

Original Research Article

Hospitalizations in neonatal intensive care unit at Mahajanga: impacts on parents

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ABSTRACT

Background: Experiencing a birth with a pathology imposes on parents a lot of frustration. Objectives of this study were to describe the general profiles of newborns and to describe the hospitalization's psychosomatic impact on parents; in intensive care unit of the neonatology ward at the mother-child complex at the university Hospital Androva Mahajanga Madagascar.

Methods: It was prospective descriptive study, by a survey of parents, among 3 months, from 01st May to 31st July.

Results: Were included 102 newborns. Mains reasons of admission are low birth weight (51.9%), prematurity (42.1%) and perinatal asphyxia (23.5%). One hundred mothers and 90 fathers had answered our survey. Sleep disturbance (all parents), negative feelings (70% of fathers and 75% of mothers), depressed mood (52.2% of fathers and 78% of mothers) and guilt (25.5% of fathers and 58% of mothers) were the most prominent psychological manifestations among parents; then somatic manifestations as digestive, cardiovascular type; weight loss was objectified on 33% of fathers.

Conclusions: Newborns's hospitalization is a difficult situation for parents. Caregivers have an important role in enabling the family to build up.

Keywords: Intensive care unit, Newborn, Parents, Psychosomatic impact

INTRODUCTION

Neonatal Intensive Care Unit (NICU) is intended to care for babies with serious pathology during the neonatal period.¹ In France, 20 to 25.000 births per year require admission to NICU.² In developing countries, particularly in the tropics, neonatal pathologies remain a major public health problem.³ The hospital environment must encourage parent's presence, foster a climate of intimacy, allow the learning of child care, facilitate communication and reflection.⁴ Parents should be seen as partners in the care of their child and not as visitors.⁵ So, they are facing a difficult situation. Hence the objective of this study to describe the general profiles of newborns hospitalized in NICU in Mother and Child Complex at the Androva

Mahajanga Antananarivo Madagascar Hospital and the psychosomatic repercussions of this hospitalization on parents.

METHODS

This work was carried out in Neonatal Intensive Care Unit (NICU) of the neonatology service of the Mother Child Complex within the University Hospital Center Professor ZAFISAONA Gabriel (CHU PZaGa) Androva Mahajanga Madagascar, the only reference hospital in the Boeny region. A survey of parents using a questionnaire is carried out. It was carried out over 3 months, from May 01 to July 31, 2018. Were included all newborns admitted to the NICU who stayed at least 24 hours and whose at

least one parent was present during hospitalization. And then were excluded newborns whose parents were present but did not participate in the basic care of the baby, newborns whose parents presented mental problems and those whose parents refused to answer questions.

We studied: the socio-demographic characteristics of the parents, the obstetric history of the mother, the characteristics of the newborn, the length of stay and the mode of discharge, and the semi-permanent psychosomatic repercussion on parents in relation to the hospitalization of their baby.

RESULTS

One hundred and two newborns were included in our study, out of 130 admitted to the ICU, representing 19.69% of all admissions to the neonatal department.

Table 1: Distribution of newborns according to their reasons for entering the NICU.

	Effective	%
Prematurity	43	42.1
Low birth weight	53	51.9
Neonatal asphyxia	24	23.5
Neonatal asphyxia	23	22.5
Refused to breastfeed	17	16.7
Abnormal movements	10	9.8
Hyperthermia	10	9.8
Congenital malformation	8	7.8
Yellowing of the skin	2	2
Others	15	14.7

Table 2: Distribution of the psychosomatic repercussions of parents.

	Fathers		Mothers	
	Effective	Percentage	Effective	%
Psychic anxiety				
Predominantly negative	63	70	75	75
Predominantly positive	27	30	25	25
Feelings during the 1st contact and the 1st participation in the basic care of children				
Stressed, anxious, fearful, clumsy, intimidation	76	84.4	89	89
Confident, comfortable, proud, happy	14	15.6	11	11
Depressed mood				
Present	47	52.2	78	78
Absent	43	47.8	22	22
Sleep disorder				
All night	56	64.4	76	76
Part of the night	32	35.6	24	24
Absent	0	0	0	0
Slow-down				
Absent	80	88.9	80	80
Light	6	6.7	7	7
Even at interview	2	2.2	10	10
Difficult maintenance	2	2.2	3	3
Feeling of guilt				
Present	23	25.6	58	58
Absent	67	74.4	42	42
Physical anxiety: somatic manifestations				
General	48	53.3	56	56
Cardiovascular	67	74.4	83	83
Urinary	26	28.9	11	11
Respiratory	7	7.8	20	20
Transit disorders	30	33	57	57
Loss of appetite	61	67.8	87	87
Weight loss subjective according to the dad himself				
No loss	50	55.6		
Probabl loss	25	27.8		
Certain loss	15	16.6		
Objective weight loss				
No loss	61	67		
Less than 500g	15	16.5		
500 à 1000g	12	13.2		
1001 à 1500g	3	3.3		
Over 1500g	0			

The sex ratio was 1.4 with one case of sexual ambiguity.

Seventy-six point five percent were admitted within their first 24 hours of life, and 9.8% had 7 or more days of life upon admission.

All mothers were present during the hospitalization of their babies, and 90% of fathers.

The main reasons for admission were low birth weight (51.9%), prematurity (42.1%), and lack of cry at birth (23.5%) (Table 1); note that newborn could present two signs at the same time. The average length of NICU hospital stay was 5.4 days with a maximum of 45 days.

