

In the face of danger we turn to a higher power and become very devout. We wrestle mightily in prayer with the Lord when epidemics decimate our population, when droughts occur cutting off our food supplies, or when floods destroy our growing crops, but when things go well, the human mind is such that it forgets danger. We are very much like the little boy who said his prayers regularly at night, but not in the morning on the ground that he could take care of himself during the day time. This has been expressed aptly in the old quotation:

“The devil was sick, the devil a monk would be,
The devil was well, the devil a monk was he.”

1. *Birmingham's Health*, The Jefferson County Board of Health, Feb., 1934.

AMEBIC DYSENTERY IN CHICAGO

THERE are many reasons why the outbreak of amebic dysentery in Chicago in 1933 still holds intense interest. Some of these are practical and some scientific. On the practical side it will be recalled that the Exposition for 1934 opened in May. Already some of the daily papers are asking whether precautions have been taken to make the city safe for visitors, and repeating the charge that the news last year was suppressed. On the scientific side it must be pointed out that, as far as we have been able to determine, this is the first epidemic of the sort which has ever been recorded. The health officers had an entirely new problem to deal with, and there is no question that it took them by surprise, as it did everyone else. The paper read before this Association on October 9, 1933,¹ attracted little attention; so little, in fact, that a prominent officer of the Public Health Service who heard it went back to Washington and did not even mention it. Some days later the report of a physician in Indianapolis that there were 5 or 6 cases of the disease in that city, all traceable to Chicago, gave the first intimation of its seriousness. Following this, on November 25, came from Boston² what was probably the first information which showed how widespread the infection was, cases in Canada and elsewhere being reported. There was no official publication from the Board of Health of Chicago, as such, until November 18,³ though on November 14, the radio was used.

The health authorities of Chicago have been blamed severely for suppression of the news and it has been charged that it was done in order not to scare visitors away from the Exposition.

A careful and what we believe to be an unbiased investigation fails to substantiate such a motive, though the facts are as just stated.

It must be remembered that very few of these cases occurred in Chicago, two having been reported on August 16, the date which the authorities fixed as the beginning of the outbreak. Owing to the period of incubation, which has been fixed by several observers on epidemiological evidence as from 12 to 30 days for the majority of cases, and even longer for others, visitors had arrived home in Canada and various parts of the United States before being taken sick. Doctors have all been taught that amebic dysentery is a tropical disease, and were not looking for it. Various diagnoses, such as appendicitis, colitis, ulcerative colitis, etc., were made. Operations for appendicitis were entirely too frequent, and the evidence shows that the majority of deaths have occurred among those who were operated on under mistaken diagnoses. Up to January 24, 1934,⁴ 721 clinical cases of amebic dysentery in 206 cities have been found and traced to Chicago,

in addition to which, 1,049 carriers have been found in Chicago. Ninety-four per cent of the cases detected were guests at either Hotel C or A. Hotel A obtained its water from a tank on the roof of Hotel C. This water had been used for cooling and air conditioning purposes before being pumped to the roof. On January 22, a committee met in Chicago for 6 days and heard reports. Their conclusions have entirely changed the picture if they are accepted. In the meantime engineers have studied the situation, and several men who are specialists in the study of tropical diseases have been called upon.

As early as November 22, the hotels incriminated were directed to improve their plumbing arrangements. The Board of Health has had some 15 engineers or technical assistants making an intensive study of the water and sewage systems of the hotels involved. It must be said that they were in a mess. Like Topsy, the system has just "growed," without noticeable planning. The house engineers have been in the habit of making repairs and additions without notifying the city. The inspection of hotels is not what it should be. Several city departments have inspectional powers, such as the Building Department, Fire Department, License Department, Department of Gas and Electricity, Smoke Inspection Department, Department for the Inspection of Steam Boilers, Department of Public Works, and Board of Health. It would seem that concentration of responsibility might have led to better results. Since the depression and the bankrupting of the city by the former administration, there is a shortage of inspectors, and even new work is scarcely kept up with, much less watching old work, repairs, alterations, etc. The evidence is that two hotels were responsible for 94 per cent of the cases detected. Careful charts have been made showing the dates of registration of the visitors and the dates when their bills were paid, as well as the appearance of the symptoms and the course of the disease as far as possible. If any considerable number of cases have occurred in the city, they have not been detected.

