

Comparing the efficacy of nutritional supplementation of different caloric concentrations on linear growth and weight gain in late childhood, a longitudinal study.

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Introduction

Liquid nutritional supplements (ONS) are used successfully in the management of underweight infants and young children with undernutrition , So we evaluated the growth parameters of 30 children with low weight gain who did not have any systemic illnesses and assessed their response to nutritional supplementation using two different formula supplements (1cal/1 ml) versus 1.5 cal/1ml) for one year.

Aim

We evaluated the growth parameters of 30 children with low weight gain who did not have any systemic illnesses and assessed their response to nutritional supplementation using two different formula supplements (1cal/1 ml) versus 1.5 cal/1ml) for one year.

Methodology

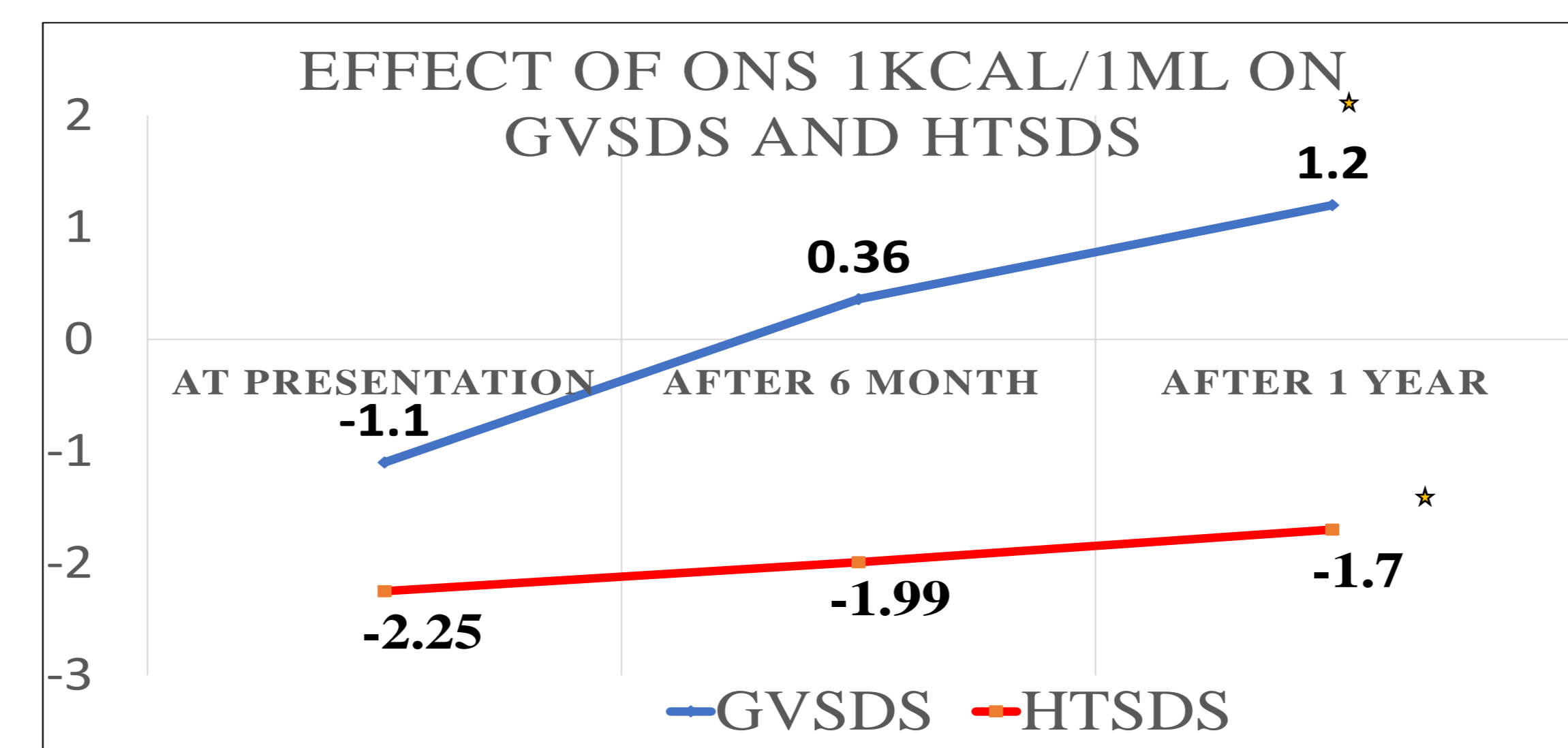
- Thirty underweight children (BMI SDS < -1.5), aged 9 ±4 years, were divided into two groups according to the type of NS given by different dietitians.

