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Analysis of Evolution of the State Nutritional, of there Duration of Stay and Mortality of Children 0-59 Months in Mbujimayi Case of the General Hospital of Tudikolela, Democratic Republic of Congo

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Abstract

Objective

The objective of this analysis is to evaluate the evolution of the nutritional status of a cohort admitted to nutritional recovery center at the Tudikolela hospital, in Mbujimayi, and to identify the risk factors for hospital malnutrition as well as its consequences on the morbidity and length of hospitalization.

Material and methods

Our study is prospective, transversal, carried out in a center of nutritional recovery of malnutrition.It was carried out in a Unit Nutritional Therapeutic intensive (UNTI) of the Tudikolela General Hospital in Mbujimayi (Democratic Republic of Congo). It concerns 275 subjects.

Results

The presence study reveals that diarrhea on admission (p0.009) constitutes a mortality factor in malnourished children.

Keywords: Analysis, Evolution, State Nutritional, Mortality, Mbujimayi

1. Introduction

In many developing countries, one of the major challenges is In there malnutrition of the children. There situation East more unfavorable in Asia, in particularly in the southern regions, where the majority of malnourished children worldwide are found. Approximately 120 millions of children of less of 5 years present A delay of weight. Subsequently, Africa leads the way, with around 47 million children affected, well ahead of Latin America or other regions of the world [1].

Over the last twenty years, developments have been positive everywhere, with the exception of Africa south of the Sahara where the number of malnourished people has continued to increase. This is obviously not a homogeneous phenomenon, some countries are moving forwardwhile others are not. not. However, Africa, despite decades of economic crisis, remains in reality the continent where the situation is

the most worrying [2] Malnutrition and disease compromise children's cognitive development and reduce their productivity as adults. When health systems fail to prevent disease, society pays a price in treatment costs and lost productivity. Conversely, improving maternal and child health and nutrition can create a positive cycle, allowing children to thrive and facilitating community progress. and countries [2]. Undernutrition affects 30 to 50% of hospitalized patients and represents a significant cause of complications encountered during hospitalization (infections, delayed healing) [3, 4].

The presence of malnutrition extends the length of hospitalization by 45% on average. It constitutes a factor of aggravation of the causal pathology and the occurrence of complications and consequently increases the cost for society [3, 5].

Death occurs when protein loss reaches approximately 50% of normal protein mass [6]. But the occurrence of a complication caused by malnutrition can lead to death before reserves are exhausted. Screening for malnutrition must therefore be part of any clinical examination by systematically looking for accompanying functional signs such as fever, abdominal pain, dysphagia, diarrhea and a change in appetite [7, 8].

In children, growth in stature requires high and specific protein and energy intake. Any mismatch between nutritional needs and intake can lead to undernutrition and impact growth, puberty and cognitive development [8].

Children hospitalized for an acute illness or the decompensation of a chronic illness have a significant impact on the course of the illness, the occurrence of complications And there duration of their hospitalization in reason of their state nutritional initial. Of Furthermore, the hospital setting itself is a stressful element that leads to increased energy requirements and hypercatabolism linked to the pathological state, loss of appetite and administered medications [9].

Hence the emergence of the concept of hospital undernutrition (DH) which is defined according to the American Society of Parenteral and Enteral Nutrition (ASPEN) as a state of nutritional imbalance which occurs during the hospital stay, independently of nutritional status at admission [10].

The deterioration of the nutritional status of hospitalized children results in increased mortality and morbidity. It extends the duration of stay and increases the care and cost [3, 11].

The deterioration of the nutritional status of hospitalized children has been the subject of numerous studies in recent years, but it is difficult to determine its exact prevalence due to the absence of standardized diagnostic criteria [12].

The objective of this study was to evaluate the evolution of the nutritional status of a cohort admitted to the Unit Nutritional Therapeutic intensive (UNTI) in the hospital Tudikolela, in Mbujimayi, and to identify the risk factors for hospital malnutrition as well as its consequences on morbidity and length of hospitalization.

2. Methodology

Prospective, cross-sectional study conducted in a nutritional recovery center in malnutrition.

