

## Laboratory and Epidemiology Communications

### Outbreak of *Salmonella* Enteritidis Caused by Contaminated Buns Peddled by a Producer Using Traveling Cars in Hyogo and Neighboring Prefectures in 1999: an Epidemiological Study Using Pulsed-Field Gel Electrophoresis

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*Salmonella* serovar Enteritidis has become the most prevalent among the *Salmonella* serotypes in Japan since 1989 (1). In September 1999, an outbreak of the serovar occurred in Okayama Prefecture and its boundary areas extending to Hyogo and Tottori Prefectures (Fig. 1). The outbreak was due to contaminated cream buns peddled by a producer using eight traveling cars. They were produced by a manufacturer in Seto

Town in Okayama Prefecture. Thirteen *Salmonella* Enteritidis isolates were obtained from fecal specimens of 206 patients with diarrhea, abdominal pains, fever, and in some cases, nausea. Two isolates were obtained from the food.

All 15 isolates showed a phage type of RDNC (Reaction Does Not Conform) (2). Almost all the isolates were sensitive to CP, ABPC, CPF, FOM, GM, ST, and TMP; one isolate showed intermediate resistance to CP, three isolates to ABPC, and one strain to CPF. They were intermediately resistant

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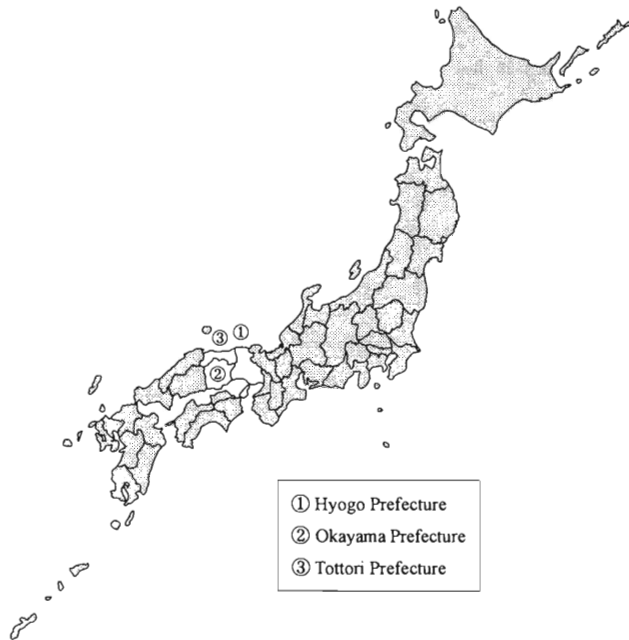


Fig. 1. Location of outbreak.

to SM, TC, KM, and NA, except for three isolates which were sensitive. They were also intermediately resistant to CTX, except for four isolates which were sensitive. None of the isolates were fully resistant to the 12 antibiotics tested. Antibiotic resistance was assayed in this study by using Sensi Disc (BD Biosciences, Sparks, Md, USA).

Fourteen isolates were examined by pulsed-field gel electrophoresis (PFGE) by using a Gene Path Typing System (Nippon Bio-Rad, Tokyo). The PFGE pattern of *BlnI*-digested chromosomal DNAs was identical for all the isolates (Fig. 2). The PFGE pattern of *XbaI* digests demonstrated essentially the same results (data not shown).

The cream buns were made of butter and chicken eggs. The producer used cars to peddle them, a method of selling

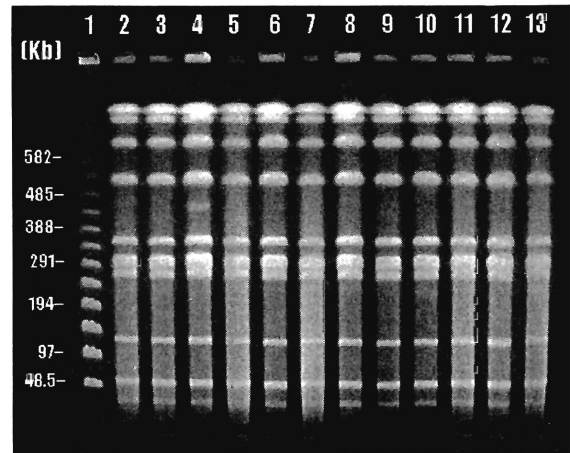


Fig. 2. PFGE pattern showing *BlnI*-digested chromosomal DNA of *Salmonella* Enteritidis isolates. Lane 1;  $\lambda$  DNA ladder: lanes 2-12; isolates from patients: lane 13; an isolate from a cream bun.

food which is common in Japan. This epidemic showed the inherent risk of this method in spreading food poisoning throughout a large geographical area.

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