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RESEARCH PAPER

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The Prevalence of Protein Malnutrition among Children under five in Jaafer Ibn Oaf Hospital Specializations

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ABSTRACT

This is a descriptive cross-sectional study that was carried out at Jaafer Ibn Oaf Hospital Specialization to measure the prevalence of protein energy malnutrition among Children under five year of age the sample size all children under five admitted to hospital during 1 – 30 September 2013, the mean result of this study The prevalence of protein-energy malnutrition severe, 9.3%; moderate, 16.7%; mild, 74.1%; normal. As to the prevalent of severe malnutrition it was as follows; 25.9% (14).

Key word: Prevalence, Malnutrition, Children and Hospital.

INTRODUCTION

Malnutrition is a broad range of clinical conditions in children and adults that results from deficiencies in one or a number of nutrients (WFP, 2000). Hunger and malnutrition during calamities are common among refugees and displaced population; over 22 million people currently suffer worldwide, many suffer from one or more of the multiple forms of malnutrition. According to UNICEF 2007, malnutrition contributes to the deaths of more than 6 million children under age five each year (UNICEF, 2007). By January 2009, 4.8 million civilians had been affected by Darfur's crisis, of which 2.9 million were displaced (Nielsen et al, 2009). Globally, malnutrition causes about 5.6 million of 10 million child deaths per year, with severe malnutrition contributing to about 1.5 million of these deaths and the prevalence of malnutrition is highest in Sub-Saharan African (Heinkens, 2008). Acute malnutrition is the leading cause of ill-health of children in Darfur (www.wphna.org 2011). Associated risk factors for PEM. Our review noted that PEM was more common among children from the lower social class (69.4%) and those predominantly breast fed for three months or less (48.6%) compared to exclusively breast fed children (18.9%). The reason for this may not be unconnected to the fact that poor families have low purchasing power for adequate nutritious foods for their families. Illiteracy on the other hand, may influence feeding practices. The low rate of exclusive breast feeding noted in this review despite the Baby Friendly Initiatives is also very worrisome. Poverty and illiteracy as risk factors for PEM, (Nigeria, 2012). A management and prevention of malnutrition are based on the following strategies and adequate general ration for the whole community. Targeted (selective) feeding: Supplementary feeding for moderately malnourished children. Therapeutic feeding to severely malnourished children. Mass (blanket) supplementary feeding to all children if excessive malnutrition rates. Inclusion of other groups (e.g. pregnant and lactating women) where appropriate older persons and medically sick cases. Random untargeted food distribution, often initiated by well-meaning groups with little effective refugee experience, should be avoided, (Roger Detels, 2005) It has been estimated that, in the 20 countries that are home to 80% of the world's stunted children, malnutrition was an underlying cause of 51% of diarrhoea deaths, 57% of malaria deaths, 52% of pneumonia deaths and 45% of measles deaths (Save children, 2012). Complementary feeding is the introduction of foods other than breast milk or infant formula into the infant's diet, In fact the primary role of complementary feeding is neither to increase dietary diversity, nor to replace breastfeeding intake, Instead it used to make the child gradually become familiar with other foods than breast milk (Michael, J, 2005) The nutritional status of 327 under-five children living in Mayoo displacement camp, Khartoum, Sudan, was assessed during May- August 2004. Risk factors for protein-energy malnutrition (PEM) were also studied. According to WHO criteria, a total of 186 (56.1%) children had malnutrition, of these 101 (30.1%), 43 (13.1%) and 42 (12.8%) were mildly, moderately and severely malnourished respectively. According to welcome classification, the commonest type of malnutrition was found to be underweight (38.2%), marasmus, kwashiorkor were detected in (6.4%) and (0.9%) respectively, there was no case of marasmic kwashiorkor in the studied population. Prevalence of vitamin "A" was 9.2% of which 0.9% had night blindness. Age, sex, lack of immunization, lack of breast -feeding, history of fever and history of diarrhoea were tested and were not found be risk factors for malnutrition in this group of children, (Ahmed, 2005). The term malnutrition generally refers both to under nutrition and over nutrition, but in this guide we use the term to refer solely to a deficiency of nutrition, many factors can cause

malnutrition, most of which relate to poor diet or severe and repeated infections, particularly in underprivileged populations (WHO, 2005).

MATERIAL AND METHODS

Study design and population: Cross sectional descriptive study it covers all children in Jaafer Ibn oaf hospital aged less than 59 months 1-30 Sep.

Study area: Jaafer Ibn Oaf Hospital Specialization is located in Khartoum Locality, sudan

Sample size and sample technique: the study covered all children at hospital during one month was 54 child, the anthropometric measurement weigh for high was taken for children, and questionnaire structure directly to mother child.

Data analysis: The data was analyzed using the statistical package for the social sciences (SPSS) version 16. Categorical variables were expressed as frequency. Significance was tested using chi-square test.

