

Laboratory and Epidemiology Communications

Epidemiological Studies of an Outbreak of Paratyphoid Fever
in the Shima Area of Mie Prefecture

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On 14 December 1993, Mie Prefectural Institute of Public Health and Environmental Sciences was informed by Osaka Prefecture of four cases of paratyphoid fever. All the patients had used the same pension K in the Shima area of Mie Prefecture. Then reports of paratyphoid cases came sequentially. A total of 27 paratyphoid cases were reported from the end of December 1993 to early January 1994. Twenty-four patients used pension K and two used pension U. All of the patients had eaten raw oysters there. One patient was a fisherman who had never used either pension. He retained part of his harvest in the sea near the harbor of the village for personal

consumption. There were 17 patients in Mie, five in Osaka, two in Shizuoka, and one each in Hyogo, Aichi and Yamaguchi Prefectures (Figs. 1 and 2). *Salmonella* Paratyphi A was isolated in all of the patients. The majority of the isolates was that of phage type 2 (PT2). No secondary infections, such as those occurring in family members, were reported.

From November to December 1993, 407 persons used pension K and 140 persons used pension U. All clients of the two pensions were investigated for possible paratyphoid infection. All of them were healthy except patient #9, who had been diagnosed as having a common cold and who also

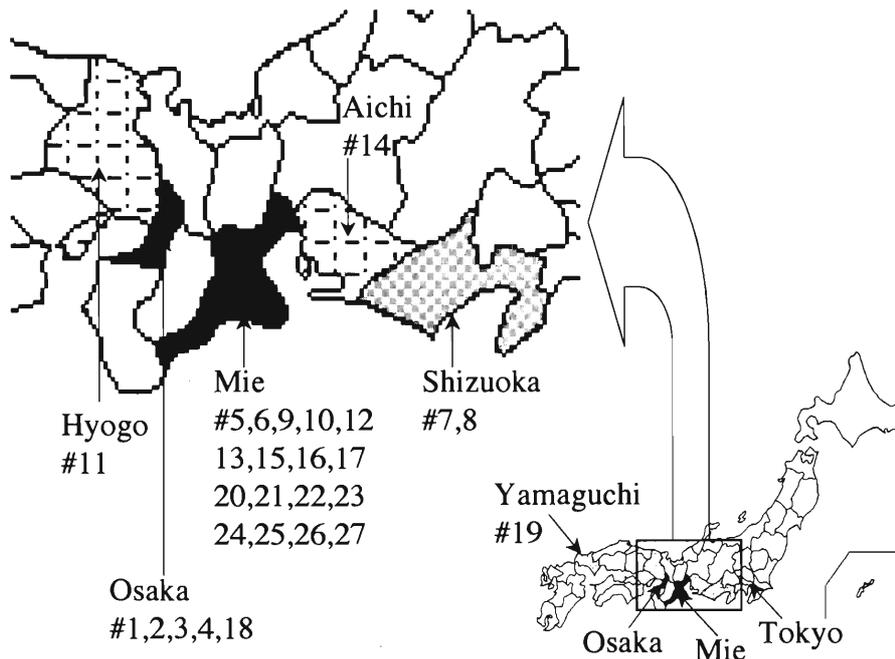


Fig. 1. Geographical distribution of patients.

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patterns produced by pulsed-field gel electrophoresis: criteria for bacterial strain typing. *J. Clin. Microbiol.*, 33, 2233-2239.

2. National Institute of Health and Infectious Diseases

Control Division, Ministry of Health and Welfare (1996): Typhoid fever and paratyphoid fever, Japan, January 1994-September 1996. *Infect. Agents Surveillance Rep.*, 17, 296'-297'.