The study took place in a Unit Intensive Nutritional Therapeutic (UNTI) of the hospital General Tudikolela to Mbujimayi (Republic Democratic of Congo), from 2020 to 2021. UNTI hospitalizes children throughout the treatment period. The analysis to be carried out concerns a sample of 275 children admitted to a Therapeutic Nutritional Unit intensive (UNTI). The aim of the study was to analyze the nutritional status of children.

All children aged 6 to 59 admitted to the Unit Nutritional Therapeutic intensive (UNTI) in Mbujimayi**. Subjects with normal nutritional status are also included.**

3. Results

3.1 Analysis of the children left healed

1) Description of the sample

Painting 1: Distribution of the case according to THE features socio- economic

Features	Frequency	%
Age		
➢ 1 to 22 months	205	74.5
➢ Superior has 22 month	70	25.5
Sex		
➢ Male	158	57.5
➢ Female	117	42.5
Level socio- economic		
➢ Down	28	11
➢ Weak	146	57.2
➢ Weak	81	31.8

This painting watch that there slice age of 1-22 month predominates with 74.5 %(age average is 18 months. The male gender is more represented with 57.5% (sex ratio 1.3 in favor of the male sex. The low socio-economic level represents 57.2%.

Painting 2: Distribution of case according to THE features upon admission

Relapse	Frequency	%
➢ Yes	13	4.8
➢ No	260	95.2
Edema upon admission		
➢ No	217	78.9
➢ Yes	58	21.1
Dehydration upon admission		
➢ Yes	92	33.5
➢ No	183	66.5
Temperature has admission		
➢ Hyperthermia	172	62.55
➢ Hypothermia	103	37.45

At seen of this painting, there relapse represents 4.8 %, 21.1 % of the children had edema on admission, 33.5 % dehydration and hyperthermia represents 41.8%.

2) Evolution of the state nutritional

Painting 3: Analysis of L' nutritional status

Evolution							
Variables	**Good**		**Bad**		x2	p	S
	n	**%**	**n**	**%**			
1. Sex							
➢ Male	1	1	99	99	**5.11**	**0.024**	**S**
➢ Female	6	7.6	92.4	73			
2. Age of the child					**7.98**	**0.005**	**S**

➢ 1 to 22 months	2	1.5	131	98.5			
➢ Superior has 22 month	5	10.9	41	89.1			
3. Level socio- economic					0.895	0.639	NS
➢ Down	1	5.0	19	95.0			
➢ Weak	3	3.1	95	96.9			
➢ Weak	3	6.4	44	93.6			
4. Relapse							
➢ Yes	0	0.0 %	8	100	0.343	0.558	NS
➢ No	7	4.1 %	163	95.9			
5. Edema upon admission					0.277	0.598	NS
➢ No	5	3.5	137	96.5			
➢ Yes	2	5.4	35	94.6			
6. Dehydration to admission							
➢ Yes	3	5.7	50	94.3	0.613	0.433	NS
➢ No	4	3.2	122	96.8			
7. Diarrhea has admission							
➢ Hyperthermia	28	16.28	144	83.72	2,064	0.150	NS
➢ Hypothermia	24	23.3	79	76.7			

This painting revealed a relationship statistically significant between evolution of nutritional status and sex (p 0.024) age of the child (p 0.005).

3) Analysis of the duration of stay

Painting 4: Analysis of the duration of stay

Duration stay							
Variables	**1**		**2**		x2	p	S
	n	**%**	**n**	**%**			
Presence of dermatosis upon admission							
➢ Yes	6	100.	0	0	0.531	4	0.466 NS
➢ No	247	91.82	22	8.18			
vaccine measles					**7.98**	**0.005**	NS
➢ **Yes**	44	91.67	4	8.33			
➢ **No**	199	91.71	18	8.29			
➢ **DK**	10	100	0	0			

At seen of This painting, he does not exist none link associative between there duration of stay And there presence of dermatosis on admission, measles vaccine Socio-economic level.

