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IMMUNOLOGICAL INDICATORS IN PATIENTS WITH CHRONIC PHOSPHORUS INTOXICATION AFTER IMMUNOTHERAPY

Abstract. Studies were conducted on the basis of the medical unit of the Shymkent city production association "Phosphorus". A total of 95 patients with CHPI were examined. Subpopulation of T-helper, T-killers increased. Humoral immunity has been changed. Immunomodulin improves the immune system. After immunotherapy, multidirectional shifts in the concentration of IgM, IgG and IgA were detected. The number of lymphocytes in patients with CHPI of the initial degree of intoxication increased by 12.2%. The subpopulation of lymphocytes CDZ +, CD4 + decreased. The content of immunoglobulin IgG after immunotherapy increased by 34.5%, 55% and 35% compared with the control. Phagocytic activity of leukocytes increased. The rate of completion of phagocytosis increased. Phagocytic index decreased. Thus, immunomodulin stimulates immunopathy. Stimulates hematopoiesis. Effectiveness is noticed.

Key words: T-lymphocytes. T-helper, phagocytosis, immunomodulin, phosphorus.

Introduction. Many xenobiotic substances in the long-term intake of the body have a depressing effect on both specific resistance and cellular and humoral immunity [1].

Currently, the study of hematopoiesis and immune status is of paramount importance, since many pathological processes in humans can be both a consequence and cause of various disorders of the immune system, especially in secondary immunodeficiency States [2].

The aim of the work was to study the state of lymphocyte subpopulations in the blood of patients with chronic intoxication with phosphorus compounds (HISF) of various degrees.

Materials and methods. Blood sampling was carried out from the ulnar vein to the heparinized solution of the medium. Peripheral blood lymphocytes were isolated in ficoll-verografin density gradients the number of T-helpers,T-suppressors and immunoregulatory subpopulations of t-lymphocytes with DZ+, CD4+, CD8+, CD9+ and CD56+ were determined by mono-clonal antibodies in rosette formation reactions. The content of serum IgA, IgM, IgG were estimated by radial immunodiffusion according to G. MAPP et. all. (1965). Phagocytic activity was determined by the method of K. B. Ospanov [3].

The studies were conducted on the basis of the medical unit of Shymkent city production Association "Phosphorus". The study included 95 patients with CPCI, including 35 patients with early stage, S0 moderate and 30 with severe degree CPCI; as a control, were examined 54 healthy workers-builders of Shymkent. As an immunostimulant used the drug immunomodulin [4, 5], which was administered to patients with CPCI composed of conventional therapy daily for 5-10 days. Depending on the degree of intoxication, treatment with immunomodulin with a dose of 0.01 g was: with an initial degree of -5 days, with a moderate degree - 10 days and with a pronounced degree - 15 days.

Results. The content of CD56+ in patients with HYSF after therapy, including immunomodulin, increased with an initial degree of intoxication by 19.9% ($p<0.05$), with a moderate degree - by 24.9% ($P<0.05$) and with a pronounced degree of intoxication by 40.8% compared with the indicators before therapy. The relative and absolute content of subpopulation of CD8 + lymphocytes after immunotherapy

decreased with an initial degree of intoxication by 20.2%, with a moderate degree by 25 and 40% in persons with a pronounced degree of intoxication.

