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An Outbreak of Mumps in Thiruvananthapuram District

Kerala State has established surveillance of diseases of public health importance using the model of 'district level disease surveillance' (DLDS) developed in the North Arcot district in Tamil Nadu(1). Physicians of both public and private sector health care facilities report 15 notified disease and other diseases at their discretion, through a pre-formatted, self-addressed business reply post card. The card also contains space to enter the basic demographic information and place of residence of all persons with reported illnesses. Space is also provided on the card to enter the date of onset of disease and the date of reporting. The disease reports are received in the office of the District Medical Officer (Health) on all working days. Each card is scrutinized and all data are captured in pre-formed tables, for analysis. Thiruvananthapuram, the southern-most district in Kerala commenced DLDS on January 1, 2002 and the adjacent district of Kollam started it in June 2002.

During January, February and March we received a large number of reports of mumps in Thiruvananthapuram district, clearly indicating the occurrence of an outbreak.

Cases were from all parts of the district. Anecdotally there was information of mumps outbreak in the southern parts of Kollam, but DLDS had not been initiated in that district at this time. The diagnosis made by the pediatricians and physicians was accepted since mumps is relatively easy to diagnose based on clinical features of acute parotitis, unilateral or bilateral. The epidemic curve is presented in *Fig 1*, with the beginning of the outbreak in the last week of January, the peak in the second week of February, and the last cases in the third week of March. The age distribution of cases is presented in *Fig 2*. There was no case below 1 year but there were 52 cases between 1 and 5 years, 29 in boys and 23 in girls. The largest number was in the year-group of 5 to 9, with 98 cases, 54 in boys and 44 in girls. In the age group of 10-14 years there were 25 cases, 15 in boys and 10 in girls. There were very few cases beyond 14 years: one boy and 3 girls 15-19 years old had mumps. Two women in their 20's and one woman in her 30's had mumps and the oldest subject with the disease was a man 42 years old. Age was not recorded for one male and two females. Since mumps is usually a self-limited illness and not associated with fatality, it was not notified for reporting in the DLDS system. Yet, the availability of a disease-reporting system was used by a large number of doctors to report mumps in the

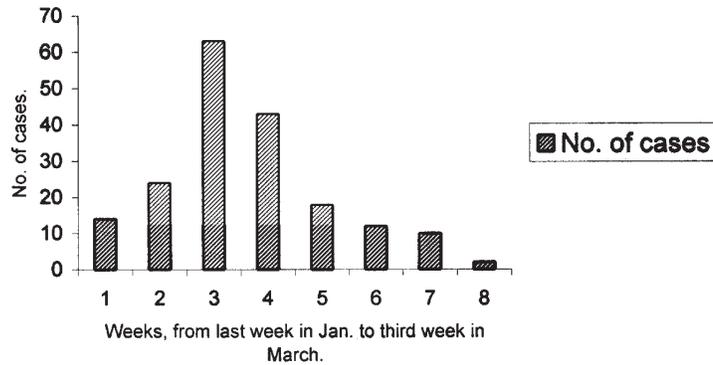


Fig. 1. No. of cases of mumps reported during the period from last week in January till the third week of March, 2002.

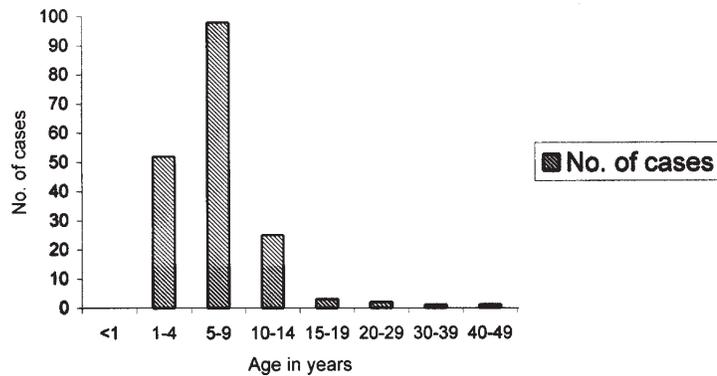


Fig. 2. No. of cases with age distribution

space marked for ‘any other disease’. This experience indicates that any new or emerging disease may similarly be picked up through this reporting system.

The data obtained through DLDS cannot be accepted as a quantitative representation of the outbreak, but only as a qualitative indicator. Undoubtedly there was a large outbreak; it was sharp and short, during the relatively cool and dry months of January through March. The age pattern clearly showed peak prevalence in the age group of 5-9 years. This is suggestive evidence for the

previous outbreak having occurred between 5 and 10 years ago. This data-collection system is not sufficient to obtain information on any complications. We did not consider it important to conduct a community survey for quantitative data or for complications. Although there was no particular necessity to confirm the etiology by virological investigations, it must be pointed out that there is no facility to do virus culture in any institution in the state of Kerala. However the Government has established a State Institute of Virology and Infectious Diseases in Alappuzha, to initiate virus culture and other

microbiological diagnostic support service to public health.

The epidemiology of mumps has not been investigated in India in the past. This study suggests that it occurs in outbreaks at intervals of 5-10 years. Mumps is preventable by vaccination. Mumps vaccine is marketed as a combination vaccine including those against measles and rubella – the MMR vaccine. The national immunization programme does not use MMR, but only measles vaccine. The Indian Academy of Pediatrics has recommended its inclusion in the vaccination schedule of children who attend pediatric clinics run by the members of the Academy and whose families can afford the cost of the vaccine(2). This report brings out the fact that mumps occurs in our communities, but in the absence of a documentation system, its epidemiology and magnitude are not appreciated. Even this outbreak was documented in the Thiruvananthapuram district where DLDS is operative, but there is no information about any such outbreak in the adjacent district of Kollam, where there was no disease reporting

system in the first quarter of 2002.

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