Maternal Profile of Children with Severe Acute Malnutrition

Maternal undernutrition has a long lasting impact on the nutritional status of her child. We analyzed nutritional status of the mothers of children with severe acute malnutrition.

We enrolled mothers of 150 children up to 5 year of age who were admitted with severe acute malnutrition (SAM) in the nutritional rehabilitation center. Demographic details were recorded in a questionnaire. The mothers were examined for their weight, height, hemoglobin levels and signs of vitamin A deficiency. The body mass index (BMI) was calculated and graded according to the World Health Organization (WHO) classification as underweight (<18.5 kg/m^2), normal (18.5-24.99 kg/m^2), pre-obese (25-29.9 kg/m^2) and obese (≥30 kg/m^2) [1]. The underweight children were further divided into severe thinness (BMI <16.0 kg/m^2), moderate thinness (16.0-16.99 kg/m^2) and mild thinness (17-18.49 kg/m^2). Anemia was defined as hemoglobin <12.0 g/dL (severe <7.0 g/dL, moderate 7.0-9.9 g/dL, mild 10.0-11.9 g/dL)

According to the BMI, 76 (50.6%) of the mothers were underweight (**Table** I), out of them 10 (6%) were severely thin, 23 (15.3%) were moderately thin and the rest were mildly thin. Anemia was present in 70% mothers, out of which 20% were moderately anemic and one (0.7%) was severely anemic. Almost half (49.3%) of the mothers were illiterate and 40% had signs of vitamin A deficiency. At the time of the study, 57 (38%) mothers had more than two children.

According to National Family Health Survey-3, 2005-06, 36% of women in Uttar Pradesh are thin, based on their BMI; almost half of them (14.9%) are severely or moderately thin. In the same survey, anemia was present in 49.9% of women with 14.8 % having severe to moderate degree of anemia [2]. Our data showed a much higher proportion of women having malnutrition and anemia. Association between malnutrition and multiple factors such as parents' education, number of under-five children, birth order, mother's BMI and height have been reported earlier [3,4]. The maternal and child

TABLE I DEMOGRAPHIC AND NUTRITIONAL PARAMETERS OF MOTHERS OF SEVERELY MALNOURISHED CHILDREN (*N*=150)

Parameter	Mean (SD)
Age (y)	24.8 (4.3)
Weight (kg)	42.4 (5.9)
Height (cm)	149.40 (5.4)
Hemoglobin (g/dL)	10.9 (1.8)
Body Mass Index (kg/m^2)	18.9 (2.5)
Age at marriage (y)	18.1 (2.8)
No. of children	2.4 (1.4)

undernutrition study group concluded that to improve nutrition in mother and child, intervention in the dietary intake should be supplemented with other strategies like improvement in the underlying determinants of under-nutrition such as poverty, poor education, disease burden and lack of women empowerment [5].

Female literacy and nutrition must be addressed to tackle childhood malnutrition.

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