RESULT

The prevalence of protein-energy malnutrition was severe 9.3%; moderate 16.7%; mild, 74.1%; normal. As to the prevalent of severe malnutrition it was as follows; 25.9% (14).

Table 1. Show the Prevalence of malnutrition by age based on weight-for-height z-scores.

	Severe (<-3 z-score)		Moderate (>= -3 and <-2 z-score)		Normal (> = -2 z score)	
	Nu.	%	Nu.	%	Nu.	%
Total no.	5	9.3	9	16.7	40	74.1

Table 2. Odema among under five children. Attending the Gafar Abn oaf.

odema	Frequency	Percent
Yes	12	22.2
No	42	77.8
Total	54	100.0

Table 3. Show relationship between gender and protein energy malnutrition deficiency.

Gender	Malnutrition				Total	
	Infected		Not infected			
	Nu	%	Nu	%	Nu	%
Male	7	50	21	52.5	28	51.9
Female	7	50	19	47.5	26	48.1
Total	14	25.9	40	71.5	54	100

$\chi^2 = 0.026$

P Value = 0.872 Not significant

Table 4. Illustrate relationship between mother education and protein energy malnutrition deficiency.

Education	Malnutrition				Total	
	Infected		Not infected			
	Nu	%	Nu	%	Nu	%
Less than secondary school	13	92.9	25	62.5	38	70.4
Secondary school and above	1	7.1	15	37.5	16	29.6
Total	14	25.9	40	71.5	54	100

$\chi^2 = 4.584$ P Value = 0.032 Significant

Table 5. Show relationship between family income and protein energy malnutrition deficiency.

Income	Malnutrition				Total	
	Infected		Not infected			
	Nu	%	Nu	%	Nu	%
Less than 500	11	78.6	26	65	37	68.5
501- 750	1	7.1	11	27.5	12	22.2
More than 750	2	14.3	3	7.5	5	9.3
Total	14	25.9	40	71.5	54	100

$\chi^2 = 2.728$ P Value = 0.256 Not Significant

Table 6. Relationship between infected with malaria and protein energy malnutrition deficiency.

Malaria	Malnutrition				Total	
	Infected		Not infected			
	Nu	%	Nu	%	Nu	%
Yes	6	42.9	7	17.5	13	24.1
No	8	57.1	33	82.5	41	75.9
Total	14	25.9	40	71.5	54	100

$\chi^2 = 3.648$ P Value = 0.05 Significant

Table 7. Relationship between infected of diaherro and protein energy malnutrition deficiency.

diaherra	Malnutrition				Total	
	Infected		Not infected			
	Nu	%	Nu	%	Nu	%
Yes	12	85.7	23	57.5	35	64.8
No	2	14.3	17	89.5	19	35.2
Total	14	25.9	40	71.5	54	100

$\chi^2 = 3.620$ P Value = 0.05 Significant

CONCLUSION

There are several factors due to protein energy malnutrition deficiency such as and status of PEM was severe, PEM due to several factors behind it such as socioeconomic status low income, low education, diarrhea, age and gender.

RECOMMENDATIONS

Raising the level of mothers, s education, improving the family Income and early diagnosis and treatment of malnutrition, diarrheal and other diseases.

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REFERENCES

- WFP, (2000).** Cesare Giulio Viola, Food and Nutrition Handbook, Rome.
- UNICEF (2007).** The State of the World's Children - [Internet]. Available from: <http://www.unicef.org/sowc/>
- Jens Nielsen et al. (2009).** Trends in nutrition and mortality from publicly available surveys Darfur, Sudan 2004 – 2008, Health Project Statens Serum Institute, Copenhagen.
- Heinkens (2008).** Case management of HIV infected severely malnourished children: challenges in the area of highest prevalence. *The Lancet*. Vol. 371. pp. 1305-1307.
- World Nutrition (2011).** Journal of the World Public Health Nutrition Association, Available from www.wphna.org Volume 2, Number 2, p: 98.
- Nigeria Teaching Hospital (2012).** Under five Protein Energy Malnutrition, University of In Nigeria, P.6.
- Roger Detels (2004).** Oxford Textbook of Public Health, Fourth Edition, New York, PP. 1731-1752.
- Save Children (2012).** Life free from hanger, Tackling child malnutrition, U.K., P.6.
- Michael, J., Elia, M., Ljunquest, O., and Dow, S. (2005).** J., Clinical Nutrition in Bound in India, Printed Replika Press Pulitd, Kudly, P123.
- Ahmed, M.H. and Mamuon, N. (2005).** Types and Risk Factors for Malnutrition in Khartoum (mayoo) Displaced Sudanese Children, Faculty of Medicine, University of Khartoum, P.84-8
- WHO (2005).** Malnutrition quantifying the health impact at national and local levels, Geneva P.2.

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