

Laboratory and Epidemiology Communications

Cryptosporidium Outbreak in a Sports Center

Hajime Yokoi*, Miyoshi Tsuruta, Toshimitsu Tanaka, Mami Tsutake, Yoko Akiba, Tomoko Kimura, Yoko Tokita, Toru Akimoto, Yoshio Mitsui, Yoshihiro Ogasawara and Hiroshi Ikegami

Chiba City Institute of Health and Environment, Chiba 261-0001, Japan

Communicated by Takuro Endo

(Accepted September 15, 2005)

In late August of 2005, 151 of the 255 people who participated in an August 20-24 swimming training in a hotel in Nagano Prefecture developed diarrhea and other intestinal symptoms. They belonged to a sports training club with 20 branches, 10 of which had joined the swimming training. The Food and Environment Division of the Nagano Prefecture Government started investigation on September 1 by collecting data from Prefectures potentially involved in this incident.

In Ciba City, 39 participants in one club branch in the City were investigated. The investigation revealed that 38 of 39 participants (97.4%) developed symptoms, and all of them had used the swimming pool in the hotel. They developed

symptoms from August 24 to September 1 with an incidence peak at August 28 (Fig. 1). All had diarrhea. Fever (84.2%) and abdominal pain (78.9%) were also frequent. Diarrhea was watery, and its frequency varied from several to twenty times a day. Other symptoms were vomiting (60.5%), nausea (50.0%), headache (31.6%) and chill (10.5%). Two patients among the afflicted consulted Chiba Aoba Hospital. The clinical laboratory of the hospital detected in the patients' stool specimens oocysts similar to those of *Cryptosporidium*. Based on that information from the hospital, our institute conducted extensive laboratory tests for detection of *Cryptosporidium*. We found oocysts of *Cryptosporidium* in the stool specimens of 30 of the 31 patients we tested during September 1-7. Oocysts from four stool specimens tested further were all of the *C. parvum* human genotype.

Nagano Prefecture Government announced the possibility

*Corresponding author: Mailing address: Chiba City Institute of Health and Environment, 1-3-9 Saiwai-cho, Mihama-ku, Chiba 261-0001, Japan. E-mail: hajime-yokoi@city.chiba.jp

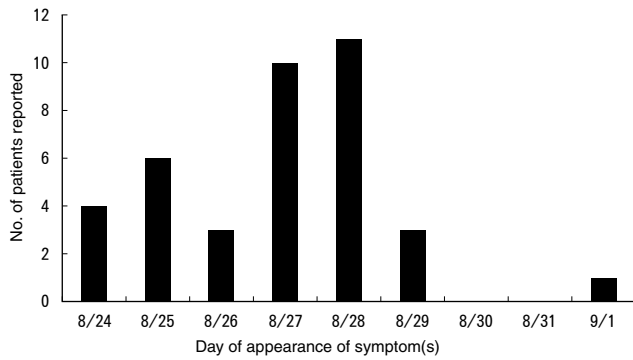


Fig. 1. Incidence of patients over time.

that the outbreak was caused by a contaminated swimming pool in the hotel on the grounds that the patients were limited to users of the swimming pool or the gymnastic room of the hotel.

In the present case, the rapid report from the hospital to the public authority in Chiba City and the timely transfer of information from Nagano Prefecture to Chiba City greatly contributed to identification of the source of the outbreak. The present incident indicates the importance of clinical laboratories having the capacity to diagnose parasites, and demonstrates the persistence of parasitic infections, despite their recent decrease. In cases like the present one, clinicians and epidemiologists tend to suspect viral or bacterial infections rather than parasitic infections.

The continued exchange of information and epidemiological analysis from wider geographical perspectives is necessary to detect the links between apparently isolated outbreaks.

We thank Prof. Yoshikura, Emeritus Researcher of the National Institute of Infectious Diseases, for advice on preparing the manuscript.

This article appeared in the Infectious Agents Surveillance Report, vol. 26, 168-169, 2005 in Japanese.