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PLENUM OF THE ALL-UNION COMMITTEE ON THE
STUDY OF RHEUMATISM AND DISEASES OF THE
JOINTS AT THE PRESIDUM OF THE ACADEMY OF
MEDICAL SCIENCES USSR

- USSR -

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PLENUM OF THE ALL-UNION COMMITTEE ON THE
STUDY OF RHEUMATISM AND DISEASES OF THE
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MEDICAL SCIENCES USSR

(10-11 April 1959, Moscow)

This is a translation of an article written by S. I. Shcherbatenko in Kazanskiy Meditsinskiy Zhurnal (Kazan' Medical Journal), Vol. 40, No. 5, 1959, pages 104-106.

Therapeutists, pediatricians, otolaryngologists, and pathophysiologists took part in the work of the Plenum. Ministers of Health, S. V. Kurashov and N. A. Vinogradov, and the President of the Academy Med. Sci., A. N. Bakulev were present at its opening.

Reports were submitted on the prevention and pathogenesis of rheumatism, as well as on organizational problems.

The report on the prophylaxis of rheumatism was submitted by Active Member of the Acad. Med. Sci. USSR, Prof. A. I. Nesterov (Moscow).

Experience shows that the streptococcus plays the principal role in the development of rheumatism. Particularly stressed was the basic element in the prevention of rheumatism -- the enhancement of the protective forces of the host organism.

Prophylaxis must be carried out systematically according to State plan, as well as according to an individual plan. The speaker outlined five basic directions in the prophylaxis of rheumatism: 1) development of a healthy, physically well-developed individual, primarily in school children, as well as among adolescents; 2) active control of streptococcus infection; 3) measures by the individual to prevent rheumatic affections and relapses; 4) organization of expert treatment of rheumatism by modern means; an extensive and active dissemination of knowledge among the population on measures of preventing rheumatism, among parents primarily -- also among teachers, students, workers, and employees with higher indices of rheumatic morbidity.

The implementation of the State plan of prevention of rheumatism requires that the agencies of public health of each republic, oblast, kray, and city have their projected annual plan of anti-rheumatic measures, prepared with the participation of specialists and approved by appropriate higher administrative organs (Council of Ministers of the republic, oblast (kray) Ispolkom, etc.)

S. Ye. Lapina and K. M. Kogan (Moscow) related their experience of working on prevention of rheumatism in the department of cardio-rheumatic diseases of the First City Clinical Hospital imeni N. I. Pirogov. To reduce initial morbidity of rheumatism and relapses they carried out a course of antibacterial therapy of focal infections. During the spring and fall seasons they conducted a course of bicillin therapy on individuals suffering from chronic tonsillitis or chronic inflammation of the accessory nasal cavities. The course consisted of six intramuscular injections of 600,000 bicillin units every five days. These courses were carried out twice a year. A tendency toward rarer relapses was observed in these patients.

L. Yu. Bolotina, O. P. Gal'ch'yants and N. L. Borodiyuk (Moscow) reported that within six months following a prophylactic course of treatment, the frequency of relapses was lowest in the group of patients who had received five to six injections of bicillin. The immunological data in these patients support the conclusion that bicillin inhibits streptococcal infection.

The report of G. G. Gorelik (Moscow) was devoted to his work in a rheumatological office on the prevention of rheumatism in children.

Bicillin prophylaxis was carried out only in those children whose tolerance was good. The courses consisted of four injections per month in the fall and spring. Bicillin proved effective in a large percentage of cases and the speaker recommends its use, though the question of dosage, length of the course, and frequency require further study. The speaker suggests the combination of bicillin injections with administration of gamma-globulin and vitamin therapy.

The majority of reports were devoted to problems of pathogenesis and the determination of the activity of rheumatism.

The data presented by A. N. Nesterov demonstrated that the new diagnostic methods are finer and more sensitive and they also enable one to judge the effectiveness of therapy.

The use of immunological methods in the diagnosis of rheumatism and infectious arthritis was discussed in

the report by V. I. Sachkov, N. I. Kuznetsova, V. N. Anokhin, and Yu. K. Tokmachev (Moscow).

According to these authors, determination of C-reactivity is the most valuable test in rheumatism. Among the reactions with antigens, the determination of antistreptokinase is more dynamic. In the immunology of rheumatism, attention must be paid to the change in the antigenic properties of tissues. In elucidating this change they employed the dielectric method which enabled them to establish the closeness of the antigenic properties of the serum of rheumatic and infectious arthritis patients, as well as detect the streptococcus antigen in the blood in rheumatism.

I. M. Lyampert (Moscow) reported that the reactions of determination of antihyaluronidase, streptokinase, and anti-O-streptolysin have been modified in the Institute.