3.2 Analysis of there mortality

Table 5: Description

Features	**Frequency**	**%**
Age		
➢ 1 to 22 months	205	74.5
➢ Superior has 22 month	70	25.5
Sex		
➢ Male	158	57.5
➢ Female	117	42.5
DIARHEA		
➢ **Yes**	115	41.82
➢ **No**	160	58.18
DTCP3		
➢ YES	104	37.82
➢ NO	163	59.27
➢ DK	8	2.91
Vaccine anti measly		
➢ YES	48	17.45
➢ NO	217	78.91
➢ DK	10	3.64
STATUS		
➢ Negative	222	81
➢ Positive	53	19
Diagnostic		
➢ Marasmus	217	78.91
➢ Kwashiorkor	58	21.09
Dermatosis		
➢ **Yes**	6	2.18
➢ **No**	269	97.82

In view of this table, the age group of 1-22 months predominates with 74.5 % (the average age is 18 months. The male gender is the most represented with 57.5% (sex ratio 1.3 in favor of the male sex. **Diarrhea represents** 41.82%, **DTCP3** 37.82% and Marasmus 78.91%.

2. Analysis mortality

Painting 6: Analysis of mortality

Deceased							
Variables	**Yes**		**No**		x2	p	S
	n	**%**	**n**	**%**			
1. Sex							
➢ Male	30	18.99	128	81.01	0.001	0.969	NS
➢ Female	22	18.80	95	81.20			
2. Age of the child							
➢ 1 to 22 months	39	19.02	166	80.98	0.007	0.933	NS
➢ Superior has 22 month	13	18.57	57	81.43			
3. Diarrhea upon admission							
➢ **Yes**	30	57.69	22	42.31	6,641	0.009	S
➢ **No**	85	38.12	138	42.31			
4. Cough							
➢ **Yes**	31	20	124	80	0.275	0.599	NS
➢ **No**	21	17.5	99	82.5			
5. Dermatosis							
➢ **Yes**	1	16.67	5	83.33	0.020	0.887	NS
➢ **No**	51	18.96	218	81.04			
6. Malaria							
➢ **Yes**	20	15.87	106	84.13	1,398	0.237	NS
➢ **No**	32	21.48	117	78.52			
7. Ditcp 3							
➢ **Yes**	25	24.04	79	75.96	2,929	0.231	NS
➢ **No**	26	15.95	137	84.05			
➢ **DK**	1		7				
Vaccine anti measles							
➢ **YES**	14	29.17	34	70.83	4,300	0.116	NS
➢ **NO**	37	17.05	180	82.95			
➢ **DK**	1	10	9	90			
Diagnosis							
➢ **Marasmus**	43	19.82	174	80.18	0.551	0.457	NS
➢ **Kwashiorkor**	9	15.52	49	84.48			

There diarrhea has admission (p0.009) constitutes A postman of mortality at the house of malnourished children.

4. Discussion

THE painting I watch that there slice age of 1-22 month predominates with 74.5 %(age average is 18 months. The male gender is more represented with 57.5% (sex ratio 1.3 in favor of sex male. THE level socioeconomic weak represents 57.2%.These results are higher than those found in Abidjan (53.15%) for the age group under 24 months (Sackou *et al*. 2016) [13].

In view of the Table 2, relapse represents 4.8 %, 21.1 % of children had edema on admission, 33.5 % dehydration and diarrhea represents 41.8%.

This Table 3 reveals a statistically significant relationship between the evolution nutritional status and sex (p 0.024) age of the child (p 0.005).

In view of Table 4, there is no associative link between the length of stay And the presence of dermatosis on admission, measles vaccination socio-economic level.

HAS there light of painting V, there slice age of 1-22 month predominates with 74.5 %(age average is 18 months. The male gender is more represented with 57.5% (sex ratio 1.3 in favor of the male sex. **Diarrhea represents** 41.82%, DTCP3 37.82% and Marasmus 78.91%. These observations are different from those of Campanozzi A *et al* (2009) [14].

According to Table 6, diarrhea on admission (p0.009) constitutes a mortality factor in malnourished children. These results match those found in Burkina Faso where, it was reported that one in three (3) malnourished children presented with diarrhea upon entering a nutritional rehabilitation center (Somé, 1999) [14]. However, they do not match those of The results of the present literature data which stipulate that undernutrition is responsible for an increase in morbidity and mortality, the average duration of hospitalization and the cost of care (Naber *et al*., 1997) [3].; (Brunn *et al*.,1999) [4], hence the need for early and appropriate treatment.

5. Conclusion

He exists clinically a association enough revealing between THE patterns of diarrhea and child mortality. Alongside symptoms frequently accompanied by malnutrition such as diarrhea and to some extent fever, poorly defined syndromes.

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