Methodology

- Group 1 included 10 children who received high caloric supplements (400 ml/day divided on two or three times/day) (1cal/1 ml)
- Group 2 (N=20) received NS (1.5 cal/1ml). We recorded anthropometric measurements and lab data for all the children for a year.

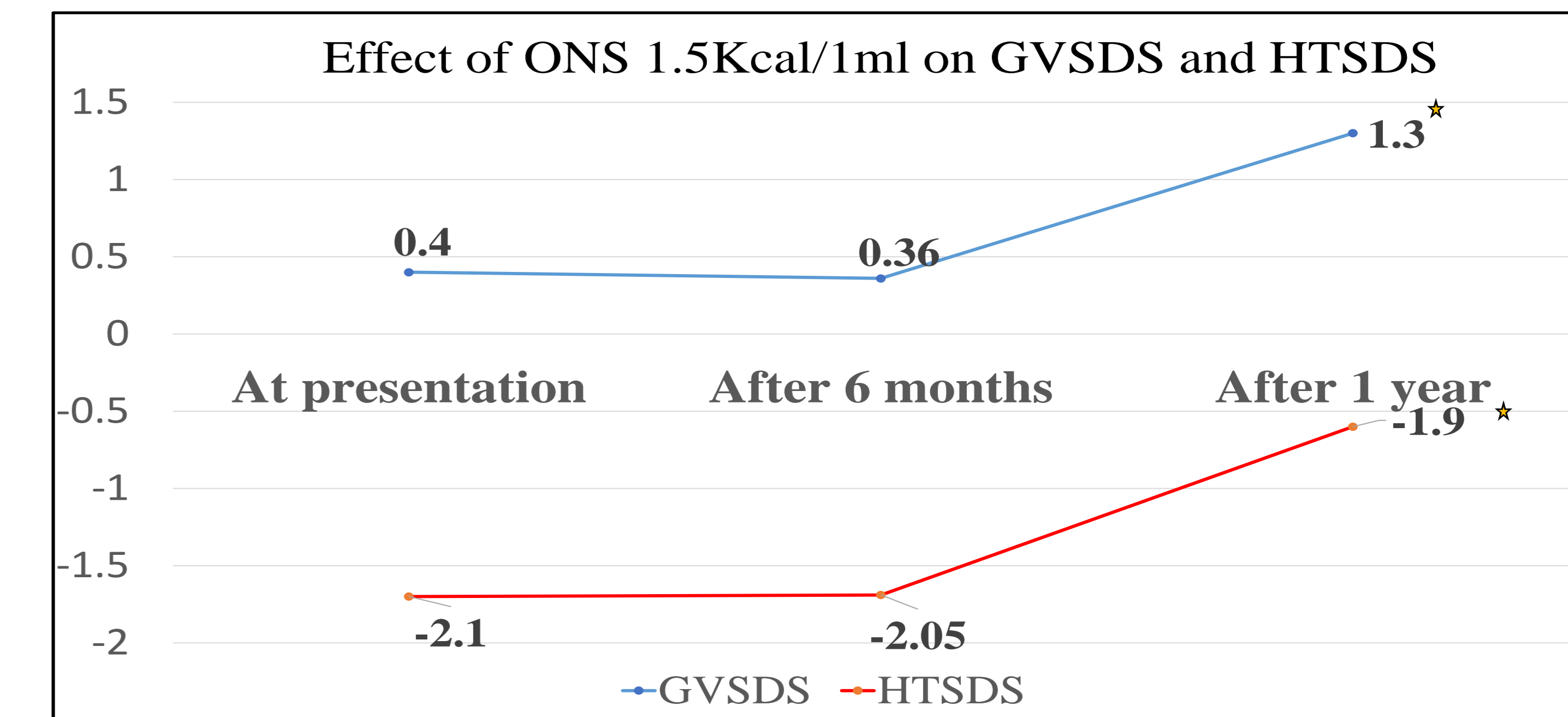
Results

- At presentation, there was no statistically significant difference in BMISD between groups 1 and 2.
- Height SDS was < -2SD in both groups.
- Linear growth velocity increased significantly during the year of NS from 5.36 ±2.9 cm/yr to 8 cm±2/yr in group 1 and from 6.15±1.8 cm/yr to 7.76 ±2.5 cm/yr) in group 2.



Results' cont.

- After NR the weight gain/day increased to 9.85 g/day and 11.6 g/day in groups 1 and 2 respectively.
- There was a significant improvement in the difference between the HtSDS and MPHSD in both groups which was higher in group 1.



Conclusion

1. Oral NS improved the nutritional and anthropometric status of old children. There was a significantly higher weight gain/day in the group on NS (1.5 cal/ 1ml) compared to the group on (1cal/ml) during the first 6 months
2. A significant improvement occurred in the HtSDS in both groups after 1 year of NS.