

AN EPIDEMIC OF DIARRHŒA, PRESUMABLY MILK-BORNE.

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MILK-BORNE EPIDEMICS IN GENERAL.

Milk-borne epidemics, as a rule, show certain characteristics which distinguish them from all other epidemics.

1. A very sudden outbreak and a gradual decline.
2. The first cases appear among milk users.
3. The severity of the outbreak depends on the distribution of the infected milk and the amount of infection present in the milk.
4. The length of the epidemic varies with the period of incubation of the disease, the length of time the milk is infected, and contagiousness of the disease.
5. Secondary cases very often occur.

THE DUBLIN EPIDEMIC.

On August 5, 1913, there broke out in Dublin, N. H., an epidemic of diarrhœa exhibiting all of these above-named characteristics. At first the outbreak was localized along one milk route, but soon became general and spread throughout the entire community. During the first few days of the epidemic there was a sudden rise in the number of cases reported and the total jumped from a few cases to thirty-one, all of which were in households taking milk from this one milkman.

The Dublin Chemical and Bacteriological Laboratory had been making routine bacteriological tests of all the milk sold in Dublin. On August 4th the milk from this particular barn was found to be infected with *B. coli*. Up to this time the total count had been very low, with absence of coli and streptococci. Immediately a survey of the barn and surroundings was made and the following data collected:

Two members of the family had had diarrhœa on the evening of August 3d. One of these persons handled the milk in the milk room.

An open privy, which had been overlooked up to this time, was discovered in the horse stable immediately adjoining the milk room. Flies were in great abundance, and it was admitted by a member of the family that they were frequently found in the milk room.

The milk continued to show coli until August 8th, when it cleared up entirely.

THE NATURE OF THE DISEASE.

The disease showed a very rapid onset accompanied by pain, high temperature, nausea and vomiting. Diarrhœa always followed. Secondary cases were numerous, especially among children.

THE SPREAD OF THE EPIDEMIC.

Until about August 12th, all cases occurred along the suspected milk route. Over 60 per cent. of these milk users were infected. On that date one of the neighbors of an infected household came down with the disease. From then on the contagion spread from one family to another, probably through contagion, until nearly every home in the community had or had had the disease.

Nothing was done to investigate the causes, although the State Board of Health was asked to look over the situation.

It might be said, to eliminate as many probable causes as possible, that the town of Dublin does not have a common water supply. Most of the water comes from driven wells or from the lake. Dublin is a summer resort and everything is done to keep the town in as sanitary a condition as possible.

CONCLUSION.

The epidemiology of this outbreak has not been studied carefully enough to permit us to draw any positive conclusions. I have tried to show the relation of the epidemic to the milk infected with coli. The evidences seem to incriminate the milk, although a positive diagnosis of a milk-borne epidemic cannot be reached from the data at hand.