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RESEARCH ARTICLE

CLINICAL AND EPIDEMIOLOGICAL PROFILE OF DEATHS AT PEDIATRIC EMERGENCY DEPARTMENT OF GENERAL REFERENCE HOSPITAL MALEMBA, DEMOCRATIC REPUBLIC OF CONGO

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ABSTRACT

Objective: analyze clinically and epidemiologically deaths at pediatric emergency department of Hopital General de Reference Malemba. **Patients and Methods:** The present study was retrospective descriptive of deaths occurred at pediatric emergency department of Hopital General de Reference Malemba during a six months'period (September 2018 –February 2019).88 cases have been registered. Some variables analyzed such as age, complaint, retained diagnostic, clinical findings. **Results:** The mortality rate was 9,7% with most of the deaths under 5 years of age; 46% between 1-11 months. Fever and cough or another respiratory symptom constituted most of the complaints. Signs of anemia, respiratory distress and general state alteration were found in more than 50 per cent of the death cases. Severe Malaria and acute respiratory infections were evoked in almost all the cases.75 per cent were transfused, received injectable antimalarial and some received IV antibiotics. **Conclusion :** Many deaths could have been avoided with early visits at the emergency department, systematic antimalarial therapy for those children with fever and cough, diarrhea-vomiting, difficulty eating, general state alteration during the rainy season; supervision of caregiving facilities official and non-official alike from those who define healthcare policy, satisfying vaccination coverage.

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INTRODUCTION

In 2017, 15,000 children would die every day worldwide, 85% of whom were under the age of 5, mainly in developing countries, and often from preventable causes. Multiple goals and recommendations have been formulated over the past two decades with a decrease in child mortality, especially for the 1-11-month age group. However, targets for reducing child mortality have not yet been met in developing countries. Analyzing deaths in paediatric emergency departments will allow us to understand the profile of the most vulnerable children, the factors involved in mortality, the signs of life-threatening; and to put in place adequate care

measures, as the death of a child under the age of 15 remains intolerable, especially for preventable causes. In this work, we will be asked to analyze the cases of deaths in the paediatric emergency departments of the General Referral Hospital Malemba over a six-month period (September 2018-January 2019). It is a descriptive retrospective study including all cases of deaths received and treated in the pediatric emergency department during this period. We used patient records to compile a linear list of age, clinical signs, care, follow-up examinations, consultation or not by a doctor as essential information. The overall objective of our work is to analyze deaths in paediatric emergency departments.

The specific objectives

- Determining the most vulnerable children
- Determine the signs of vital danger for good triage, to concentrate resources (human and material), often insufficient in our circles, towards the real problems.

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- Alert referents and/or parents of the benefits of a reference or consultation on time and the care to be given with the reference.

MATERIALS AND METHODS

Study framework: HGR Malemba is a reference hospital in rural areas, the only public hospital in the territory of Malemba Nkulu with a population of about 367,000. The Malemba Paediatric Emergency Department has a capacity of 8 beds, and an average monthly attendance of about 116 children. The care team consists of three doctors and six nurses.

METHODOLOGY

We used records of deaths in pediatric emergency departments over a six-month period (September 2018-January 2019). We excluded from the study all the brought dead. The data collected was organized as a linear list using Excel. Which list allowed us to organize the data in the form of variables, including age, clinical signs, treatments received, consultation or not by a doctor. The data analysis was done after organizing the data in the form of tables and graphs using Excel. The age-class distribution took into account definitions of child mortality.

RESULTS

Epidemiological aspects: Figure 1 gives us the age distribution of cases. 38 cases of death were less than one year old, or 46%, 3 cases of newborns. Most newborns are interned in the maternity ward due to lack of neonatology service and die from medical-surgical emergencies. And the over 5s represent less than 10%

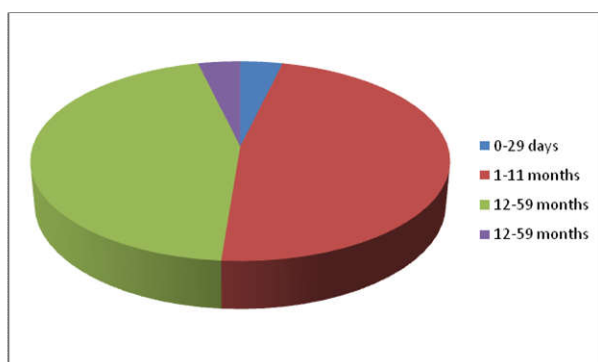


Figure 1. Age distribution of cases

Clinical aspects: Table I gives us the distribution of symptoms among deaths in pediatric emergency departments, Fever (48), cough (36) and agitation (24) were the bulk of the reason for consultation. Table II gives us the distribution of cases by clinic. Deaths presented pallor in 66%, respiratory impairment in 68%, impaired consciousness 37%. Table III gives us the distribution of clinical signs by age. An almost similar distribution of signs of anemia and respiratory signs in children aged 12 months and 12-59 months. 9 cases of convulsion in 12 months. Table IV gives us the mentioned diagnosis of cases of death. In 73% of deaths in our severe malaria is mentioned as diagnosis, lung disease in 38%.

