

Abstract:

Introduction and purpose

Children's respiratory infections are the leading cause of death worldwide. Some supplements along with treatment may be helpful in improving patients. The current study aims to examine effect of Glutamine supplementation on serum levels of some inflammatory factors and oxidative stress and appetite in children with respiratory infections (2 to 6 years).

Materials and procedures

In a clinical trial, 40 patients with respiratory infections were randomly divided into two groups of complement (20 subjects) and control (n = 20). After obtaining written consent from families, the general information (height, weight and BMI) was recorded and signs of respiratory infection (including cough, fever and respiratory distress) were collected at discharge. Before taking the supplement, both blood samples were taken at 2 cc. Then, for 5 days, the glutamine supplementation group received 0.5 pg. / kg juice with a spoonful of sugar, and the same amount of sugar was given to the control group. At the end of the fifth day, a re-blood sample was taken to perform serum IL1 β , tumor necrosis factor, malondialdehyde and total antioxidant capacity tests, then all data were analyzed.

Findings

The results of this study showed that serum levels of IL-1 beta, alpha and hs-CRP tumor necrosis factor decreased significantly with glutamine supplementation by five days (p <0.05) and the appetite of patients during the five-day period was significantly higher in glutamine supplementation compared to the control group (p <0.05). No significant changes were observed in serum levels of TAC, MDA and clinical signs at the end of the study.

Conclusion

Glucose supplementation with 0.5 g / kg in children with respiratory infections caused a significant decrease in serum IL-1 beta, hs-CRP and tumor necrosis factor, and significantly increased appetite. So glutamine supplementation may be beneficial for patients during hospitalization.

Significant changes in two case groups were shown in indices in oxidative stress and clinical findings.

Significant increase was demonstrated in appetite in the supportive group during the study.

Key words: Glutamine, Respiratory Infection, Children, Inflammatory Factors, Oxidative Stress