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TECHNICAL DISCUSSIONS - POLIOMYELITIS

POLIOMYELITIS IN IRAN

by

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In a previous report¹ it was attempted to demonstrate that:

1. Poliomyelitis in its paralytic form is not a rare condition in Iran.
2. Although sporadic cases are seen throughout the year, so far there has not been an "epidemic".
3. Cases before six months of age and after five years were not seen.
4. Foreigners travelling to Iran if not vaccinated are in danger, and in these cases young adults are susceptible and the disease is usually very severe.

Since the previous report the position has not altered, except that it appears that the number of cases are gradually increasing. This may be due to awareness on the part of medical practitioners and the general public.

During the last year two cases were seen (one by myself and the other by Dr. Mokhtar-Zadeh) over the age of five (Six years and eight years respectively).

The physicians' interest in this condition was well demonstrated in a recent symposium held in Pahlavi Hospital. For nearly five hours some hundreds of physicians attended this symposium.

The general public's interest has been awakened mostly by agents of pharmaceutical firms who provide the vaccine. This interest had nearly reached the stage of hysteria.

¹EM/RC9B/Tech.Disc./4, 1 September 1959

Literally thousands of children of all ages of the middle and upper classes have been vaccinated against poliomyelitis. Unfortunately even now the condition is not notifiable, and therefore frequency and distribution of the condition in the country cannot be estimated.

During the last few years, the Pasteur Institute of Iran (Director Dr. Baltazard) made great progress in the study of this condition, and a summary of their activities follows:

In 1955 the Institute with the help of the University of Maryland and Walter Reed Army Institute of Research in America, began serological studies on poliomyelitis in Iran. Of the first 15 sera obtained from children older than five years, in 14 cases antibodies to all three types of virus were found and in one case two types 1 and 2.

In a small isolated village in Kurdistan (Akinloo) all 35 sera from cases aged six to twenty years, demonstrated antibodies to the three types. In ten children below the age of five, eight showed all the three types.

In 1957 Dr. Pournaki after a course of studies on poliomyelitis-virology in Paris, began working on this problem in a special department in the Pasteur Institute of Tehran.

First the sera of 52 children and adults above the age of five from all classes of population were examined. All showed antibodies. 32 to all three types, 15 to two types and 4 to one type only. Only in one case were there no antibodies to type 1.

To study the position in newborn infants, umbilical cord blood was obtained in 110 cases. In 12 the results were discarded as not "readable". In the other 98 cases all showed the antibody, 51 to three types, 39 to two and 8 cases to one. Again only one case did not have the antibody to type 1.

In 1958 sera from 200 patients from the Bongah Nikookari Children's Hospital, aged two to twenty-four months were examined. This demonstrated that antibodies rapidly diminished up to the age of six months. At the age of nine months absence of antibodies was noted in 100% of cases, at ten months in 75%, at thirteen months in 50% and at eighteen months in 25% of cases. At the age of two years 85% of cases showed antibodies.

Virus Isolation

Faeces from 106 children aged less than four years from Bongah Nikookari were studied. Before six to twelve months, 6 out of 16 showed that they were carriers. From seven to twelve months, 9 in 13. In the second year 23 carriers in 30 cases; in the third year 13 in 23 cases and in the fourth year 25 in 41 cases.

Of 75 isolated viruses 33 were definitely identified, 8 were poliomyelitis and the others were Coxsackie, Echo, etc.

127 cases of clinical paralytic poliomyelitis were sent to the Institute by Dr. Mokhtar-Zadeh and myself for laboratory studies. In 46 cases polio-virus was isolated, 36 cases type 1, 6 type 2, and 4 type 3.

CONCLUSION

Poliomyelitis is now recognized by doctors and the public, as an endemic condition and preventable.

All children born have maternal immunization, but this rapidly diminishes up to the age of six months. From then up to the age of two years immunization is acquired in up to 85% of the cases and by the age of five is nearly 100%.

Therefore poliomyelitis is practically unknown below the age of six months and above the age of five years.

Two new cases above this age show that with increased hygienic development in the country older cases will appear in the future.

Notification of this disease and spreading the true facts about the epidemiology of the condition to the general public would greatly mitigate the present wave of 'hysteria'.