

Original Paper

Relationship between malnutritional and serum level of Iron, Zinc, Calcium and Magnesium in 6-36 months hospitalized children

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Abstract

Background and Objective: Malnutrition is considered as one of most serious disorder in childhood. This study was carried out to determine the prevalence of malnutrition and its relation to serum level of Magnesium, Zinc, Iron and Calcium in 6-36 months hospitalized children.

Methods: In this case-control study upon CDC chart, 166 children were in control group diagnosed with no malnutrition and 151 children were also in case group with malnutrition. BMI and serum level of Magnesium, Zinc, Iron and Calcium were measured for each child.

Results: Out of 151 children with malnutrition, 128 (84.76%) and 23 (15.23%) were involved in mild and moderate malnutrition, respectively. The serum level of Magnesium and Zinc in case group was non-significantly lower than controls, while the serum level of Calcium and Iron non-significantly higher than controls. BMI was significantly reduced in cases in compared to controls and this reduction was related with malnutrition (95% CI: 0.38-0.59, OR=0.47, P<0.05).

Conclusion: Malnutrition in 6-36 month children was not related to serum level of Zinc, Magnesium, Iron and Calcium, while children with malnutrition had lower body mass index.

Keywords: Child, Malnutrition, Zinc, Iron, Magnesium, Calcium

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