

ORIGINAL ARTICLE

Clinical Features of Severe Malnutrition at the Pediatric Ward of Tembakau Deli Hospital, Medan

by

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Abstract

Six hundred and fifty seven hospitalized patients under five in Child Health Department Hospital Tembakau Deli Medan, from January 1988 until December 1988 had been investigated retrospectively. Severe PCM are found 12 (1.8%), consisting of 7 (58.3%) boys and 5 (41.7%) girls. Most cases were found at the age of 1 - 2 years (33.3%). Marasmus were found in 5 cases (41.7%), Marasmic kwashiorkor in 4 (54%), while Kwashiorkor in 3 cases (25%). Clinical features of the patients are as follow: hepatomegaly 7 (58.3%), anorexia 6 (50%), old man face 5 (41.7%), subcutaneous fat decrease 5 (41.7%), thinsparse easily pick hairs 5 (41.7%), muscle hypotrophy 5 (41.7%), edema of the lower extremity 4 (33.3%), crazy pavement dermatosis 2 (16.7%). All patients were hospitalized combined with other diseases as chronic diarrhea 6 (50%), bronchopneumonia 5 (41.7%) and ascariasis 4 (33.3%).

Mortality in 1 patient.

Introduction

Severe malnutrition is caused by a decreased food intake (less in quantity, composition or both) or malabsorption as in acute or chronic infectious diseases.

In developing countries, severe malnutrition is still high, and causes mortality and morbidity problem. In Indonesia protein energy malnutrition called poor malnutri-

tion, mostly among under 5-year-old children. Malnutrition may be a greater risk for infectious diseases and the clinical features varied.

The purpose of this study is to know about clinical features of those poor malnourished under fives at the Pediatric Ward of Tembakau Deli Hospital, Medan.

Materials and Methods

This study was done retrospectively on all infants and children under five years of age who were hospitalized at the Pediatric Ward of Tembakau Deli Hospital, Medan, from January 1988 until December 1988.

Medical record of all patients that were diagnosed as severe malnutrition, with the

age under of fives years were collected and studied, including sex, ratio, age group, immunization status, nutritional status, parents education, father's job, accompanying diseases, clinical symptoms, duration of hospitalization and outcome. Nutritional status was determined according to Kartu Menuju Sehat (KMS).

Results

During this study the total number of under five years old cases that were hospitalized were 657 cases. Of these, 12 (1.8%) were diagnosed as severe malnutrition; there were 7 (58.3%) boys and 5 (41.7%) girls. They consisted of marasmic 5 (41.7%), marasmic kwashiorkor 4 (34%) and kwashiorkor 3 (25%).

Most cases were found amongs 1 - 2 years in 4 (33.4%) (Table 1). The immunization status revealed BCG 6 (50%), DPT II in 4 (34%), DPT III in 2 (16.7%), Polio II in 3 (25%), Polio III in 2 (16.7%) and Morbilli in 2 (58.3%), Secondary School 3 (25%), higher Secondary School 1 (8.3%) and University 1 (8.3%). Fathers education were Primary School 8 (68%), Secondary School 3 (25%) and University 1 (8.3). Father's profession were as plantation worker 11 (91.7%), staf 1 (8.3%). Duration of Breast Feeding Up to 6 months were found on 2 (16.7%) and more than 24 months on 2 (16.7%) children 4 - 7 months on 1 (8.3%), 7 - 8 months

on 2 (16.7%) and more than 12 months 1 (8.3%) child.

Clinical symptoms were hepatomegaly on 7 (58.3%), anorexia on 6 (50%), old-man face on 5 (41.7%), subcutaneous fat decrease on 5 (41.7%), thinsparse early pick hairs on 5 (41.7%), muscle hypotrophy on 5 (41.7%), edema of the lower extremity on 3 (33.3%) and crazy pavement dermatosis on 2 (16.7%).

All patient that were hospitalized suffered also from accompanied diseases, mostly chronic diarrhea on 6 (50%), bronchopneumonia on 5 (41.7%) and ascariasis on 4 (33.3%) (Table 2).

Duration of hospitalization mayority within 7 - 14 days were found on patients 5 (41.7%) and the longest at 30 days hospitalization were found on 2 (16.7%).

The outcome was as follow; malnutrition improvement 9 (75%), discharge against medical advise on 2 (16.6%) and death on 1 (8.3%) (Table 3).

