An Enterohemorrhagic *Escherichia coli* O103 Outbreak at a Nursery School in Miyazaki Prefecture, Japan

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Isolation of enterohemorrhagic *Escherichia coli* (EHEC) O103:H2 has been reported each year since 2000 in Japan; however, O103:H2 is relatively rare in comparison with O157, O26, and O111 (1). Few outbreaks caused by EHEC O103 have been reported (2,3). We describe here an outbreak of EHEC O103:H2 infection at a nursery school in Miyazaki Prefecture, Japan (Fig. 1).

On August 5, 2006, a clinic notified a local health center of a case of EHEC O103 (VT1) infection. The patient was a 1-year-old baby attending a nursery school who developed the initial symptoms on July 29. On August 9 and 10, the health center received reports of isolation of EHEC O103...
We conducted bacteriological investigations of a total of 70 persons: 20 class A children, 3 class B children, 16 nursery school staff members, and 31 family members. EHEC O103 (VT1) was isolated from 12 persons: 8 class A children, one nursery school staff member, and 3 family members (Table 1). Eight of them developed mild symptoms, such as diarrhea and loose passage.

The time course of the outbreak is shown in Fig. 2. New cases appeared on day 7 and after, when the day of the appearance of the first case is defined as day 0. The original infection source was not confirmed, but secondary infections within the nursery school and the affected families were suspected.

The pattern of pulsed-field gel electrophoresis (PFGE) after digestion with XbaI was indistinguishable among nine isolates including the first one, while another three differed only by 1-4 bands (Fig. 3). PFGE data suggest that the outbreak was caused by a common EHEC O103 strain.

The last patient stopped excreting the pathogen and no new patients had been reported for 30 days, and we thus concluded that the outbreak was terminated as of September 11.

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REFERENCES