Tableau I symptoms

symptoms	Cases
fever	48
convulsion	7
diarrhea	17
distress	17
cough	36
agitation	24

Tableau II clinical distribution of cases

	Cases
Pallor	47
respiratory	48
agitation,asthenia,unconsciousness	34
convulsion	12

Tableau III age and clinical distribution of cases

age	clinical signs			
	pallor	respiratory	convulsion	unconsciousness
< 12 mois	23	30	9	4
12-59 mois	30	28	3	2

Tableau IV Diagnostic evoked

Diagnostic evoked	Cases
severe malaria	52
pneumopathy	27
meningitidis	16

Tableau V laboratory examinations performed

laboratory	number
GE+	31
GE-	7
Hb	38
PL	0
aucun	21

Tableau VI Treatment

treatment	number
transfusion	51
antibiotics	35
antimalaria	47

Diagnostic and therapeutic attitude: Table V gives us the laboratory tests we have done. Most of the tests performed were GE, 38 cases, positive in 31 cases and hemoglobin levels. And in 28% of cases no laboratory examination was performed. Table VI gives us the treatment we received. 51 children were transfused, 47 received an antimalarial or injectable Artesunate 18 cases, Quinin infusion 29 cases, no cases of oxygen therapy and some cases received hypertonic glucose.

DISCUSSION

The mortality rate in paediatric emergency departments was 9.7% during the study period. 10.6% for (Asse, 2011). 6.14% overall mortality rate for (Ahmed Issa, 2013). 4.1% for (4), low mortality rate as the study was conducted in a tertiary hospital (specialized and better equipped).

Age: In our work 46% of deaths were less than 12 months old and 93% were less than five years old.

At this age, in our environment, children are vulnerable to respiratory diseases (promiscuity, low socio-economic level) and malaria. Almost all deaths were less than five years old, which could be explained by the short duration of the study and the fact that the over-fives die in hospital for medical-surgical pathologies and do not appear as deaths in paediatric emergency departments. 3 cases of newborn deaths noted in the emergency room, most urgent cases of newborns at HGR Malemba die in the maternity ward where they are interned due to lack of neonatology service. 65.5% of under-fives according to (Asse, 2011). Probably due to a two-year study in the area of moderate malaria endemicity.

Symptoms and Clinical Signs: At admission fever was the major symptom 48 cases as well as cough and agitation (or inconsolable child) respectively 36 and 24 cases. Fever and respiratory distress as reason for consultation in cases of death in respectively 73.59% and 35.9% of cases for (3). Signs of anemia and respiratory signs prevailed in our series. There is an association of the causes of anaemia at this age in our environments (inadequate intake, intestinal parasitosis, and malaria). We found 9 cases of convulsion in 12-month-olds. Dyspnea was the reason for hospitalization in 39% of cases for (Anass, 2018).

Diagnosis evoked: Diagnosis mentioned was severe malaria in 52 cases, lung disease in 27 cases, explaining the fact that the malemba health zone is an area with high endemic malaria, same finding as Mapendo (Mapendo Ndeko, 2017), 35.2% severe malaria, 20.6% acute respiratory infections, 19.1% malnutrition. Pneumonia, congestive heart failure and sepsis being the leading causes of death in pediatric emergency departments for (Gemechu Jofiro, 2018), study conducted in a malaria area.

Treatment received: 75% of children were transfused, 69% received an antimalarial (61% of quinine infusion)

Conclusion

The proportion of deaths in pediatric emergency departments at HGR Malemba was 9.7%; almost all deaths were less than five years old with 46% less than 12 months. Most newborns die in maternity care from medical-surgical pathologies. Fever and cough or other respiratory symptoms were the reason for the consultation. Clinical signs of anemia, respiratory distress, and an alteration of the general condition were encountered in more than half of the cases. The bulk of the deaths were diagnosed with severe malaria, lung disease. 75% of children were transfused, received antimalarial parenteral and antibiotics including betalactamines and Gentamycin. Many deaths could be prevented by early consultation, collaboration along this chain of continuing care, routine ACT in case of fever and cough, diarrhea-vomiting, difficulty feeding; impairment of the general condition especially during the wet season, through supervision and supervision of all care facilities that the population uses even informal ones and satisfactory vaccination coverage.

What is known about this subject. Studies of global trends in child mortality. What does your study bring new. To analyze the epidemiological and clinical profile of deaths in paediatric emergencies a malemba. Establish the preventable factors found in deaths.

Conflict of interest

The authors do not declare any conflict of interest

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