

The Correlation between Vitamin D and acute Diarrhea in Children aged 2 months to 12 years old who referred to Booali hospital in Ardebil

Abstract

Background: Diarrheal diseases are one of the major causes of delayed physical growth in poor societies and developing countries. Although some studies have suggested that vitamin D deficiency is a risk factor for diarrhea, some researchers disagree.

Aim: The aim of this study was to investigate the relationship between serum vitamin D levels and acute diarrhea in children aged 2 months to 12 years referred to Bu Ali Hospital in Ardabil.

Materials and Methods: In this study, patients aged 2 months to 12 years with acute diarrhea admitted to Bu Ali Hospital in Ardabil were included in the study. To conduct this study, first the objectives of the research project were presented to the parents of eligible children and if they agreed, written consent was obtained from the children to enter the study. Demographic variables of the children including age, sex, residence, household economic status, and inflammatory or non-inflammatory diarrhea were entered in the relevant information form and patients underwent clinical examination. According to the number of patients in the control group, children without underlying problems who referred to Kosar subspecialty clinic for follow-up were included in the control group. After the initial completion of the information form, blood samples were taken from children and serum levels of vitamin D were measured. The data were entered into statistical software and the two groups were compared.

Results: In this study, 188 patients were included in the study. The mean age of children was 3.06 ± 2.29 years. Most children 79 (79.8%) were in the group of children under 4 years old. The mean serum level of vitamin D in the control group was 22.36 ± 5.17 ng / ml and in the case group was 19.19 ± 3.52 ng / ml. There was a statistically significant difference between serum vitamin D levels and economical status with diarrhea in the study groups. (55.3%) 52 children lived in the city and (44.7%) 42 people in the case group lived in the village. The results of diarrhea in patients in the case group showed that 32 (34%) diarrhea was inflammatory and 62 (66%) was non-inflammatory. There was no statistically significant difference between the type of diarrhea and the place of residence with the serum level of vitamin D. The results of gender analysis in patients in the case group showed that in the case group there were 61 (64.9%) boys and (35.1%) 33 girls. The results of chi-square test showed no significant difference between the genders of children with diarrhea.

Conclusion: Based on the results of this study, vitamin D deficiency can be a predisposing factor for diarrhea in children.

Keywords: Vitamin D, Diarrhea, Children