



## WEIGHT GAIN ON F-75 DIET IN SEVERE ACUTE MALNOURISHED CHILDREN IN HADOTI REGION

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**ABSTRACT** **BACKGROUND:** Malnutrition is rampant in paediatric age group. It is responsible for high morbidity, mortality and serious long term sequelae. In addition to critical care, a nutritional therapy followed by nutritional rehabilitation is a very important aspect for these children.

**AIMS AND OBJECTIVE:** 1. To study average daily weight gain on f-75 diet in SAM children admitted in malnutrition treatment centre. 2. To study that food inadequacy is a very important cause of SAM.

**MATERIAL AND METHODS:** Study done on SAM Children(without edema) aged 6months to 60 months hospitalized in Malnutrition Treatment Center Medical College Kota and stayed during study period during January 2017 to January 2018. F-75 diet was given to 357 SAM children that were enrolled in study for first 3days according to MTC guidelines. Daily weight gain recorded. Average daily weight gain (gm/kg/day) calculated on day fourth.

**RESULTS :** Out of 357 children average daily weight gain on day fourth was following: <5gm/kg/day in 68(19.04%), 5-10 gm/kg/day in 74 (20.72%), >10 gm/kg/day in 215 (60.22%).

**CONCLUSION :** Although f-75 is not intended for weight gain, still children gained good weight on starter diet. High quality infant and young child feeding counseling is needed to prevent severe acute malnutrition.

### KEYWORDS :

#### INTRODUCTION :

Malnutrition remains a major public health problem throughout the developing world and is an underlying factor in over 50% of the children deaths under 5 years who die each year of preventable causes [1-4]. Approximately 9% of sub-Saharan African and 16% South Asian children suffer from moderate acute malnutrition and approximately 2% of children living in developing countries suffer from severe acute malnutrition [5, 6]. This is equivalent to approximately 60 million children suffering from moderate malnutrition and 13 million suffering from severe acute malnutrition at any one time. In India approximately 20% of children under five years, are severely wasted [7]. Estimates from most recent nationally representative survey indicate that 6.4% of children below 60 months of age have weight-for-height below third standard deviation. At Present Indian population of 1.2 billion, there are about 132 million children under five years (12% of population), of which 6.4% or roughly 8 million are assumed to be suffering from severe acute malnutrition. To prevent deaths among severely malnourished children identified under this drive, the Government of India, started the Nutrition Rehabilitation Centers (NRCs) with support of UNICEF. The objectives of the programme are to control malnutrition among the children aged 1-5 years in the country and to bring down the percent of severely malnourished children to less than 1% [8]. This work was done on the basis of the WHO protocol for management of severe acute malnutrition. Therefore, malnutrition is an important public health problem in India. However, little information is available on risk factors for severe acute malnutrition (SAM), especially non dietary ones. Mother's formal education, nutrition, her knowledge about infant feeding practices, working status, family beliefs, socioeconomic status, and any underlying infections or illnesses from which the child may be suffering have impact on overall nutrition and weight gain.

#### MATERIALS AND METHODS:

This was a prospective observational study done from January 2016 to July 2018 at Government medical college Kota Rajasthan, which is a tertiary care hospital having 10 bedded malnutrition treatment center (MTC), which runs with help of WHO/UNICEF. The study participants were 357 children of severe acute malnutrition between 6 and 60 months of age. These children were enrolled on the basis of WHO criteria for severe acute malnutrition, which included children with weight-for-height (*W/H*) or length (*W/L*) with *Z* score less than 3 standard deviation, and/or mid-upper arm circumference (MUAC) <115 mm, and/or presence of bilateral pitting pedal oedema. The children who met this criterion were admitted to MTC and given special therapeutic diet including F 75 and F 100 as per WHO/UNICEF protocol for management of severe acute malnutrition

(WHO 1999). F 75 diet given for initial 3 days and then shifted to F 100 diet. These children were observed for daily weight gain. After ruling out the acute complications and their initial stabilization, these children were subjected to the actual MTC protocol. Children were given NRC diet as per WHO/UNICEF protocol daily along with other supplements. WHO weight for height reference charts were used for their assessment. Daily weight measurements were done at fixed time using a single standardized weighing scale provided by UNICEF. Average daily weight gain was calculated on day fourth and on discharge.

#### RESULTS :

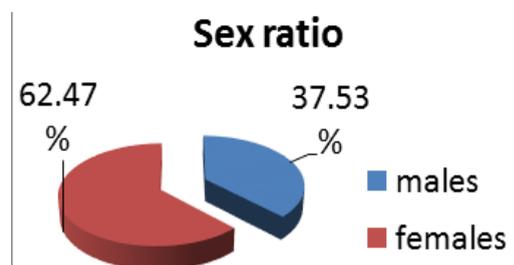
Among 357 children 62.47% were females while 37.53% children were males. According to age distribution most of the children (73.31%) belonged to 6-18 months of age, 25.43% children were of 19-36 months of age and 3.73% children were of 37-60 months of age. On day fourth average daily weight gain was <5gm/kg/day in 68 (19.04%) children, 5-10 gm/kg/day in 74 (20.72%), >10 gm/kg/day in 215. On discharge average daily weight gain rate was <5gm/kg/day in 95 (26.61%), 5-10 gm/kg/day in 81 (22.68%), >10gm/kg/day in 181 (50.70%) children.

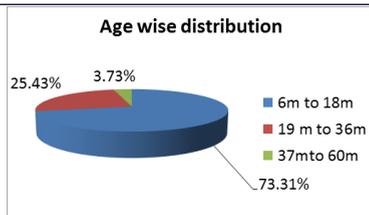
**Table 1 Average daily weight gain rate on day fourth**

Weight gain	No. Of children	percentage
<5gm/kg/day	68	19.04%
5-10gm/kg/day	74	20.72%
>10gm/kg/day	215	60.22%

**Table 2 Average daily weight gain rate on discharge**

Weight gain	No. Of children	percentage
<5gm/kg/day	95	26.61%
5-10gm/kg/day	81	22.68%
>10gm/kg/day	181	50.70%





#### DISCUSSION:

It is the known fact that F-75 is not intended to increase the weight of the child. It is used only for biochemical and metabolic stabilisation. But in our study we saw that child gained good weight on starter diet. So

Children are at risk of malnutrition when they are not eating the right foods in right quantity, quality and diversity or suffering from diseases or infections.

To prevent severe acute malnutrition there is need of

- High quality infant and young child feeding counseling
- Disease prevention and treatment

Although many successes have been achieved in promoting breast feeding, this has not been the case for complementary feeding.

Factors include policy support, funding, advocacy, private sectors involvement, availability and use of monitoring data, integration of research into action and existence of well articulated series of steps for successful implementation of complementary feeding.

As we saw that the most affected age group was 6m to 18 m.

That is the time to start complementary feeding as now mothers milk is no longer sufficient for child.....

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