

PARENTERAL VS ORAL VITAMIN B12 IN CHILDREN WITH NUTRITIONAL MACROCYTIC ANEMIA: A RANDOMIZED CONTROLLED TRIAL

AIM: To compare the efficacy of oral vitamin B12 therapy with the standard parenteral vitamin B12 therapy in improving vitamin B12 levels in children with nutritional macrocytic anemia, after three months of treatment.

ELIGIBLE SUBJECTS

Single initial dose
im/iv 1000 µg
Vit B12
(N=80)

n=40

n=40

RANDOMIZATION

PARENTERAL GROUP

Vit B12 (1000 µg)
Age < 10 yrs: 3 a/d doses
Age 10-18 years: 5 a/d doses
Subsequently monthly for 2 doses

ORAL GROUP

Methylcobalamin 1500 µg Daily
Age < 2 yrs : half tablet
Age > 2 years: one tablet

After 3 months

RESULTS

	PARENTERAL GROUP mean (SD)	ORAL GROUP mean (SD)	P-value
Vit B12 rise (pg/ml)	629.2 (304.5)	441.2 (211.6)	0.007
Hemoglobin rise (g/dl)	2.66 (2.4)	1.06 (2.1)	0.008

CONCLUSION: Increase in serum vitamin B12 levels and hemoglobin was better in children with nutritional macrocytic anemia receiving parenteral as compared to oral vitamin B12.

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