

Prevalence and Profile of Discharges without Medical Approval in a West African Pediatric Teaching Hospital, Côte D'ivoire

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Abstract

Introduction: Discharges without medical approval in pediatrics may be life-threatening for the child. The objective of this survey was to determine the prevalence, describe the clinical profile and assess the risk of these premature discharges in hospital pediatric services.

Methods and patients: We conducted a retrospective and descriptive survey between January 1, 2017 and December 31, 2018 in children under 5 admitted in the pediatric service of Yopougon Teaching Hospital. The survey focused on socio-demographic and clinical parameters.

Results: Out of 2354 admissions during the survey period, 202 children were discharged without medical approval, making a prevalence of 8.6%. Among them, 136 left without medical advice (DWMA) and 66 against medical advice (DAMA). The average age was 18.3 months (+/- 13.9). The sex ratio was 1.5. The reasons for consultation were dominated by anemia (44.6%), respiratory distress (9.4%) and febrile convulsions (8.4%). The most common conditions were severe malaria (46.0%), acute lower respiratory infections (18.8%) and severe acute malnutrition (6.9%). Signs of medical emergency were found in 50.0% of the cases at the time of discharge.

Conclusion: Discharges without medical approval represent a worrying situation in a hospital pediatric environment. Discharges circumstances are frequently marked by the existence of signs of life-threatening emergencies, raising a serious ethical issue.

Keywords: Discharge without medical approval, Hospitalization, Children, Cote d'Ivoire.

INTRODUCTION

Discharges without medical approval are a serious issue in emergency or hospitalization services in Africa. It can be discharge without medical advice (DWMA) or discharge against medical advice (DAMA). In the first case (DWMA), the parent leaves the hospital with the child without knowledge of the medical staff and is commonly known as "escape". In the second case (DAMA), the parent decides on the child's discharge from hospitalization despite the medical staff's explanations on the risks for the child in these discharge conditions.

The magnitude of the problem varies with circumstances and regions (1, 2, 3, 4). In addition,

several studies have identified factors associated with the risk of DAMA or DWMA, that are the low level of education of parents, the low socio-economic level, the age especially the infants, the rank of the child in the siblings and the morbid state of the children (1, 2, 5). Other studies have questioned the lack of communication between patients and the medical staff and the high cost of care (4, 6, 7).

This way of discharge raises a serious medico-legal issue (8) which in certain situations are life-threatening for the children and thus contributing to an increase of the readmissions and the mortality of the children (6, 9).

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There are no data in Côte d'Ivoire describing this problem in general and particularly in pediatric services. This survey therefore proposes to determine their prevalence, to describe the socio-demographic and clinical profile of children discharged without medical authorization and to assess the risk of these premature discharges in pediatric university hospital medium.

PATIENTS AND METHOD

We conducted a descriptive and retrospective survey from January 1st, 2017 to December 31st, 2018, at the Jean Badoual unit of the pediatric department of Yopougon teaching hospital. This unit is in charge of caring for children under 5 years (1 to 59 months). These children are received in this unit through emergencies or the consultation unit and it operates every day, 24 hours a day.

Patient records were collected from hospital records. For each child, the following parameters were took into account on a standard survey form: the date of admission, the occupation of the parents, the place of residence, the age, the sex, the vaccination status based on National Programme of immunization in Côte d'Ivoire, the consultation reason, the diagnosis before discharge, the reason for leaving, the clinical picture of the child on discharge and the duration of hospitalization.

The profession of parents was classified in professional category according to the criteria of National Institute of Statistics and Economic Studies in France (INSEE) (10). When the discharge mode was a DAMA the patient record contained a discharge card on which is mentioned the reason or circumstances of discharge from hospital. It is submitted to the parent or legal after explanation of the risks that the child incurs in these conditions of discharge. However, in case of DWMA, the reason for discharge is mentioned in the patient file by the doctor when the patient has expressed the desire to go out before the discharge.