In testing these reactions on rheumatic and healthy individuals, as well as on people with streptococcus infections (chronic tonsillitis, scarlet fever, streptococcus angina, acute and chronic nephritis, polyarthritis), it turned out that these antibodies reach a high level and are manifested more frequently in acute rheumatism, as compared to the other mentioned diseases.

In rheumatic patients the streptococcus antigens in the blood are detected more often and in larger concentrations than in streptococcus tonsillitis.

E. R. Agababova, N. T. Yareshka, Ye. Ye. Nechayeva (Moscow) think the streptococcus infection not only precedes rheumatism but is present in the acute as well as during the intervals between attacks of the disease.

Prof. P. P. Sakharov and Ye. I. Gudkova reported on methods of determining the allergic state and the acuteness of the infectious process in rheumatic patients.

He developed a streptococcus allergen, named "fibrin-allergen", for the elucidation of bacterial allergy and its strength in chronic tonsillitis and rheumatic patients. Allergen is administered intracutaneously in two, four, or ten doses. In rheumatic patients the positive reaction to ten cutaneous doses developed in 92.1 percent of cases, and in healthy individuals in 18.4 percent. Allergen can be used for the evaluation of the effectiveness of the desensitization therapy. Allergen was also used for the purpose of specific desensitization by administration into the tonsillar tissue.

Prof. V. I. Ioffe (Leningrad) presented a report outside the program on the "General Principles of the Study of Immunological Processes in Rheumatism." He noted that the study of rheumatic immunology must be conducted along the lines of elucidation of the rheumatic immunology of the

streptococcus, as well as general immunology of the infectious process (autosensitization) and general immunology of reactivity connected with allergization.

Z. I. Malkin and S. I. Shcherbatenko (Kasan') devoted their report to clinical evaluation of a number of non-specific reactions in rheumatism and their significance in diagnosis and treatment.

Of considerable interest were the observations on the state of phagocytic activity of leucocytes, cholinesterase, acetylcholine, elimination of 17-ketosteroids, as well as the carbon anhydrase in the blood and the intensity of phosphorylation processes. In the study of metabolic processes the most important is the protein metabolism.

A simultaneous determination of cholinesterase and acetylcholine offers valuable data for determining the activity of the rheumatic process. The active rheumatic phase is characterized by a higher content of acetylcholine and a reduction of cholinesterase. Disappearance of acetylcholine and drastic inhibition of cholinesterase are characteristic of rheumo-septic and septic endocarditis. Such disturbances are of poor prognostic significance in rheumatic therapy. The ratio of cholinesterase and acetylcholine is normalized in effective therapy.

Docent P. N. Yurenev compared the antihyaluronidase activity of the serum (in 84 patients who had undergone mitral commissurotomy) with the clinical, pathological (biopsies made of the auricles of the left atrium), and immunological indices, and found that the rise in the titer of the antibodies depends on the stage and form of the disease, and reflects on the whole the state of allergization and the general reactivity of the organism.

Pediatrician Prof. P. A. Panomareva (Moscow), on the basis of observations carried out at the poly clinic and hospital, concluded that rheumatism may for long periods of time proceed under the guise of general disturbances and intoxication phenomena without any acute clinical symptoms.

In detecting rheumatism in its early stages in children, of great importance are such methods as the determination of fractional sedimentation of erythrocytes, phonodacryography, determination of the antihyaluronidase level in the blood, and the electroencephalogram record.

According to Ye. V. Kovaleva and T. V. Dratvina (Moscow), the most sensitive tests in determining the rheumatic process activity in children is the dynamics of antihyaluronidase content of the blood and the correlation of protein fractions of the blood, determined by electrophoresis on paper.

Prof. B. S. Preobrazhenskiy and T. N. Popova (Moscow)

found that tonsillitis which precedes an attack of rheumatism has characteristic clinical and morphological symptoms. Clinically it is characterized by diffuse hyperemia and infiltration of the anterior and posterior arcs, while the tissue of the gland itself remains relatively intact. Morphologically, an Ashoff-Talalayev granuloma is present in the tonsillar capsule, but only in patients where tonsillitis preceded the attack of rheumatism. On this basis, the authors expressed an opinion that such an angina is specifically indicative of rheumatism.

The tonsils are not necessarily the primary area affected by rheumatism; any other section of the upper respiratory tract can be affected. Therefore, removal of the tonsils may create better perspectives for the subsequent course of rheumatism, but it does not usually prevent the appearance of a general hyperergic reaction connected with the entrance of exogenous and endogenous toxins from other sections of the upper respiratory tract.

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