

## Laboratory and Epidemiology Communications

### Comparison of the Incidence of Norovirus Infection in Homes for the Elderly

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In Japan, outbreaks of norovirus infections in homes for the elderly are increasing. According to a nation-wide survey conducted by the Ministry of Health, Labour and Welfare, 5,371 cases of gastroenteritis and 12 deaths due to norovirus infection were reported between November 2004 and January 2005, indicating the importance of caution in norovirus infection in the elderly who are relatively less resistant to infectious diseases. Between January 5th, 2004 and January 24th, 2005, norovirus infections occurred at four homes for the elderly in the southern area of Ibaraki Prefecture. In all of these cases, norovirus was detected in fecal samples of patients by reverse transcription (RT)-PCR.

In the present study, we investigated the incidence of norovirus infection in the elderly by age using Mann-Whitney's statistical U-test (software Dr. SPSSII, SPSS Japan Inc., Tokyo, Japan). Only patients with diarrhea or vomiting were included. Of 327 patients, 115 were aged between 50-79 years, 146 between 80-89 years, and 66 patients 90 years or more. The numbers of patients with diarrhea or vomiting, and the incidence are shown in Table 1. As shown in Figure 1 and Table 2, patients aged more than 90 years had a significantly higher incidence of vomiting ( $P < 0.05$ ) when compared with those aged less than 90 years, while no difference was observed in the incidence of diarrhea among these age groups.

Table 1. Age comparison in homes for the elderly and their symptoms

Age	50-79 (n = 115)		80-89 (n = 146)		90-over (n = 66)		Total (n = 327)	
	No.	Rate <sup>1)</sup>	No.	Rate	No.	Rate	No.	Rate
Diarrhea	23	20.0	29	19.9	20	30.3	72	22.0
Vomiting	26	22.6	34	23.3	24	36.4	84	25.7

<sup>1)</sup>: Incidence (%) of people in homes for the elderly.

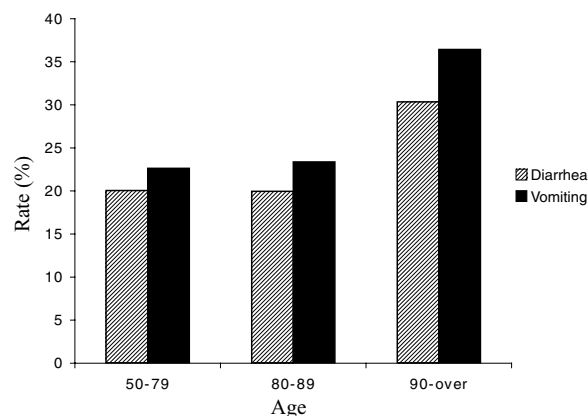


Fig. 1. Incidence of symptoms by age.

Table 2. Results of the Mann-Whitney's U-test

Symptom	Comparison with each age	Probability of significance
Diarrhea	50-79 and 80-89	0.978
	50-79 and 90-over	0.118
	80-89 and 90-over	0.096
Vomiting	50-79 and 80-89	0.897
	50-79 and 90-over	0.047
	80-89 and 90-over	0.049

The present results indicate that the incidence of norovirus infections in people aged more than 90 years is high in homes for the elderly, and that special attention should be paid to this issue in order to reduce transmission.

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