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The Role of the Micronutrients; Vitamin A, Vitamin B$_{12}$, Iron, Zinc, Copper Levels of Children with Lower Respiratory Tract Infections

Dear Editor,

I read the article by Fidancı İ. et al. (1) "The Role of levels of Vitamin A, Vitamin B12, Iron, Zinc and Cooper in Lower Respiratory Tract Infections in Children". According to the data of the World Health Organization, every year more than 10 million children under 2 years of old lose their lives all over the world due to preventable and treatable diseases. Respiratory tract infections account for the majority of these losses of lives (2). In childhood, 23% of outpatient cases and 29-38% of hospitalized patients are diagnosed with pneumonia (2). These data demonstrate that pneumonia is an important community health care problem in children under 2 in the developing countries and in Turkey leading to high rate of mortality and morbidity. Although there exist many agents in the etiology of pneumonia, it is commonly known that since they are preventable, zinc has an important duty especially in the developing countries (2).

Since the lack of zinc and trace element has an importance in developing countries, three big studies have so far been carried out particularly in Ethiopia, India and Bangladesh.

Umeta et al. (3) in Ethiopia investigated the effects of zinc supplements in 6-12 month-old well-nourished and undernourished infants. At the end of the study, it was revealed that the group that took zinc statistically increased in length and weight, worked up an appetite, had lower chance of getting a cough and diarrhea, fever and vomiting declined significantly in comparison to the group that took placebo. In Bangladesh, on the other hand, Brooks et al. (4) gave one group of patients 20 mg zinc daily in addition to antimicrobic therapy to children under 2 suffering from severe pneumonia, and placebo to another group. The researchers realized at the end of the study that the period of hospital stay during the period of severe pneumonia recovery diminished through adjuvant zinc therapy. In India, Kumart et al. (5) measured the blood zinc levels of 50 children aged 2month-5 years hospitalized due to pneumonia and found that statistically the plasma zinc amount measured in patients with pneumonia were significantly low when compared with the control group cases. In all these three studies, there was no any side effect of the zinc given to the patients; and this is important with respect to the safe use of this drug for patients and in studies.

In our study (6), we obtained similar results as well. These studies demonstrated that adjuvant zinc therapy accelerated the recovery period of severe pneumonia in children, could help to diminish the development of antibiotic resistance by reducing the multiple antibiotic use and lessen infection-related complications and mortality. In the study done by Fidancı İ. et al. (1), it was found that vitamin A and Fe levels were significantly low in comparison to control group; but, Zn level in the patient group was lower than control group, but statistically not significant. No difference was found between the groups with regards to Cu and Vit B12 levels. It was found that the results of other studies were compatible with our study.

Many reasons such as children's mortality in developing countries and Turkey still occupying the top of the list, low socioeconomic levels, low level of per capita income, carbonate-rich, low protein diet, and family and population planning may explain pneumonia-related mortality. Although there are many factors causing the development of pneumonia, the preventable of these factors are important for us. The lack of zinc, which is a serious problem for our country since it seriously leads to mortality and morbidity, can be overcome through zinc-rich diet or external zinc supplements and elevated immunity.

Vefik Arıca, MD
Clinic of Pediatrics, Okmeydanı Training and Research Hospital, *İstanbul, Turkey*
Phone: +90 505 679 78 77
E-mail: vefikarica@hotmail.com

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Burden of Rotavirus Gastroenteritis in the Pediatric Emergency Service

Dear Editor,

Studies have been done in our countries by many centers to establish the epidemiologic characteristics of rotavirus infections in an attempt to specify the prevalence and seasonal distribution. However, the studies in which detailed laboratory results are discussed are limited (1). Similarly, the studies investigating the effects of this disease on the pediatric emergency departments are restricted as well. Therefore, I read the article titled (2) "The Burden of Rotavirus Gastroenteritis Patients in the Pediatric Emergency Departments" by Oğuz et al. (2) with great admiration and interest.

It was found that the most prevalent acute diarrhea agents in children under 5 were viruses and in these viruses, rotavirus group A was the most prevalent responsible agent (3). Although rotavirus infection can be seen in all age groups, the symptomatic infection is most common in children under 2 years age. Rotavirus diarrheas are more severe and complicated than viral other diarrheas. Knowing which age group and frequency of rotavirus positivity is expected will make it easier for the physicians working especially in pediatric emergency services in which there are no facilities for diagnosis of rotavirus and those in primary healthcare institutions convenience in the therapy. The most important limitation of this study is the lack of rotavirus positivity together with patients' distribution by age. A similar problem is true for the seasonal distribution of the patients as well. It is not clearly understood in the study in which season and frequency a physician will encounter rotavirus infections.

Another limitation of the study is that; the monitoring periods as specified by the researchers have not been reached. Besides, if it was specified the reasons of keeping the patients under surveillance and the therapies that were implemented, the reader would have been more informed about the burden caused by rotavirus diarrheas in the emergency departments.

I hope that my comments and feedback will positively contribute towards Mr. Oğuz et al.'s (2) study.

Çapan Konca, MD
Department of Pediatrics, Adıyaman University Faculty of Medicine, *Adıyaman, Türkiye*
Phone: +90 416 216 10 10 (4278)
E-mail: dr.capan@hotmail.com
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Response to the Editor

Dear Editor,

We would like to thank honorable Dr. Çapan Konca for his interest in and contributions to our study.

Many studies were carried out in our country investigating the epidemiologic and clinical characteristics of rotavirus infections and it was demonstrated that symptomatic infection prevalence increased in winter and in children under two (1, 2). In our study, we aimed to highlight the burden that rotavirus-positive gastroenteritis cases place on pediatric emergency departments, rather than all the gastroenteritis cases. Therefore, the distribution prevalence of rotavirus-positive gastroenteritis cases by age and season was evaluated within itself.

As we specified in the limitations part of our study, since our study was a retrospective one, the data regarding the follow-up periods in the pediatric emergency observation rooms and the therapies implemented were not accessible. The follow-up form (outpatient basis, emergency observation room or inpatient basis), follow-up duration, and the therapy to be implemented were decided by the physicians who monitored the cases. In viral acute gastroenteritis cases, the main therapy is