Short Report

Outbreak of rotaviral diarrhoea in a relief camp for tsunami victims at Car Nicobar Island, India

Sirs,

The Andaman and Nicobar Islands, a Union Territory of India, is a stretch of more than 300 islands in the Bay of Bengal. The Asian tsunami of December 2004 severely affected the islands, particularly Car Nicobar, an island inhabited predominantly by Nicobarese tribes. Several hundred people were killed and thousands went missing. All the 17 villages in the island, located along the coast, were destroyed. The survivors fled into the jungles and settled there in temporary camps. The largest settlement, that of Mus village, remained cut off from the remaining camps for several days after the tsunami. Our team visited Mus on 11 January 2005, after a jungle track was cleared, and found a large number of patients suffering from diarrhoea. As per the records kept at a makeshift medical camp manned by local paramedics, cases of diarrhoea had been increasing since 7 January 2005. There were 1346 inmates (654 males and 692 females) at the camp. From 7 to 29 January, a total of 113 cases of diarrhoea were reported giving an attack rate of 8.4%. Attack rate was 100% among infants and it showed a decline with increasing age, the only exception being a higher attack rate among those aged 10–14 years compared to those in the age group of 5–9 years. There was one death giving a case fatality ratio of 0.88%. The epidemic curve showed a sharp increase from 7 January and a slow decline after 15 January with multiple peaks indicating secondary cases. No bacterial enteric pathogen was isolated from any of the stool samples collected from the patients. Group A rotavirus was found by RNA electrophoresis in 19 out of 20 samples tested. Drinking water samples from five of the six wells supplying water to the camp showed contamination by coliforms. Chlorination of the water sources was started immediately and samples were tested daily for residual chlorine. Halogen tablets were distributed and the people were motivated to use boiled water for drinking. Later, pit-latrines were constructed near the camp. Attack rates among people using different wells ranged from 0 to 15%. People using the water of five of the six wells were affected, indicating that either all these wells were contaminated or the source of infection was not well water. Once daily chlorination of wells was started, the number of cases started decreasing. No other specific cause could be identified as the source of infection.

Although epidemics of rotaviral diarrhoea are common in some countries,2–4 it is rare in institutional settings or camps.1 The inaccessibility of the Mus village camp immediately after the tsunami delayed institution of preventive measures against water-borne diseases and by the time access was made, the outbreak had begun. Apparently the water sources, which were not commonly in use before the disaster, were contaminated and open defecation practiced before construction of pit-latrines aided transmission of infection. Institution of public health intervention measures not only contained the current outbreak but might have also prevented an imminent threat from cholera that occurred in the neighbouring Nancowry islands in 2002.5

Competing interests

None.

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References


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