Smallpox (Alastrim) in Paraguay

Control of the 1947 Epidemic as Compared with Typhoid Fever, Tetano and Diphtheria.

by

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It is known that in wartime and in postwar periods smallpox tends to spread among the people living in those areas. (1)

The Republic of Paraguay in 1947 was the theater of a violent civil war, later called the “Revolution de Conception”, and according to that rule Paraguayanans suffered a sudden increase of the incidence of smallpox (alastrim).

Only in 1947 the country’s sanitation officials were informed of its existence when there were already 2,328 cases amongst a population of approximately one million people.

Arriving in Paraguay at the beginning of 1948, carrying instructions to start the Microbiology Department of the “Instituto de Higiene de Asunción” which would eventually study and prepare vaccines against the communicable diseases (smallpox, alastrim, typhoid fever, tetanus and diphtheria) largely spread at the moment, and in order to immediately start a campaign against the epidemics, we sent for smallpox vaccines from Instituto Osvaldo Cruz of Rio de Janeiro, preparing at the same time our own vaccines also made up, with virus received from Brazil.

With the collaboration of the distinguished Paraguayan sanitarian, Dr. Emilio Velilla, Head of the Department of Epidemiology of the Ministry of Public Health, we began a mass vaccination of everyone exposed to the disease, in all the clinics, in every department of the country.

The benefits derived from these sanitary measures were apparent when smallpox cases decreased, so much so that in 1948 their number dropped to less than 1500, and finally came down to 150 cases, i.e., the same number of cases known to exist in 1946 before the outbreak of the epidemic, as shown in Fig. n.º VIII.

A few years have gone by since the population of Paraguay was systematically and intensively vaccinated with vaccines prepared from virus especially sent down from Brazil, and later after we left Paraguay
in 1949 made up by our distinguished pupil in that country, Dr. Carlos Castillo. It is interesting to note from the statistical data we requested and which we promptly received from the Ministry of Public Health of Paraguay, the excellent results obtained. It can be seen in the figure below not only that the outbreak of the epidemic that started in 1947 was under control, but also that there was a gradual and significant decrease of the incidence of typhoid fever in the country thanks to the regular and intensive vaccination against typhoid fever with vaccines prepared by us while visiting that country. It is also shown in the same figure that the occurrence of tetanus and diphtheria amongst the Paraguayans has practically suffered no substantial changes because no plan was ever carried out to fight these diseases as the one of general vaccination of the people against smallpox and alastrim.

The virus responsible for the 1947 epidemic was not identified at that time because of lack of means to do so, but taking into consideration the hispathological diagnosis previously made by Dr. Magarinos Torres, as well as the clinical development and the ever mild character observed in all cases, one can assume that it was the alastrim virus and not the real smallpox virus.

CONCLUSIONS

1 — Vaccines prepared with the Brazilian virus from Instituto Oswaldo Cruz have shown to be efficient and to have a protecting power against the virus which caused the 1947 epidemic in Paraguay (alastrim and smallpox), and the after four years of regular application no post-vaccination accident was ever reported.

2 — The plan for a general immunization of the people carried out by the Ministry of Public Health of Paraguay through its several departments of sanitation which were created in accordance with the density of the population proved to be very efficient since the 1947 outbreak of the epidemic was perfectly controlled.

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