Table 1. Socio-demographic characteristics of children according to the discharge mode

	DAMA (n = 66)	DWMA (n = 136)	Total (N = 202)	P
Age (month)				0.13
< 24	40 (29.6)	95 (73.4)	135 (66.8)	
> 24	26 (38.8)	41 (61.2)	67 (33.2)	
Sex				0.27
Male	42 (34.7)	79 (65.3)	121 (59.9)	
Female	24 (29.6)	57 (70.4)	81 (40.1)	
Residence place				0.20
Yopougon	39 (30.2)	90 (69.8)	129 (63.9)	
Out of Yopougon	27 (37.0)	46 (63.0)	73 (36.1)	

The clinical picture of concern at the time of discharge was considered to be signs that could be life-threatening (severe anemia with or without signs of decompensation, respiratory distress, coma, convulsion) on the one hand and, a pathology whose management was justified only in hospitalization or that the period considered necessary for a possible discharge with medical authorization was not respected on the other hand.

A morbid association was selected when at least two conditions were diagnosed in the same child. The diagnosis of hospitalization was the one mentioned in the patient record at the time of discharge from hospital.

The data were processed with the software Epi Info7. Qualitative variables were described in terms of size and percentage and quantitative variables in terms of average and standard deviation. A Fischer test was used to compare frequencies with a significance level of 5%.

RESULTS

Out of 2354 admissions, 202 (8.6%) children went out without medical approval. This prevalence was 7.3% (87/1187) in 2007 and 9.9% (115/1167) in 2018. Among them, 136/202 (67.3%) DWMA and 66/202 (32.7%) DAMA. The average age was 18.3 months (+/- 13.9). The sex ratio was 1.5. Infants (<24 months) accounted for 66.8% of cases. They came from the commune of Yopougonin 63.9% of the cases. Out of the 124 children whose vaccination cards were available, 66 (46.8%) were up-to-date with the vaccines recommended by National Programme of immunization. Mothers had no professional activities in 46.1% (70/152) of the cases. Fathers were manual workers, farmers or have intermediary occupations respectively in 34.6%, 17.6 and 10.6% of cases.

Tables I and II summarize the socio-demographic characteristics of children according to the discharge mode.

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Table 2. Socio-professional characteristics of parents according to the discharge mode

	DAMA (n = 66)	DWMA (n= 136)	Total (N = 202)	P
	Size (%)	Size (%)	Size (%)	
Socio-professional category of the mother				
Intermediary occupation	2 (66.7)	1 (33.3)	3 (1.5)	0.25
Employee	1 (100.0)	0 (0.0)	1 (0.5)	0.33
Trader	17 (34.0)	33 (66.0)	50 (24.8)	0.47
Manualworker	5 (17.9)	23 (82.1)	28 (23.9)	0.05
Jobless	24 (34.3)	46 (65.7)	70 (34.7)	0.1
Data missing	17 (34.0)	33 (66.0)	50 (24.8)	0.47
Socio-professional category of the father				
Entrepreneur	1 (100.0)	0 (0.0)	1 (0.5)	0.32
Intermediary occupation	9 (45.0)	11 (55.0)	20 (9.9)	0.16
Employee	3 (75.0)	1 (25.0)	4 (2.0)	0.1
Trader	2 (18.2)	9 (81.8)	11 (5.4)	0.24
Farmer	9 (27.3)	24 (72.7)	33 (16.3)	0.32
Manualworker	24 (36.9)	41 (63.1)	65 (32.2)	0.03
Retired	1 (100.0)	0 (0.0)	1 (0.5)	0.33
Jobless	3 (25.0)	9 (75.0)	12 (5.9)	0.41
Data missing	14 (25.5)	41 (74.5)	55 (27.2)	0.12