Sixty-nine newborns (67.6%) were discharged normally from the ICU, 14 were discharged against medical advice (13.7%) and 19 cases had died (18.7%). The main reasons for discharge against medical advice were financial problems (5 cases), long stay in an ICU (4 cases), overall dissatisfaction (2 cases), conflict between the parents (1 case).

Table 2 shows the distribution of the psychosomatic repercussions of the parents.

DISCUSSION

In our study, 102 newborns were included over 3 months, out of 130 NICU admissions. This was much higher than that found by Gönülal et al in 2010 (68 cases in 5 months), in Chile (59 cases in 5 months) and in Rwanda (110 cases in 8 months).⁶⁻⁸ This could be explained by the fact that it is the only neonatal reference center in the former province of Mahajanga Madagascar.

Male predominance was also found in other studies such as Togo in 2012 (sex ratio of 1.67), Colombia (60.8% of male gender).⁹⁻¹⁰ This male predominance in NICU could be linked to a greater vulnerability of the male gender. In contrast, in Australia, they noted that 53% were female.¹¹

The main reasons for entry were low birth weight (51.9%), prematurity (42.1%), neonatal asphyxia (23.5%) and respiratory distress (22.5%). Palma et al found that prematurity was the most frequent at 71%, followed by respiratory distress (42%).⁷ In the other hand, Guedeoussou et al reported that the main reasons for hospitalization were respiratory distress, ie 42.1%.⁹

The length of hospital stay ranged from 1 to 45 days with an average of 5.4 days. Soumagne et al noted that 26% of newborns stayed for 0 to 3 days and 42% for 4 to 10 days, as well as 32% for more than 10 days.¹² And Thiam et al reported that, the average length of Hospitalization was 10 days with extremes of 1 and 32 days.¹³ Although it was 18.7%, the mortality rate in our ICU was lower than those found elsewhere: 36.6% in Porto-Novo; 45.2% at CHU Tokoin Lome; 28.3% in Cotonou.^{3,9,14} This high

mortality rate could be explained by the lack of material resources in the service.

The rate of discharges against medical advice in our home was 13.7%, which was lower compared to that found by Sagbo et al (21.7%).¹⁴

As a psychological impact, more than 2/3 of the parents evoked predominantly negative feelings, ie 75% of mothers and 70% of fathers (Table 2). A feeling of stress, fear, a feeling of awkwardness were mentioned by 89% of mothers and 84.4% of fathers. This negative feeling was found in 63% of parents in a study by Casper et al, where 56% evoked a feeling of stress, fear and a feeling of awkwardness.¹ Several studies indicate that mothers have high levels of stress, fear and negative feeling higher than fathers like that of Wieder-Huszla et al where 30.77% of mothers were extremely stressed compared to 7.14% of fathers.¹⁵⁻¹⁷ And Gosme-Siguret et al found that 66.7% of mothers and 64.3% of fathers were very anxious, afraid, and fearful.¹⁸

Depressed mood was reported in 78% of mothers and 52.2% of fathers (Table 2). Likewise, other authors suggest that mothers have a lower level of depressed mood than fathers; such as Gosme-Seguret and al who found a result approaching our own where 80% of mothers and 51% of fathers felt depressed.¹⁵⁻¹⁸

All parents suffered from a sleep disorder, of which 76% of mothers and 64.4% of fathers were upset all night. The frequency of sleep disturbance was lower elsewhere like that found by Gosme-Seguret and al where it was present in 93.3% of mothers and 64.3% of fathers; and in the study by Glaser and al, it was present in 63.2% of parents.^{18,19} This higher frequency could be explained by the separation of the mother's room from the baby, as well as by the fact that parents must participate in the constant monitoring of their baby with the health team.

More than half of mothers in our study had presented a feeling of guilt compared to 25.6% of the fathers. Kaliouli et al reported that 35.4% of fathers evoked feelings of guilt very present in their spouses.²⁰ Parents experience shock when faced with a sick baby. This would be all the more difficult for them if the newborn was the couple's first child.

As somatic manifestations, 56% of mothers and 53.3% of fathers suffered from a general resonance. Gosme-Seguret et al reported that 73.3% mothers and 64.3% fathers who had felt tired.¹⁸

Cardiovascular manifestations were marked in 83% of mothers against 74.4% of fathers. The frequency was lower in the study by Glaser et al in Switzerland who found that 42.1% of parents had manifestations such as pain, or vegetative reactions such as increased sweating or increased heart rate.¹⁹

As digestive manifestations, 57% of mothers and 33% of fathers presented transit disorders, 87% of mothers and 67.8% of fathers reported loss of appetite or have difficulty eating in the absence of prompting family. A large difference between the rates in both parents was found in the Gosme-Seguret study who found that 73.3% of mothers and 28.6% of fathers had eating disorders.¹⁸

According to a self-assessment of fathers, 27.8% felt a likely weight loss and 16.6% reported a certain loss. But by objectiving, 33% of fathers showed a weight loss. This weight loss in fathers was less significant compared to that objectified by Gosme-Seguret where it was 21.4%.¹⁸

CONCLUSION

The main reasons for hospitalization in the intensive care unit of the CHU PZaGa neonatal department were mainly represented by low birth weight, prematurity and perinatal asphyxia. The birth of a newborn with neonatal pathology turns a happy event for the family who have been waiting for this little one for several months. Hospitalization of a newborn baby in the ICU is stressful, anxious for parents and contributes to depression. It causes in the parents some physical manifestations such as fatigue, palpitation and digestive manifestations. These manifestations affect both parents but the mothers suffered the most.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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