The hotels involved have been ordered to rearrange entirely their plumbing systems and to install new works throughout. The older part of the chief hotel dates back to the time when steel pipe was considered the best material for such work. The sanitary sewer pipes were found to be badly corroded, so that the writer pushed a five cent kitchen fork through the main pipe. Many leaks existed and, in a number of places, wooden plugs now badly rotted had been used to stop holes. Unfortunately, the sanitary sewer which carried some 62 per cent of the load of the hotel passed directly above the tank in which water was refrigerated for the dining rooms and the floors. The ice machines, the laundry, the machine shop, the room for the preparation of the desserts, etc., were all on the same floor and were below the level of the street sewer. Two 4 inch sewer pipes intended for overflow emptied into a cement trough under the laundry tubs. All leakage was carried to sumps and forced to the level of the street sewer.

The committee mentioned found that following two rains on June 29 and July 2, the street sewer broke, flooding the basement of Hotel C and running directly into the ice storage house. In their report a good deal of stress was laid on this, but the epidemiological evidence collected since shows that following this accident there was a remission of cases for approximately 3 weeks, which the engineer in charge attributed to improved drainage!

The numbers of carriers and active cases, most of whom worked in the basement of Hotel C, has been repeatedly given.⁴ It seems that the committee approached the question with a firm conviction that the disease was due to carriers and active cases among food handlers, and there is little doubt that the great majority of

people who have studied the question have believed in the same origin. Leaky sewers and cross-connections and a generally bad condition of plumbing would have furnished the means of spreading the infection. Great doubt has been thrown upon this method of origin by the investigation of Spector and Buky.⁵ The drying of the amebae rapidly destroys them—a matter of minutes. In an experiment on this point, the hands of doctors were painted with a thick emulsion of feces rich in cysts. Drying for even a few minutes destroyed them, as tested by the vital staining which protozoölogists hold constitutes an accurate diagnosis between living and dead organisms, the living cysts refusing to take aqueous eosin, while the dead ones absorb it readily. These experiments seem to do away in great measure with the carrier question; but it does not entirely absolve food handlers who are carriers and serve salads which are sent up in a moist condition.

There are still many problems to be answered. What, for example, is the relation between the large cyst and the small cyst? Some of our best known authorities claim that they are the same, but Dr. Spector finds that she can cultivate the large cysts without trouble, whereas failure attends the great majority of her efforts on small cysts. On the face of it, this would indicate some difference in the two organisms.

Certainly the studies in Chicago will compel us to rewrite our chapters on amebic dysentery. The committee referred to acknowledges that there is much room for study and, while we deplore the tragic events which have made this investigation necessary, there is little question that in the end, all health officers in this country as well as others, will be in a better position to avoid such outbreaks in future and to handle them when they occur.

A symposium on the subject was a feature of the meeting of the American Medical Association in Cleveland in June, and for our own meeting in Pasadena in October a discussion has been arranged.

REFERENCES

1. Tonney, Hoeft and Spector, *J.A.M.A.*, Nov. 18, 1933, p. 1638.
2. Lund and Ingham, *J.A.M.A.*, Nov. 25, 1933, p. 1720.
3. Bundesen, Rawlings, and Fishbein, M., *J.A.M.A.*, Nov. 18, 1933, p. 1636.
4. *J.A.M.A.*, Feb. 3, 1934, p. 369.
5. *Pub. Health Rep.*, Mar. 23, 1934, p. 379.

EAST AND WEST SHALL MEET

LONG ago, the poet said—

“ For East is East
And West is West;
Néver the twain shall meet.”

Fortunately, this does not apply to public health workers, for those in the East and those in the West speak the same language, uphold the same traditions, carry the same burdens, strive for the same results, and they meet together at least annually for purposes of mutual advancement and development. Public health workers of California and other western states are gratified at the prospect of the Sixty-third Annual Meeting of the American Public Health Association in Pasadena. There is a traditional pride in serving as hosts to the public health workers of the nation, and there is a sense of appreciation in the opportunities for acquiring knowledge through practical experience and instruction provided by leaders in the profession who come from older communities and institutions. Meeting in a far