Multidirectional shifts in IgM, IgG and IgA concentrations were detected in the blood of patients with HISF after immunotherapy in the determination of immunoglobulins. Thus, the content of IgM after therapy in patients with initial, moderate and severe degree of intoxication DECREASED by 15% 14.6% and 26%,respectively, compared with the control. The inclusion of immunomodulin in the treatment of patients with HISF had a positive effect on the content of lymphocytes. The number of lymphocytes in patients with initial degree of HISF intoxication increased by 12.2%. The most pronounced increase in the number of lymphocytes was found in the appointment of immunomodulin for 10 days in persons with moderate and severe degrees of intoxication, while the level of lymphocytes increased by 41.6% and 106.5% compared with the control. When determining the lymphocyte subpopulations were observed multidirectional changes, in particular, the increase of relative and absolute content of lymphocyte subpopulations: CLE+, CD4+, СД56+, CD 19+ and at the same time, a reduction in the relative and absolute content of СД19+. The content of SDH+ after immunotherapy in patients with initial, moderate and severe degree of intoxication INCREASED by 19%, 30%, 39.9% compared with the control indicators. Absolute and relative content of CD4+ increased in patients with HISF with initial and moderate degrees of intoxication by an average of 20% and 30.2% compared with the control. The greatest increase in the content of CD4+ was established after immunotherapy in patients with a pronounced degree of intoxication, with an increase of B9%on average. The content of DM 19+ in patients with initial and moderate degrees of intoxication increased by 49.7%, and 50.3% compared with the control indicators, and the greatest increase in the relative and absolute number of subpopulations of DM 19+ was established after immunotherapy in patients with HYSF with a pronounced degree of intoxication. The content of IgG immunoglobulin in patients with initial, moderate and severe degree of HISF after immunotherapy increased by 34.5%, 55% and 35% compared to the control. The content of IgA after immunotherapy in patients with primary CPCI stepeni decreased by 33%, in individuals with moderate and severe degrees of intoxication, the decrease was 42.9% and 33.4%, compared to benchmarks. Patients with CPCI immunotherapy significantly reduced to intensified treatment of the index paracetamol activity and the index of completeness of phagocytosis of neutrophils with a significant decrease in phagocytic index .Phagocytic activity of leukocytes increased by 58.1% 57.9% and 49.8% in patients with initial, moderate and severe degrees. The index of completeness of phagocytosis increased by 61.8%, 65,8% and 70.5% in comparison with indicators before treatment, the indicators of completeness of phagocytosis in individuals with primary and moderate degree close to that of the control data. The phagocytic index, on the contrary, decreased in persons with an initial degree of HISF once, with moderate and severe degrees of intoxication - by 5.1% and 29.1% compared with pre-therapy.

Thus, the inclusion in the traditional therapy of immunomodulin to some extent leads to the normalization of the content of lymphocytes and its subpopulations.

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СОЗЫЛМАЛЫ ФОСФОРМЕН УЛАНҒАН НАУҚАСТАРДЫҢ ИММУНАЛОГИЯЛЫҚ БҰЗЫЛЫСТАРЫ ЖӘНЕ ОЛАРДЫ КОРРЕКЦИЯЛАУ

Аннотация. Зерттеулер «Фосфор» Шымкент қалалық өндірістік бірлестігінің медициналық бөлімі базасында жүргізілді. СФУ мен ауырған 95 науқас зерттелді. Т-хелпер, Т-киллер саны арта бастады. Гуморал иммунитеті өзгерді. Иммуномодулин иммундық жүйені жақсартады. Иммунотерапиядан кейін IgM, IgG және IgA концентрациясында көп бағытты ауысулар анықталды. Ішкі масштабты интоксикация дәрежесі бар науқастарда лимфоциттердің саны 12,2%-ға артты. CD3 +, CD4 + лимфоциттердің субпопуляциясы төмендеді. Иммунотерапиядан кейін иммуноглобулин IgG мазмұны 34,5%-ға, бақылауға қарағанда 55 және 35%-ға артты. Лейкоциттердің фагоцитарлық белсенділігі артты. Фагоцитоздың аяқталу жылдамдығы артты. Фагоцитарлы индекс төмендеді. Осылайша, иммуномодулин иммунопатияны ынталандырады. Гематопоэзді ынталандырады. Тиімділігі байқалады.

Түйін сөздер: Т-лимфоциттер. Т-хелпер, фагоцитоз,иммуномодулин, фосфор.

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ИММУНОЛОГИЧЕСКИЕ ПОКАЗАТЕЛИ У БОЛЬНЫХ С ХРОНИЧЕСКОЙ ФОСФОРНОЙ ИНТОКСИКАЦИЕЙ ПОСЛЕ КОРРЕКЦИИ

Аннотация. Исследования проводились на базе медсанчасти Шымкентского городского производственного объединения «Фосфор». Всего обследовано 95 больных с ХФИ. Субпопуляция Т-хелпер, Т-киллеры увеличились. Гуморальный иммунитет были изменены. Иммуномодулин улучшает состояние иммунной системы. После иммунотерапии выявлены разнонаправленные сдвиги концентрации IgM, IgG и IgA. Количество лимфоцитов у больных с ХФИ начальной степени интоксикации увеличивалось на 12,2%. Субпопуляция лимфоцитов CD3+,CD4+ снижалось. Содержание иммуноглобулина IgG после иммунотерапии увеличилась на 34,5%, 55% и 35% по сравнению с контролем. Фагоцитарная активность лейкоцитов увеличивалась. Показатель завершенности фагоцитоза увеличивался. Фагоцитарный индекс снизился. Таким образом иммуномодулин стимулирует иммунопоэз. Стимулирует гемопоэз. Замечен эго эффективность.

Ключевые слова: Т-лимфоциты, Т-хелперы, фагоцитоз, иммуномодулин, фосфор.

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