOLOGUEM B. [5] in his study in 1998 and that of GOITA A [4] in 2011 who found 17% and 14.2% respectively. This difference could be explained by the geographical location of the Mali hospital, located in a peripheral district of the district of Bamako where the population is less dense, unlike the CHU Gabriel Touré which is located in the city center. In our study, the majority of patients came from commune VI of the district of Bamako, i.e. 51%; This would be explained by the fact that the Mali hospital is located in this commune. Children aged 10 to 15 were the most represented at 39%. Our result differs from those of Bendjaka Priso L. N. [6] in 2010 and KABORO. M *et al*., [7] in 2006 who found an over- representation of children aged 0 to 5 with 30.8% and 46.74% respectively. This difference could be related to the fact that our studies were carried out in services with different profiles. The male gender predominated with 58% of cases with a sex ratio of 1.36. This male predominance has been demonstrated in several series of literature [8, 9]. This could be linked to a more turbulent behavior of boys, willingly, more oppositional with regard to taboos, more athletic abilities and the fact that they are more autonomous compared to girls, who are often confined to household chores. Which could explain their low representation? School-aged children not attending school accounted for 10% in our study. This result is lower than that of Ouloguem. B [5] who found 18% and KANTA.S [26] in 2007 16.31%. Most of our patients, 59.4% of cases, were seen between 8 a.m. and 4 p.m. Our results differ from those of EJLAIDI. A [33] in 2010 in Morocco, which found 46.25% of cases between 8 a.m. and 4 p.m.; This could be explained by the fact that traumatic pathologies are more frequent during the day compared to the night when the population is less active. The majority of our admissions to the service were referrals/evacuations, i.e. 60.3% of cases. Our result is higher than that of Hahusseau. A [31] who found 41% of cases and that of OULOGUEMB [5] who found 13.9% cases.

This could be due to the system of evacuation of the injured by the firefighters in our country, where all the victims are brought directly to the SAU, without any triage beforehand. AVP patients were the majority in our study, i.e. 48.7% of cases. OULOGUEMB. [5] obtained a higher result, i.e. 53.6% of cases. This difference could be explained by the high frequency of AVPs in the city center of Bamako, due to the insufficiency or the poor state of the road infrastructures, but also to the ignorance or the non-respect of the highway code by most of the users. CBVs accounted for 3.1% of cases.

Ouloguemb [5] found 5.7% of cases. This would explain why even children are not spared by the generalization of violence in our country. During our study period 33.8% of cases benefited from surgical PEC. This result differs from that found by Ouologuem B. [5], where 71% of cases benefited from surgical management. This could be explained by the fact that the majority of our patients did not require surgical CEP; but also that there was no pediatric surgery department at the Mali hospital at the time of the study. During this study there were a total of 24 deaths: 18 DCA cases and 6 cases of death in the emergency department. Thus, the overall mortality rate was 5.2%. This rate can be superimposed on that found by KABORO M. *et al*., [7] in Chad, i.e. 4.95% of cases. On the other hand, it is much lower than that of OUOLOGUEM B. [5], i.e. 12.2% of cases. This difference could be explained by the fact that the study of the latter concerned not only the emergency department but also the intensive care unit; but also by a shorter length of stay for our patients in the SAU, i.e. 23.23 hours as the average duration.

CONCLUSION

The grounds for recourse of children from 0 to 15 years old to the general-purpose SAU of the Hospital of Mali are multiple. Accidents remain the most frequent reason for recourse in the service. The care must go through a real evaluation during their passage in the service which cannot be done without adequate skills. They must benefit like adults from the progress of modern medicine.

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