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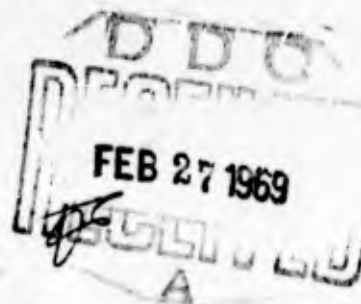
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Author's Abstract of
THE ROLE OF VACCINATION-IMMUNITY IN PROTECTING
THE ORGANISM AGAINST INHALATORY INFECTIONS
(COMMUNICATION II)

V. M. Nikitin
(Faculty of Microbiology,
Kirov Academy of Military Medicine.)

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The object of the work was the continued study of the role of active immunity in protecting the organism against inhalatory infection with respiratory diseases.

As our experimental model, we used a pasteurellosis infection in rabbits. Chinchilla rabbits of the same age (5-6 months) and weight (1.8-2.5 kg) were obtained from a rabbit farm with good record as regards pasteurellosis. After fifteen days of observation without detection of any marked symptoms of disorders of the upper respiratory passages, at normal temperature and with absence of specific agglutinins, the rabbits were cleared as healthy and accepted for the experiment. A virulent strain of *Pasteurella avis* was used. Subcutaneous injection of 1 ml of a one-day broth culture diluted 1:100 mln. caused death of the rabbits; one Dcl inhaled was equivalent to 3000-5000 microbe cells.

For immunization we used a warmed *Pasteurella* culture grown in Hottinger broth inside a cellulose sack immersed in the broth. A total of 44 rabbits was used in the experiment, of which 26 were immunized, with the remaining 18 serving as controls.

The rabbits of the first group (10 in number) were twice immunized subcutaneously (3.5 and 5 billion microbes) with an interval of thirteen days. Fifteen to seventeen days after the immunization, their agglutinin titer varied from 1:200 to 1:800, but the inhalatory introduction of 1 and 10 Dcl of *Pasteurella* destroyed all of them along with the controls.

Rabbits of a second group were triply immunized subcutaneously at six-day intervals; four of the rabbits being given 5 billion microbes (1-2-2 billion) and 6 rabbits 3 billion (1-1-1 billion) microbes of warm vaccine. Fifteen days after the immunization, their agglutinin titers varied from 1:400 to 1:1600. After a 10 Dcl inhalation, 6 controls and 3 out of the 8 immunized rabbits perished within 10 days. Two rabbits inoculated 30 days after immunization and exhibiting agglutinin titers of 1:1600 and 1:3200 did not die.

Rabbits of a third group (4 in number) were doubly immunized subcutaneously (3.5 and 5 billion microbes), and seventeen days after the last injection were reimmunized intravenously (1 billion microbe cells). Seven days after reimmunization their agglutinin titers were 1:3200 - 1:6400.

A 10 Dcl inhalation produced one casualty (and both of the controls died).

Thus judging by the agglutinin titers, subcutaneous immunization of rabbits with warmed Pasteurellosis vaccine brings about an immunological readjustment in the organism of the rabbits, but did not save them from destruction by inhalatory infection with a lethal dose of Pasteurella. Triple intravenous and subcutaneous-intravenous immunization produced a specific immunity of sufficiently high degree to protect the animals against inhalatory infection with several definitely lethal doses of Pasteurella.