

Infantile Paralysis

Owing to the menace that Infantile Paralysis presents to the municipalities of Canada by the proximity of the epidemic that has spread itself over the City of New York, a great responsibility rests upon the health departments of our urban centres to prevent the dreaded scourge from invading this country. At this time of writing there do not seem to be many cases of Infantile Paralysis in the Dominion—or if there are they have not been made public—but the danger is too near our doors to be treated with indifference. Canada is specially fortunate in the wholesome physique of the people, as compared with older countries, and it would indeed be a bad day for her if the disease, which is now scourging the United States, was to secure a hold here, as can be testified by those who have seen the awful results.

The disease itself would seem to be the result of an attack by an organism or parasite on the contents of the spinal cord. The healthy child is just as subject to infection as the weakly, and the attack comes quickly. Children have been quite well and healthy at breakfast time and cripples an hour afterwards. While infantile paralysis is not new (it has been somewhat prevalent for a long time in Scandinavian countries, though not to the extent of an epidemic) medical science does not seem to have successfully grappled with the disease, beyond coming to the conclusion that the best preventatives are cleanliness and open air isolation. The insisting on both of these necessary precautions are within the province of municipal councils and their medical staffs, and a rigorous campaign of hygienic education should be the order of the day in every community. The New York authorities have stopped all children under the age of sixteen attending motion picture shows and are even killing off the cats and dogs in the city to stop the risk of transmission as much as possible, though no direct evidence has been forthcoming that the disease has been spread by these domestic animals. The American authorities are taking no chances now, neither should the civic authorities of Canada. We must take heed of New York's warning with its toll of thousands of young stricken children. We cannot afford to play with the danger.

Among the few medical men who have made a study of infantile paralysis is Dr. Simon Flexner, of the Rockefeller Institute. Some of his conclusions taken from the New York Times might be quoted as follows:

"Poliomyelitis, or infantile paralysis, affects chiefly, but not exclusively, young persons; it may and not infrequently does affect adults and no age is absolutely free of danger of infection."

"The virus of infantile paralysis exists in the secretions of the nose and throat and in the intestines. Hence the mode of spread may be by kissing, coughing, and sneezing, which carry the secretions of the nose and throat from one person who may be infected to other persons.

"Since the disease attacks by preference young children and infants whose nasal and mouth secretions are wiped away by mother or nurse, the fingers of these persons readily become contaminated. The care of other children by persons with contaminated fingers may, therefore, lead to the conveying of the infectious micro-organism indirectly from the sick to the healthy. This danger also exists in connection with vendors of food which is eaten uncooked. The existence of cases of infantile paralysis in the homes of vendors of food is, therefore, a perpetual

source of danger. Dissemination can be made by means of house flies.

"Treatment involves isolation of the actually ill, proper care and destruction of contaminated discharges, supervision of persons in contact with the ill and of all vendors of food, exclusion of all flies, and general sanitary control of the personnel and habitations of families in which the disease exists.

"No age is absolutely free of danger of infection, although infantile paralysis affects chiefly young persons. It not infrequently affects adults. Moreover, as indicated, the disease is one that can be communicated by healthy persons who have been in contact with the sick, but who are themselves well."

The idea of contagion in respect to epidemic poliomyelitis is not a new one, but appeared in the literature of more than a quarter of a century ago, and of late has been frequently invoked. The clinical course of the disease indicated an infectious origin, but up to very recent times no convincing knowledge concerning the nature of the agent causing infantile paralysis existed. The epidemic of 1907 in this country (United States), in France and in Germany led to a renewed study of the nature of the infection, in the course of which the more subtle and recent methods of bacteriology were employed.

These methods led almost simultaneously, in the United States, by Dr. Lewis and myself, and in France, by Landsteiner and Levaditi, to the discovery that the infectious agent was an extremely minute micro-organism that readily passed through the pores of earthenware filters and constituted, therefore, an example of the so-called filterable viruses, of which at the present time several examples are known to cause infectious diseases in man and the lower animals. The filterable nature of the virus has now been confirmed wherever the subject has been accurately investigated. On acquisition of the fact of the nature of this virus, and of the further fact, on which the discovery of the nature of the virus actually depends, that both the higher and lower monkeys are subject to the experimental disease, rest the recent great advances which have been made in the investigation of infantile paralysis.

The chief terror of the disease lies in its appalling power to produce deformities. When death does occur it is not the result, as in many infections, of a process of poisoning that robs the patient of strength and consciousness before its imminence, but is caused solely by paralysis of the respiratory function, sometimes with merciful suddenness, but often with painful slowness, without in any degree obscuring the consciousness of the suffocating victim until just before the end is reached. No more terrible tragedy can be witnessed.

Caused By a Fly.

A very interesting hypothesis is given in the Boston Transcript by Mr. Philip A. E. Sheppard, who has made a special study of the disease since 1909. He asserts that infantile paralysis is carried by a species of stable-fly, a biting fly, known as *Stomoxys calcitrans* (Linne), basing his belief, for one reason, on the fact that the occurrence of the disease in epidemic form is nearly identical with the life incidence of this fly. Infantile paralysis, in its epidemic form, has never appeared to any great extent until some time in May, one month after this particular stable-fly has begun to appear in abundance. Although the hypothesis has been challenged, this reason, and a number of others, keep Dr. Sheppard still convinced to-day of its acceptability, pending disproof.

THE TROUBLESOME BOY.

If there is one lesson more than another that social workers should learn it is to maintain their faith in the troublesome boy, and never give up in their determination to pull him safely through the unsettled, wayward years of adolescence. With faith and perseverance the ultimate reward is certain, even though we may never know in actual experience of the reformation and steady life.—J. J. Kelso.