Malnutrition in Children 0 - 5 Years Old

Genti Xhelilaj

Department of Pediatrics, University Hospital Centre "Mother Teresa", Tirana, Albania

Abstract: Malnutrition refers to deficiencies in quality and quantity in a children intake. The term malnutrition covers two broad groups of conditions. One is `undrenutrition` which includes: stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals). The other is overweight, obesity and diet-related non communicable diseases. Malnutrition affects children in every country and is still an evident problem, especially in children 0-5 years old. The aim of the study we are going to present below is to evidence the subtypes of malnutrition and the different problems we face every day in our clinical practice with the malnutritioned patients.

Keywords: malnutrition, children 0-5 years old, WHO z~ score, education

1. Introduction

Talking about malnutrition (independently of the subtype) we generally value the nutritional status in anthropomethric terms, using for this, the standards defined from the World Health Organisation (WHO). WHO has defined the optimal criteria of well growth in children 0-5 years old. This allows us to use standard criteria such as z~score or standard deviation instead of anthropological parameters such as (weight, height, index of body mass, upper arm circumference etc.). According to the z~score or standard deviation the subtype of malnutrition are as follow:

a) Deficiency in growth

Acute malnutrition – underweight (> 2DS low weight for age, according to WHO definitions)

- Marasmus severe lost in weight
- Kwashiorkor bilateral oedema
- Marasmus et Kwashiorkor

Cronich malnutrition – stunting (> 2DS low height for age, according to WHO definitions)

Cronich and acute malnutrition – wasting (thin for his height)

b) Micronutrient deficiencies or insufficiencies

c) Overnutrition

- Overweight (between 2DS and 3DS weight for age, according to WHO definitions)
- Obesity (> 3DS weight for age, according to WHO definitions)

2. Material and Methods

This is a retrospective study, performed in children hospitalized during January - December 2017 in the department of Pediatric General Medicine, University Hospital Centre "Mother Teresa", Tirana, Albania. There was a total of 840 children included in this study, all aged between 0-5 years old. The height , the weight, feeding , gender , social economic status of the parents, maternal level of education, demographic data, morbidities , hospital

permanency were evaluated . Malnutrition was measured by the standards of WHO growth.

3. Results and Discussion

In our study are included 840 children. 180 of them or 21.4 % are affected at least from 1 subtype of malnutrition (wasting, stunting or underweight) as showed in the table below:

Table 1: Subtypes	of malnutrition
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Malnutrition type	No.	Percentage
Underweight (1)	100	55.56 %
Stunting (2)	80	44.44 %
Wasting (1+2)	62	34.44 %

As shown from the table , underweight is the most common form of malnutrition in children aged 0-5 years old.

Considering the gender of the patients the result are as below:

Table 2: Distribution by gender

Gender	No.	Percentage
Male	100	55.56 %
Female	80	44.44 %

From the geographic data analised about were this patients live we took the results below:

Table 5. Ocographic distribution	Table 3:	Geographic	distribution
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Geographic distribution	No.	Percentage
Urban area	72	40 %
Rural area	108	60 %

As shown from the table, living in rural areas it's a risk factor in developing malnutrition. Analising the maternal level of education we had the results below:

Table 4: Maternal level of education

Level of education	No.	Percentage
Any level of education	22	12.2 %
Compulsory education	18	10.0 %
High school	134	74.5 %
University	4	2.2 %
Baby from orphanage	2	1.1 %

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As shown from the table, the level of education of the mother is very important to prevent malnutrition.

Other important issues we want to bring to your attention from this study are :

- The hospital permanency of malnutried children is higher than in other patients.
- Malnutried children have almost always had at least another hospitalization before. Parents refer they are obligated to bring them to the doctor very often, probably due to the higher frequency of morbidity they have respect to other children who don't have malnutrition problems.
- About 5 % of these patients had done none of the obligatory vaccines.
- They are more often affected from the intestinal infections and in the second place are the respiratory infections.
- Secondary anemia is a very often comorbidity in malnutried children.
- Low birth weight favors malnutrition.
- Exclusive breastfeeding or cow milk is a very important factor in developing malnutrition.

4. Conclusion

Malnutrition is still a common problem in our country and a big amount of our daily work consists in treating morbidities in malnourished children. Low birth weight, low level of education and occupation, exclusive breastfeeding or cow milk feeding, are some of the more important predisposing factors of malnutrition. Improving knowledge of parents, and health care professionals in nutrition is a very important measure in order to reduce malnutrition among children.

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Author Profile



Genti Xhelilaj, Pediatrician, Division of General Pediatry, Pediatric, Rheumatology and Cardiology, Department of Pediatrics, University Hospital Centre "Mother, Teresa", Tirana, Albania