

## **IMMUNOMODULATORS IN PULMOLOGICAL PRACTICE**

**D. Petkova, Z. Odzhakova, Y. Radkov, T. Mavrodinova, A. Karaivanova**

*Clinic of Allergology and Clinical Immunology, Varna*

Observing the basic requirements for prescribing immunomodulating therapy, i.e., therapy well grounded, differentiated, purposeful and individualized, we set ourselves a goal to make an attempt to assess the clinical effectiveness of some known and used in this country immunostimulating medicines and these medicines applied to patients with frequent chronic nonspecific pulmonary diseases. For the period 1983-1991 in the Clinic of Pulmology, Medical University, Varna, 197 patients with frequent pushes of chronic nonspecific pulmonary diseases (CNPD) and protracted course of acute bacterial pneumonia and signs for immunodeficiency were checked up. Their immunodeficiency was determined on the basis of the results obtained from the examination of the following indexes: phagocyte activity of polymorphic nuclear leukocytes and alveolar macrophages, lysozyme in serum and bronchial secretion, protease inhibitors, complement, Ig G,A,M, including specific antibodies in serum and bronchial secretion, circulating immune complexes, E-rosette-forming cells, intradermal test with purified protein derivative of tuberculine, candidine, trichophytin as a test for proving the cellular mediated immune deficiency. All the patients received immunomodulating medicines in correspondence with their immunity breaches:

I. **DECARIS (Levamisol)** given to 63 patients by the following way: 2,5 mg/kg daily (on the average 150 mg) during 3-5 days and then one tablet (150 mg) weekly for the following month. II. **GAMMA A** - new Bulgarian medicine (enriched with IgA gamma globulin) for correction of IgA and IgG-deficit was given to patients with signs of deficiency of antibody synthesis. 17 of them received 0,3-0,5 ml/kg, followed by a dose of 0,3-0,55 ml/kg once in fortnight under observance of their serum immunoglobulin levels. In some cases the bronchial secretion was under control during the period of treatment. III. **ANTISTENOCARDIN (Dipiridamol)** - interferon inducer was given to 91 patients with CNPD. The dose prescribed was 100 mg once a week for 3 months. 19 patients with frequent recurrences of CNPD and virus infections inhaled the newly invented Bulgarian leukocyte interferon 3-5 times - 50000 U each time. IV. **RESPIVAX** - new Bulgarian polymicrobial immunomodulator that proved to have

stimulating effect on antibody synthesis, phagocytosis and cellular immunity was applied to 62 patients with signs of dysfunction of the phagocytosis, humoral and cellular immunity in following dosage: basic course 1 tablet (50 mg) every morning for 30 days; after that 10 days monthly every morning 1 tablet (50 mg) for at least 3 months. V. **ISOPRENASIN** - immunomodulator was also included in the complex therapy of patients with non-bacterial pneumonia and unusually complicated course and with signs of cellular-mediated immunity deficiency. The dose was 50 mg/kg during a period of 7-10 days. To assess the effect of the treatment the following criteria were used - clinical and immunologic: correction of the deficiency and the dysfunction of a particular section of the immunity system. Our results are demonstrated on table 1.

Table 1. Clinical effectiveness of the complex therapy combined with immunomodulators and applied to patients with frequent recurrence of CNPD.

Immuno- modula- tors	Cases n	antirecurrent effect of treatment		Parameters shortening terms of treatment		reducing treatment	
		n	%	n	%	n	%
Decaris	63	41	5,07	40	63,5	28	44,44
Respivax	62	41	66,02	51	82,25	19	30,60
Gamma A	17	5	29,41	7	41,17	5	29,41
Antisteno- cardin	19	12	63,20	3	15,78	3	15,78

Levamisol (Decaris) and Respivax proved to have good antirecurrent effect for two thirds of the treated patients. Dipiridamol proved significant antirecurrent effect in patients with positive response to interferon after induction with it. Gamma A proved small antirecurrent effect and that is why we recommend its usage as an immunosubstitution in the complex therapy. Apart from the favourable clinical effect and practically lack of side effects, usage of various immunomodulators improved some immunologic index without normalization.