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Incidence of Malnutrition in Outpatient Department of Kerbala Teaching Hospital with some Associated Factors

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Abstract

Objectives: To evaluate the incidence of global malnutrition in outpatient department of Kerbala teaching hospital and the associated factors which include sex of patients, paternal employment and type of feeding.

Methods: By using M.U.A.C which is simple screening anthropometric test for malnutrition. Randomized Cross sectional study of 1000 child between the age of 6-59 months had taken in the study. From outpatient department of Kerbala teaching hospital. Data recorded regarding gender of patients, paternal employment and type of feeding in those less than 2 yrs. old patients.

Results: Overall incidence of global malnutrition was 6.9% in outpatient department of Kerbala teaching hospital. There is strong association between malnutrition and type of feeding during first 2 years and there was some association between employment of parents and malnutrition.

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Introduction

Measurement of mid-upper arm circumference (MUAC) provides a simple and reliable tool for screening nutritional status and also enables rapid assessment of large populations in epidemiological field study. Traditionally, MUAC has served as a practical proxy measure of undernutrition and in particular, of severe acute malnutrition among infants, children under 5 years [1].

Sever acute malnutrition (SAM) defined by world health organization (WHO) as: z score below -3 or mid upper arm circumference (MUAC) below 115 mm or presence of bilateral pitting Edema or both [2]. Moderate acute malnutrition is defined as moderate wasting i.e. (weight for height between -3 and -2, z score) of WHO child growth standard or mid upper arm circumference (MUAC) greater or equal to 115 mm and less than 125mm [2].

Degrees of Malnutrition are associated with increased risk of all causes of mortality and increased risk of death like diarrhoea, pneumonia, and measles [3].

In this study we aimed to find the incidence of moderate acute malnutrition and severe acute malnutrition in outpatient department of Kerbala paediatric teaching hospital. With effects of some demographic factors like paternal jobs and breast feedings

Patients and Methods

Cross sectional randomized study of 1000 patient from outpatient department of Kerbala teaching hospital from 2/5/2021 to 16/8/2021 in age group of 6 to 59 months to assess the nutritional status by using MUAC Table in which mid arm distance identified for each patient and recording the degrees of malnutrition with MUAC reading.

In which readings <115 mm consider SAM (red colour) and readings between 115-125 mm consider MAM (yellow colour) and readings equal or above 125 mm consider Normal (green colour).

We records sex of patients and with each patient questions about paternal job and if patient below 2 yrs. old we report type of feedings whether artificial, breast or mixed feeding.

Results

So, from 1000 patient 69 patients have malnutrition either severe or moderate in whom MUAC was <125 mm from them 51 were from non-employers fathers and 18 were employers. 40 of them were males and 29 females. Regarding feeding types in patients with less than 2 yrs. old 32 of them were bottle feeding and 13 were breast feeding.

In our study, neither sex of patients nor occupation were statistically significant but the type of feedings to those who are below 2 years old was significant P-value <0.05.

Discussion

In our study in the same hospital done in last year in 2020 incidence of global malnutrition in inpatient wards of Kerbala teaching hospital for children was 11% [4], while in this study, the incidence of global malnutrition in outpatient was 6.9%.in comparison to a study done in Babylon province in which incidence was 6.6% [5].

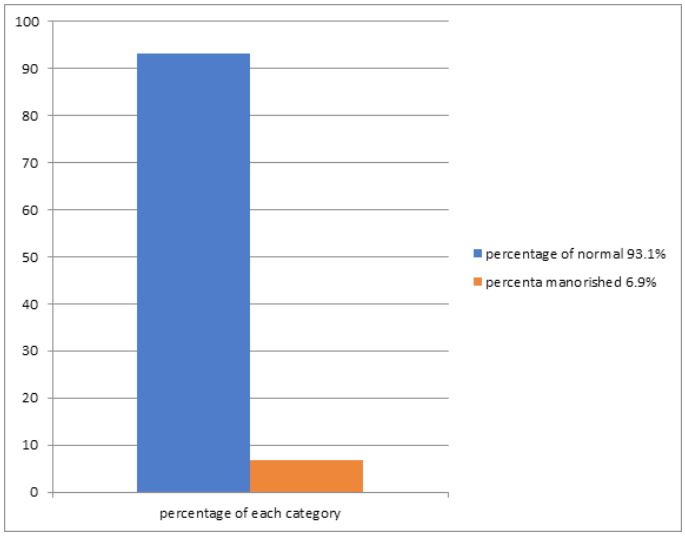

Figure 1: Percentage of each category.

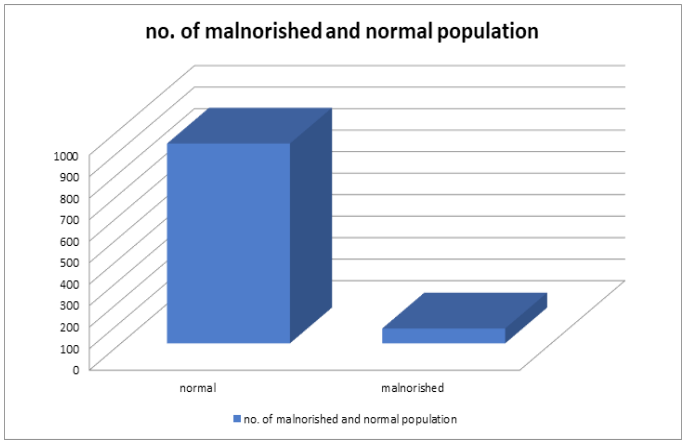

Figure 2: No. of malnourished and normal population.

Table 1: Significance of SDCV.

SDCV	CLASSES	Study No.	P value
Gender	Males	40	P=0.746 N. S
	Females	29	
Occupation	Employers	18	P=0.207 N. S
	Non employers	51	
Type feeding	Bottle feedings	32	P=0.001 S
	Breast feeding	13	

N. S=non-significant; p value>.05; S=significant; p value<0.05; H. S=highly significant

And another study done in Iraq in 1992-1994 in which incidence was 10.8% [6], And in Midnapore, West Bengal, India in 2012 in which the overall prevalence of undernutrition was 18.96%, (study done in 1-3 yrs. Old by midarm circumference measurement) [7].

In another descriptive cross-sectional study involving 201 consecutively selected children was carried out at the Buea Regional Hospital in Cameron in 2014 over a period of 3 months in which The WHO classification of Z-scores was used to determine nutritional status. The overall prevalence of malnutrition obtained was 23.4% [8].

Regarding the sex or gender there was no significant association between malnutrition and sex of patients p-value 0.746 and this finding is the same as study of Buea regional hospital (p=0.43) and similar to study of Ghazi et al. (2013) in Baghdad, Iraq (p=0.79) [9]. Regarding the employment most cases of malnutrition seen in non-employment parents but with no significant p value 0.207 which differs from that of Buea regional hospital where parent's employment status was a significant determinant of nutritional status in which malnutrition was most prevalent among children with both parents unemployed, while it was least prevalent among children with one of the parents unemployed.

But there was strong association between bottle feeding and incidence of malnutrition in which p- value was 0.001 which is comparable to study done in Babylon province in 2018 (in which high significant association was find) [5] and study done in Iraq in 1992-1994 [6].

Conclusion

Still there is high incidence of malnutrition in our society (both SAM and MAM). In fact, the malnutrition is just like iceberg we should looking for in order to avoid its consequences on mental and physical health. There is strong association between parental employment and malnutrition.

In addition, there is strong association between type of feeding whether bottle or breast feeding and incidence of malnutrition.

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