

## Efficiency of Nutritional Support Treatments in Children With Failure to Thrive

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**Abstract :** Malnutrition is an important cause of morbidity and mortality as it accounts for 45% of child deaths under the age of 5 worldwide. Therefore, early recognition and effective treatment of failure to thrive and malnutrition are important. In this study, it was aimed to retrospectively evaluate the nutritional support treatment approaches (nutrition education and diet enrichment / use of enteral nutrition products) applied in children followed up with growth failure without underlying organic causes, and to compare the efficacy of nutritional support treatments. In this study, children aged 1 month to 18 years diagnosed with growth failure who were followed up for at least 12 months between January 2011 and February 2020, were included. Anthropometric measurements at baseline and during follow-up, type of nutritional support therapy and treatment compliance were evaluated based on the retrospective records. 119 children (median age:3.2, 69 girls) were included in the study. Nutrition education and dietary enrichment were provided to 28% of the patients (Group 1). In addition to dietary education and recommendations, enteral nutrition supplements was given in 78% of them (Group 2). Compliance to the treatment rates of the patients in Group 1 and Group 2 were not significantly different at both 6th and 12th month controls. At the end of the follow up children who comply with the treatment in Group 1 had significant increase in weight for age z scores (-1.74 vs 0.05, respectively,  $p=0.019$ ) and body mass index z scores (-1.47 vs -0.53, respectively,  $p=0.034$ ) compared with baseline measurements. Similar to Group 1, in Group 2 children with treatment compliance, had a significant increase in weight for age z scores (-2.24 vs. -0.54, respectively,  $p=0.00$ ) and body mass index z scores (-2.27 vs. -1.06, respectively,  $p=0.00$ ) compared with baseline measurements. The rate of patients with severe malnutrition decreased from 15% to 12%, for moderate malnutrition decreased from 54% to 33%. Moreover, it was observed that this decrease in the rate of patients with both severe and moderate malnutrition was more prominent in patients under 3 years of age. Although there was a significant increase in anthropometric measurements with treatment in both groups, there was no significant difference in between two groups terms of change in anthropometric measurements ( $p>0.05$ ), therefore effectiveness. Failure to thrive and malnutrition in infancy and childhood cause health problems that can affect adult life. To conclude, nutritional education - dietary enrichment. recommendations and use of enteral nutrition supplements were both proven beneficial in this study. Researchers are willing to underline that the most important part of the treatment is to include the family to the process to ensure the treatment compliance.

**Keywords :** enteral nutrition supplements, failure to thrive, malnutrition, nutritional education

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