Table 1 : Malnutrition patients related to age group

Malnutrition status	0 - 1	1 - 2	2 - 3	3 - 4	4 - 5	Total
Marasmic	1 (8.3%)	2 (16.7%)	-	-	2 (16.7%)	5 (41.5%)
Marasmic-kwashiorkor	-	2 (16.7%)	1 (8.3%)	1 (8.3%)	-	4 (33.6%)
Kwashiorkor	1 (8.3%)	-	1 (8.3%)	1 (8.3%)	-	3 (24.9%)
Total	2 (16.6%)	4 (33.2%)	2 (16.6%)	2 (16.6%)	2 (16.6%)	12 (100%)

Table 2 : Accompanied diseases

Diagnosis	Total	%
Chronic diarrhea	5	50
Bronchopneumonia	5	41.7
Ascariasis	4	33.2
Amoebiasis	4	33.2
Primary TBC	3	25
Tonsilopharyngitis	2	16.6
Ancylostomiasis	2	16.6
Morbilli	1	8.3
Another diseases	5	41.5

Table 3 : Patient's outcome

Nutritional status	Improve by parents request	Discharge	D i e d	Total
Marasmic	4 (33.6%)	1 (8.3%)	-	5 (41.5%)
Marasmic-kwashiorkor	2 (16.6%)	2 (16.6%)	-	4 (33.6%)
Kwashiorkor	-	2 (16.6%)	1 (8.3%)	3 (24.9%)
T o t a l	6 (50%)	5 (41.5%)	1 (8.3%)	12 (100%)

Discussion

The total number of hospitalized patients were 657 and diagnosed as severe malnutrition were 12 (1.8%). Most cases were found at 1-2 years old (33.4%).

This result is less than findings of Jo Kian Tjaij (1965) who studied at RSUPP (14.5%), PNP Hospital (Tembakau Deli Hospital): 14% and most cases were found at 1-3 years of age (Jo Kian Tjaij, 1965). Marbun et al 1985 who studied at Department of Child Health Dr. Pirngadi Hospital Medan at 1985 found 5.8%, most cases were 6-12 years of age (16.8%) (Marbun et al., 1984).

The immunization status of BCG 6 (50%), DPT II 4 (34%), DPT III 2 (16.7%), Polio II 3 (25%), Polio III 2 (16.7%) and Morbilli 2 (16.7%). No one had completed immunization.

Puslitbang (1986) studied the immunization status at Sumatera and found 50% of children had been immunized (Pusat Penelitian dan Pengembangan Gizi Bogor,

1978).

Mother's educational status is lower than fathers where primary school on 7 mothers (58.7%) at the level at primary school. Father's occupation as plantation worker 11 (91.7%) with low socio economics status. Lower education socio economic and incomplete immunization status were the factors that can play role to increase the incidens of severe malnutrition (Hasan et al., 1985 and Marbun et al., 1984).

Duration of breast feeding mostly at 6-12 months of age were on 4 (34%) and early supplementary feeding start at 4 months of age on 8 (68%), this may be low in quantity and composition. Clinical symptoms were hepatomegaly on 58.3%, anorexia on 50%, thinsparse easily pick hairs on 41.7%, oedema of the lower limbs on 86%, crazy pavement dermatosis on 16.7%. This pictures usually found in protein deficiency (Hasan et al., 1985 and Poey Seng Hin, 1957). Poey Seng Hin (1957) studied

kwashiorkor at Jakarta with anorexia on 74%, oedema of the lower limbs on 86%, hepatomegaly on 48%, crazy pavement dermatosis on 32%, muscle hypotrophy 11.7%, subcutan fat decrease 41.7%, oedema face 41.7%.

Accompanied diseases were chronic diarrhea 6 (50%), bronchopneumonia 5 (41.7%), ascariasis 4 (33.3%), amoebiasis 4 (33.3%). Those accompanied diseases may be caused by poor hygienic sanitation, low socio economic and low parents educational status (Jo Kian Tjai) 1965 and Kardjati, S. 1985). Diarrhea in malnourished children is a serious condition and it is difficult to distinguish whether diarrhea or malnutrition is the primary disease, it is still a problem, but there are correlation between those diseases (Alisyahbana, A. 1985).

Infection may be a complication disease according to decrease in immunity or it may by synergistics (Chandra 1977 and Isliker 1981).

Ascariasis and ankylostomiasis on 4 (33.3%) and on 2 (16.7%). Study at 20 hospital in Jawa Barat (1981-1983) make conclusion, that more severe malnutrition, probability infected with Helminthiasis can be increased (Alisyahbana, A. 1985). According to the study at Hasan Sadikin Hospital, there were amoebiasis on 0.8%, and in this studied preceding were 33.3% (Hasan et al., 1985).

Improvement of severe malnutrition were at 6 patients (50%). Died on 1 (8.3%) with kwashiorkor and bronchopneumonia as accompanied disease. This is not included patients discharged by the parents request and we did not know the out come of 5 patients (41.5%) that discharge by parents request. Mortality can patients (41.5%) that discharge by parents request. Mortality can be more greater especially in severe malnutrition with morbilli and diarrhea as accompanied diseases (Behrman and Vaughan, 1983).

Conclusion

Total members of severe malnutrition patient were 1.8% majority cases at 1-2 years old were (33.6%).

Chronic diarrhea, bronchopneumonia and helminthiasis infestation as accompanied diseases are still at problem.

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