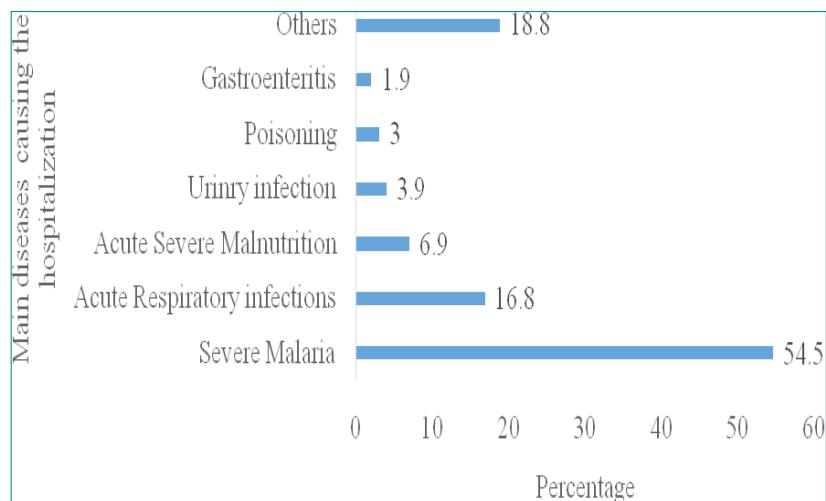


Fig1. Main diseases responsible for the hospitalization of children discharged without medical approval.

The main reasons for consultation were anemia (51.5%), convulsions (11.4%), respiratory distress (11.0%), fever (5.9%) and diarrhea (3.0%). %) and intoxication cases (2.5%). Figure 1 shows the main conditions diagnosed in hospital.

Children had a morbid association in 17.3% of cases. The average length of stay in hospital was 4.2 days (+/- 4.0). The reason for leaving was the unavailability of blood in 55.0% (55/100) of the cases and the lack of financial resources in 38.0% (38/100) of the cases. At the time of discharge, children had a serious clinical picture in 50.0% of cases. These were severe anemia (38.3%) and respiratory distress (11.7%).

DISCUSSION

This retrospective survey carried out over a two-year period in the pediatric department of CHU de Yopougon (Teaching Hospital) concerned children under 5, hospitalized and discharged without medical approval. It led to specify the frequency of this event and the profile of the children whose survival is already threatened by serious affections such as malaria, pneumonia, anemia and diarrheal diseases. The prevalence of discharges without medical approval was 8.6% taking into account the DWMA and the DAMA, with a higher rate of DWMA (66/202 vs 136/202). Most studies have focused

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on DAMA. Prevalence varies according to regions and circumstances. In fact, it was estimated at 7.7% in Congo at the pediatric medical unit of Brazzaville Teaching Hospital (2), 2.4% for the Pediatric Teaching Hospital of Ouagadougou in Burkina Faso (3) and 5.7% in Nigeria (4).

The reasons for DAMA in our survey were mainly blood unavailability (55%) and lack of financial means (38.0%). The fact that the blood unavailability at pediatric teaching hospital of Yopougon is frequently observed, justifies the 55.0% of the children in our survey discharged from hospital without having received the blood transfusion. The lack of financial means was expressed by the parents before the DAMA although the care is free for the children of less than 5 years in Côte d'Ivoire. The frequent shortage of drugs in the hospital pharmacy forces the parents to satisfy the prescriptions in private pharmacies where the cost is significantly higher, added to the transport charges, and the fact that most patients do not have health insurance. In our survey, 65% of fathers were manual workers or had no professional activity in 12% of cases, thus indicating a low socio-economic level. These facts reported in other studies (2, 4, 11, 12) constitute an obstacle in the care of children in hospitalization thus leading to the discharges without medical approval.

Other reasons might be hidden by parents. These include sometimes conflicting relationships between parents and medical staff, inadequate sanitary conditions (non-functional toilets, untimely cutting of running water, state of advanced deterioration of health facilities), use of alternative medical treatments, accounting an evil spell for some diseases. These reasons were reported by Kouyouma et al (13).

Whatever the mode of discharge (DAMA or DWMA), children are exposed to a high risk of readmission or even mortality. This was highlighted in a survey in Israel that showed that mortality and readmission were significantly higher compared to children whose discharge had been planned by the medical team (9). Another survey describing the fate of children after their discharge has shown an overall mortality of 20% and particularly high in DWMA children. These children had a 12-time higher risk of death in the first two weeks after discharge (14). In our survey, children had a serious clinical picture in 50.0% of cases at the time of discharge. These were severe anemia (38.3%) and respiratory distress (11.7%), suggesting a risk of

death after the discharge. The retrospective nature of this survey did not make it possible to specify the fate of these children.

CONCLUSION

Our study shows that discharges without medical approval represent a worrying situation in a pediatric hospital. Discharge circumstances are frequently marked by the existence of signs of life-threatening emergencies, raising a serious ethical issue. Medical coverage and improved blood supply will minimize this situation.

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