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 Chiba 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 of a Cryptosporidium outbreak in the swimming pool. Our study confirmed this possibility, and further revealed that the outbreak was caused by Cryptosporidium parvum.
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.

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