



Short Communication

Inosine Pranobex (IP) – possibilities of its use in the treatment of COVID19

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The finding that enzymes of purine metabolism interfere to the regulation of immune events is known from the findings of Giblett, et al. [1], that Adenosine Deaminase (ADA) deficiency leads to Severe Combined Immunodeficiency (SCID), The same author described in 1975 case of T-immune deficiency caused by a deficiency of another purine metabolism enzyme – Purine Nucleoside Phosphorylase (PNP). Subsequently, other authors have described cases of hypo to agammaglobulinemia with 5'-nucleotidase (5-NT) deficiency in adults [2] and children [3].

Based on these works, it was possible to postulate the hypothesis that intact purine metabolism – the balance of individual metabolites (adenosine, inosine, hypoxanthine) is a basic condition for optimal immune system function – at that time formulated by our staff [4,5]. At that time we found an imbalance in the activity of these enzymes in children with selective IgA deficiency [6,7] and also in children with oncohematological malignancies [8]. It was found that the accumulation of adenosine (ado) and deoxyadenosine (deo-ado) suppressed the blast transformation of Ly after PHA and PWM in ADA deficiency, but the significance of the inosine deficiency (ado/ ino imbalance) was not clear. In the late 70's, the product Isoprinosine (inosine pranobex) appeared on the market, declared as an antiviral product with a clear effect to number of diseases of RNA and DNA viral origin (morbilli, varicella – zoster, etc.). The mechanism of this virostatic effect was unclear, but extensive research reveals that its administration activates immune processes – the production of cytokines (TNF, IL-1, IL-6, Inf), or the activity of NK cells. Its advantage was a minimum of contraindications to use (SPC). Some results from its use in our workplaces were presented [9,10]. Despite the good results, this preparation

has been “displaced” in practice by the discovery of acyclo and ganciclovir – used mainly in DNA viral infections. At present, it is used in our country as a non-specific immunomodulator in children with recurrent respiratory infections. However, a number of works documenting its immunomodulatory and antiviral effects can be found in the literature [11–13].

Suggestion

The current COVID19 pandemic – although several antiviral agents are being declared as possible candidates for use in its severe course – does not yet have an effective drug available to alleviate, resp. suppress the severe course of the disease. In addition to currently recommended drugs, there is an opportunity to test the effect of Inosine Pranobex – Isoprinosine in influencing the course of COVID19 disease, especially in a group of high-risk patients (seniors, polymorbidity) – in a complex of other supportive treatment – in an open clinical study.

Isoprinosine at a dose of 50mg / kg / 3x in hazardous / severe conditions max. within first three days from the onset of the disease.

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