

**Evaluation of Serum selenium levels in acute phase and after improvement of gastroenteritis in children with 3 to 36 months admitted in Bouali hospital of Ardabil from June to December 2019**

**Abstract:** According to the different effects of selenium on diarrhea in children and the questionable role of selenium on the severity and duration of gastroenteritis in children and also due to the fact that diarrhea is one of the most common diseases in the country that causes great damage to the health system Therefore, the aim of this study was to evaluate the serum selenium level in children with acute gastroenteritis and recovery from the disease in Bu Ali Hospital in Ardabil.

**Aim:** To determine the serum level of selenium in the acute phase and recovery of gastroenteritis in children 3 to 36 months hospitalized in Bu Ali Hospital in Ardabil.

**Methods:** This study was a case-control study performed on patients aged 6 to 36 months. The case group of children with acute gastroenteritis and the control group also included healthy children who had no history of acute gastroenteritis in the two weeks prior to sampling, who had been referred to the hospital during the study period for reasons other than acute gastroenteritis. After completion of the information form, blood samples were taken from the children and serum was isolated. In the case group, patients returned to the laboratory one week to ten days after the onset of the disease, ie in the recovery phase, for the second time. According to the possible effect of diet on increasing serum selenium levels and dietary changes after diarrhea can increase blood levels of the selenium, to prevent interference with the results of experiments, patients' diets based on the type of diet before the onset of the disease Was considered.

**Results:** In this study, the mean age of participants in the study was 23.55 ± 8.52 months and the mean age of patients was 23.26 ± 8.91 months and the mean age of controls was 23.84 ± 8.21. They were 3 to 36 months old and 43 cases (56.6%) were male and the rest were female. The number of diarrhea days was  $4.68 \pm 1.25$  days. The mean frequency of diarrhea was 6.53 ± 1.13 times. The study of the relationship between selenium levels during the disease and after it with SPEARMAN test showed that there is a statistically significant relationship between these two variables. As the level of primary selenium increases, so does selenium after recovery.

**Conclusion:** The findings of this study suggest that blood selenium is strongly affected by the severity of diarrhea and factors affecting the severity of diarrhea. It is also concluded that infectious symptoms in patients (such as fever) can reduce serum selenium levels.

**Key words:** Gastroenteritis, Selenium, Ardabil