STIMULATION OF TYPHOID AGGLUTININS UNDER THE INFLUENCE OF THE EV PLAGUE VACCINE

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[Following is the translation of an article by Z. N. Prikhodoko and V. A. Romanov, Voronezh Medical Institute, appearing in the Russian-language periodical Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (Journal of Microbiology, Epidemiology and Immunobiology), No. 11, 1964, page 145. It appeared in the section "Author's Abstracts". Translation performed by Sp/7 Charles T. Ostertag Jr.]

The aim of the work was to clear up the stimulating influence of killed plague vaccine of the EV strain on the formation of typhoid agglutinins in rabbits. In the test 12 rabbits weighing 2 - 2.5 kg were used.

The day before setting up the test all the rabbits were checked for the presence of normal typhoid agglutinins. The animals were immunized subcutaneously in the area of the lower third of each limb. Rabbits of the control group were immunized with a killed typhoid culture (three times with intervals of 7 days in doses of 1, 4 and 4 ml suspensions containing 1 billion microbial cells in 1 ml); the animals of the first test group received typhoid and plague (EV strain) vaccine simultaneously (three times with intervals of 7 days, typhoid vaccine in the same doses, plague -- in doses of 1, 2 and 2 ml suspensions containing 3 billion microbes in 1 ml); the animals of the second test group received the plague vaccine first and after 7 days the typhoid vaccine. On the 44th day the rabbits were revaccinated subcutaneously with killed typhoid vaccine (0.25 ml in each limb). The titers of typhoid agglutinins in the blood serum of all the rabbits was determined in various periods (from the 7th through the 74th day).

The investigations showed that the immunization of rabbits with typhoid vaccine led to a significant production of agglutinins; the maximum of antibodies was noted on the 14th day. The simultaneous immunization of rabbits with plague and typhoid vaccine led to a stimulation in the accumulation of typhoid agglutinins, the maximum of which was noted on the 7th day. The preliminary administration to the rabbits of killed plague vaccine of the EV strain with the subsequent immunization with typhoid vaccine led to a depression of antibody formation -- the build-up of antibodies took place slowly and the titer reached maximum only on the 21st day.