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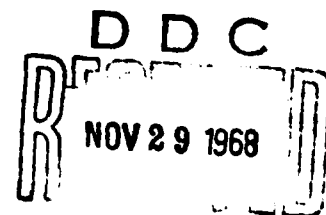
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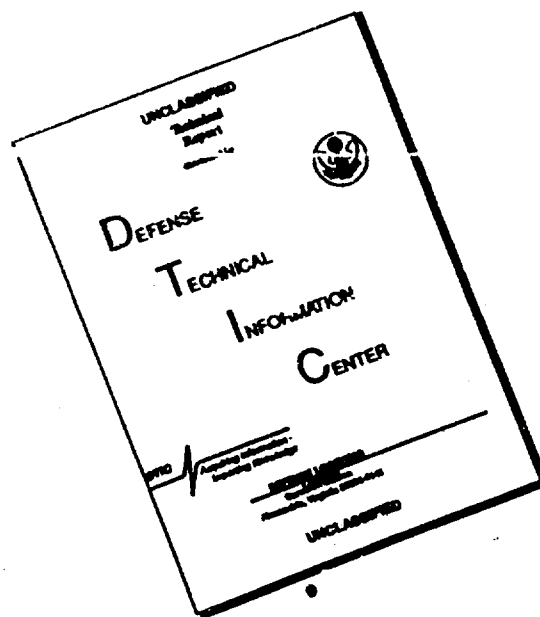
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S. TYPHI VI ANTIGEN PREPARATION USED FOR
IMMUNIZATION OF PRESCHOOL CHILDREN

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i Immunologii (Journal of Micro-
biology, Epidemiology and Immunology)
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The use of Vi antigen for the purpose of typhoid fever prophylaxis in preschool children under the conditions in the southern regions of the country showed the high effectiveness of the preparation in the case of low reactogenicity. (Pokrovskaya and associates, 1965; Putrin, 1965; Braynina and associates, 1965, et al.). It was of interest to study the effectiveness of the preparation mentioned under northern conditions.

Immunization of the children was carried out in June-July 1965 in ten cities and settlements and one rural district. The vaccinations were administrated strictly in accordance with the methodical instructions drawn up by the Moscow Institute of Epidemiology and Microbiology and approved by the Ministry of Health RSFSR. Special charts reflecting the sanitary and epidemiological character of the contingents were started on all the vaccinated and unvaccinated children aged 3 to 7 years. Trained vaccination squads headed by an epidemiologist or a pediatrician carried out the immunisation. Data for keeping records of the disease rate among the vaccinated and unvaccinated children were concentrated at the observation point at the oblast sanitary epidemiological station.

The Vi antigen was administered subcutaneously in the area of the lower angle of the scapula in a single 0.5 ml (400 γ) dose.

In all 16,774 children, including 11,162 vaccinated ones, were under observation. The 5295 unvaccinated children (absent at the time of the inoculations, refusal, temporary medical rejections) constituted the control group. Among the vaccinated and unvaccinated cases respectively were 4242 and 2375 children who were attending children's institutions.

Upon analysis of the sanitary characteristics of the nutrition, water supply and living conditions of the children under observation no appreciable differences were discovered in the vaccinated and unvaccinated groups.

Records of the typhoid disease rates among the vaccinated and unvaccinated children were kept according to a single method. The records were begun 30 days after the completion of the vaccinations. The observation period was 11 months.

A single immunisation of the children with Vi antigen brought about a tenfold drop in the typhoid disease rate among the vaccinated children.

The immunisation of children aged from 3 to 7 years had a marked effect on the general level of the typhoid disease rate in the populated areas where vaccination was carried out. Thus in the areas studied the typhoid disease rate in 1965 dropped 25 percent as compared to 1964.

The effect of the vaccinations on the typhoid disease rate in the group of children 3-7 years old appeared even more significant: if in the first half of 1965 the number of illnesses in this group increased 15 percent compared to the first half of 1964, in the second half of 1965 it dropped 52 percent compared to the analogous period of 1964. In the first half of 1966 the typhoid disease rate in the indicated group of children remained at the level of the second half of 1965.

Of the number vaccinated one child became sick 33 days after the vaccinations, the rest — after 7-9 months.

Some immunological indices have been studied in 32 children before and 30 days after vaccination. After immunisation the bactericidal index increased 2.5 times on the average, the Vi antibody titer in the Vi hemagglutination reaction increased 9.1 times, and the 7S antibody titer increased 2.8 times.

The results of study of the epidemiological effectiveness of immunisation of *S. typhi* in children aged 3-7 years with Vi antigen and of the indices of immunological shifts testified to its high effectiveness as a preparation for systematic specific prophylaxis of typhoid fever among preschool children.

CONCLUSIONS

1. A single immunisation of *S. typhi* by Vi antigen in a 400 γ dose led to a tenfold drop in the disease rate in the group of vaccinated children aged 3-7 years.

2. Vi antigen can serve as a preparation for the systematic immunoprophylaxis of typhoid fever in preschool children.

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