



Reported Morbidity  
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# MONTHLY MORBIDITY REPORT

Provisional Statistics

from

EPIDEMIOLOGY UNIT AND PUBLIC HEALTH STATISTICS

## AMEBIASIS ASSOCIATED WITH COLONIC IRRIGATION COLORADO\*

The Colorado State Department of Health has reported an outbreak of amebiasis that occurred in the period December 1977 – November 1980 and was associated with a chiropractic clinic. All of the cases had received colonic irrigation – a series of enemas performed by machine to “wash out” the colon – a practice that has been gaining popularity recently among some chiropractors, naturopaths, and nutritional counselors. Thirteen cases were confirmed by biopsy review or serologic tests. Seven cases were fatal.

Colorado health officials first learned of the association on January 9, 1981, when a gastroenterologist from Grand Junction, Colorado, reported 2 cases of amebiasis. Both patients had received

colonic irrigation at a chiropractic clinic in Montrose. The gastroenterologist knew of 2 other cases of nonspecific colitis who had also had colonic irrigation at this clinic. Colorado Health Department epidemiologists contacted other clinicians and pathologists in this area of the western slope and found several other cases of colitis also associated with the same chiropractic office.

A systematic review was undertaken of all recently diagnosed, biopsy-confirmed cases of colitis in 1980 in the area served by the Montrose Memorial Hospital. Of the 12 cases found, 8 had had colonic irrigation at the same clinic. The practitioners of this clinic were notified, and with their cooperation a more definitive study was performed.

Clinic records showed that 221 individuals had been to this chiropractic office in the period September 1 – December 31, 1980. Of these, 180

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\* Reprint from MMWR 30:9, 1981, pp 101-102.

## BULLETIN

### MENINGOCOCCAL DISEASE UPDATE

As of April 15, 1981, 57 cases of meningococcal disease of which 12 (21.1%) died were reported in Louisiana. This compares to 46 cases with 5 (10.9%) deaths during the same time period in 1980.

Of the 57 reported cases, 7 were less than 1 year of age, 18 were between the age of 1 and 4, 21 were between the ages of 5 and 19, and 12 were 20 years of age or older. There were 32 males and 25 females. Cases were scattered among 25 parishes. Lafayette parish had the largest number of cases with 9, followed by Calcasieu, Orleans and St. Bernard each with 5 cases.

Cultures obtained from 38 of the 1981 cases have been serotyped. Twenty-five (65.8%) were type B, 9 (23.7%) were type C, 2 (5.3%) were type A, and 2 (5.3%) were type Y. Typing of 55 isolates from

1980 revealed 38 (69.1%) type B, 7 (12.7%) type C, 4 (7.3%) type Y, 3 (5.5%) type W135, 2 (3.6%) type A and 1 (1.8%) type G. A slight increase in the incidence of type C has been noted in 1981; such an increase has been observed in Texas as well. This trend is worthy of watching, since there is a vaccine available against type C Disease but none available for type B. Serotyping is a valuable epidemiologic marker and is essential in making decisions concerning vaccine usage.

All hospitals and private labs that do not have materials available for serotyping are therefore requested to forward isolates directly to the Division of Laboratories for typing. The Epidemiology Section should be informed of any suspected cases prior to forwarding isolates.

were reached by telephone and interviewed. Approximately 85% of these were residents of local towns (Montrose, Delta, Paonia, Norwood, and Ouray); the others were from other parts of Colorado and from other states. Eighty-seven (48%) of those interviewed had received colonic irrigation (colonic group); 93 (52%) had received other forms of treatment, such as spinal manipulation, without colonic irrigation (noncolonic group). Twenty percent of the colonic group reported having bloody diarrhea at some time after they began having this treatment; 1% of the noncolonic group reported having bloody diarrhea ( $X^2=15.45$ ;  $p<<0.001$ ).

Approximately 60% of the individuals contacted submitted stool and blood samples for testing at CDC. Stool results are pending. Indirect hemagglutination (IHA) titers for antibody to *Entamoeba histolytica* showed that 30% (16/53) of persons in the colonic group had an antibody titer of  $\geq 128$ , whereas 3% (1/38) of the noncolonic group had such a titer ( $p<0.01$ ).

As of February 14, 15 biopsy-confirmed cases of colitis with onsets of symptoms from December 1977 through November 1980 had been identified. Thirteen of these had evidence to support a diagnosis of amebiasis either on the basis of identification of the organism in a biopsy specimen or the presence of a high antibody titer. The other 2 cases have not yet been reviewed. Ten patients had such fulminant disease that they developed bowel perforation and had to have a partial or total colectomy. Seven of these patients died.

Cultures of specimens taken from the colonic irrigation machine after routine cleaning showed heavy contamination with coliform bacteria in virtually the entire system.

**Editorial Note:** The isolation of coliform bacteria from the internal passages of the enema machine suggests that infective amebae from an earlier patient's effluent could have contaminated the common inflow/outflow tubing used for later patients. The usual mode of transmission of amebiasis

in the United States is person to person and rarely contaminated food or drink. Infection presumably occurs by oral ingestion of amebic cysts. However, this investigation suggests a previously unreported means of infection — i.e., colonic irrigation. Since this practice is widespread, it is possible that other cases have occurred elsewhere through the use of improperly disinfected machines. CDC is interested in receiving reports of such cases, which should be submitted through state health departments.

Diagnosing amebiasis can be difficult. Successful diagnosis is facilitated by multiple stool specimens that are preserved promptly in fixative, concentrated and prepared for permanent stain and wet mount, and examined carefully by trained personnel (1). Sigmoidoscopic swabs or biopsy specimens may also contain identifiable amebae. The IHA serologic test available through state health laboratories and CDC can be helpful in diagnosis. Although only about 10% of asymptomatic cyst carriers and a minority of those with amebic diarrhea will have positive titers ( $\geq 256$ ), about 85% of those with invasive amebic dysentery and over 90% of those with amebic abscesses will have positive titers (2).

Intestinal amebiasis can resemble Crohn's disease or ulcerative colitis, prompting the use of steroids that could exacerbate the infection (3). In such situations, early diagnosis and treatment of amebiasis may prevent complications such as perforation and even death.

#### REFERENCES

1. Melvin DM, Brooke MM. Laboratory procedures for the diagnosis of intestinal parasites (HHS Publication No. CDC 80-8282). Atlanta: Center for Disease Control, 1975. [Available from National Technical Information Service, Springfield, VA.]
2. Kagan IG. Serodiagnosis of parasitic diseases. In: Lennette E, Balows A, Hausler W, Truant J, eds. Manual of clinical microbiology. 3rd ed. Washington, DC: American Society for Microbiology, 1980: 724-50.
3. Krogstad DJ, Spencer HC Jr, Healy GR, Gleason NN, Sexton DJ, Herron CA. Amebiasis: epidemiologic studies in the United States, 1971 - 74. *Ann Intern Med* 1978; 88:89-97

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