

A STUDY ON EFFICACY OF ORAL ZINC THERAPY FOR TREATMENT OF ACRODERMATITIS ENTEROPATHICA

by Neerja Puri

comment: **Subtitle: IMPORTANCE OF ZINC IN MEDICINE OF 21ST CENTURY**

Ass. Prof. Miloš Jeseňák

Department of Paediatrics, University Hospital in Martin
Center for Diagnosis and Treatment of Primary Immunodeficiencies
Center for Treatment of Severe Allergic Diseases
Jessenius Faculty of Medicine of Comenius University in Bratislava,
Kollarova 2, 036 59 Martin Slovak Republic
E-mail: jesenak@gmail.com

Source of Support:

Nil

Competing Interests:

None

Our Dermatol Online. 2013; 4(2): 167

Date of submission: 22.03.2013 / acceptance: 28.03.2013

Cite this article:

Miloš Jeseňák: comment: A study on efficacy of oral zinc therapy for treatment of acrodermatitis enteropathica. *Our Dermatol Online*. 2013; 4(2): 167

Zinc is an essential mineral which belongs to the most important and non-substitutable micronutrients in human. Its significance for health was invented in 60s years of 20th century. Zinc possesses many important characteristics and plays an important role in the maintenance of equilibrium in organism. It is a part of many enzymes and possesses complex antioxidant and anti-inflammatory activity. Another very important function of zinc is its role in the immune system. Zinc stimulates the processes of phagocytosis, activated the complement system, supports the maturation of B- and T-lymphocytes and is very important for the production of immunoglobulins [1]. It is also essential for the regulation of inflammatory processes in the organism [2]. In case of zinc deficiency, the immune dysfunction can be observed. The zinc deficiency is one of the most important acquired secondary immunodeficiencies worldwide.

The zinc deficiency was observed in several diseases and chronic conditions. It was showed that the severe asthmatics and the patients with severe forms of atopic eczema have the zinc deficiency and its supplementation could support the standard anti-allergic therapy [3,4]. Zinc could be also used for the treatment and prevention of acute and recurrent respiratory tract infections [5-7].

The zinc deficiency still represents the very important problem worldwide. It is usually associated with malnutrition, especially in case of high contents of phytates in the food. Zinc deficiency is a part of genetically-determined disease – acrodermatitis enteropathica. Despite the progression of the modern medicine, it is necessary to consider this diagnosis in the context of the differential diagnosis of chronic dermatosis. As the current published study shows, the simple and cheap therapy consisting of supplementation of zinc is effective in

the treatment of this disease [8]. Author clearly described the complexity of clinical manifestation of acrodermatitis enteropathica, which involves not only the skin changes but also gastrointestinal and psycho-neurological changes and disturbances. Despite the severe chronic changes in the different organ systems, the oral therapy with zinc could significantly improve the clinical status of these patients.

REFERENCES

1. Ferencik M, Ebringer L: Modulatory Effects of Selenium and Zinc on the Immune System. *Folia Microbiol*. 2003;48:417-26.
2. Prasad AS: Zinc: role in immunity, oxidative stress and chronic inflammation. *Curr Opin Clin Nutr Metab Care*. 2009;12:646-52.
3. Khanbabaee G, Omidian A, Imanzadeh F, Adibeshgh F, Ashayeripannah M, Rezaei N: Serum level of zinc in asthmatic patients: a case control study. *Allergol Immunopathol (Madr)*. 2013; doi: 10.1016/j.aller.2012.07.008.
4. Toyran M, Kaymak M, Vezir E, Harmanci K, Kaya A, Giniş T, et al: Trace elements levels in children with atopic dermatitis. *J Investig Allergol Clin Immunol*. 2012;22:341-4.
5. Bansal A, Parmar VR, Basu S, Kaur J, Jain S, Saha A, et al: Zinc supplementation in severe acute lower respiratory tract infection in children: a triple-blind randomized placebo controlled trial. *Indian J Pediatr*. 2011;78:33-7.
6. Caruso TJ, Prober CG, Gwaltney JM: Treatment of naturally acquired common colds with zinc: A structured review. *Clin Infect Dis*. 2007;45:569-74.
7. Sazawal S, Black RE, Jalla S, Mazumdar S, Sinha A, Bhan MK: Zinc supplementation reduces the incidence of acute lower respiratory infections in infants and preschool children: a double-blind, controlled trial. *Pediatrics*. 1998;102:1-2.
8. Puri N: A study on efficacy of oral zinc therapy for treatment of acrodermatitis enteropathica. *Our Dermatol Online*. 2013;4:162-166.