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600 Outbreak of Gastroenteritis in Healthcare Workers Affecting Neonatal Patients

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Background: rotavirus is the principal viral etiologic agent of diarrhea in children and there are reports in literature regarding nosocomial spread in the adult population. At the beginning of March the Hospital Infection Control Committee was notified of four cases of gastroenteritis occurring in healthcare workers (HCW).

Objective: to describe a gastroenteritis outbreak investigation in HCW affecting neonatal patients in a university hospital at the city of Sao Paulo, Brazil.

Methods: an investigation form was sent to hospital units and healthcare managers were asked to promote an active search and to stimulate the notification of any gastroenteritis cases occurring in their units. The form had the objective of collecting epidemiological and clinical data regarding the suspected cases. Preliminary case definition (possible case) was stated as "a HCW, patient or caregiver with sudden diarrhea or vomiting in the period since February 27". Throughout the outbreak investigation there was reassessment of the case definition. A confirmed case was defined as "a HCW, patient or caregiver with sudden diarrhea or vomiting in the period since February 27 plus positive results for rotavirus in the stool".

Results: sixty five suspected cases were notified. After form reviewal, seven cases (10.8%) not fitting the case definition were excluded. Among the included cases, 4 (6.9%) were classified as confirmed and 54 (93.1%) were classified as possible cases. All confirmed cases were newborns in the high risk nursery. No other patients or caregivers were affected. Diarrhea, abdominal pain and vomiting affected respectively 94.8%, 56.9%, and 27.6% of individuals. Although the cases were spread over 14 units within the hospital, the epidemiological data did not indicate any food or water reservoir contamination; on the contrary, the outbreak curve analysis suggested person to person transmission. After the identification of the first case in the high risk nursery, every neonate hospitalized was screened for rotavirus in the stool in order to identify possible oligosymptomatic patients. This screening resulted negative for 14 inpatients. All confirmed cases among the patients were rotavirus positive in the stool. Hand and environmental hygiene were reinforced. The HCW having signs and symptoms were temporally excluded from patient care. The outbreak ended on March 21. Rotavirus infection is common at this time of the year in Brazil. The outbreak source could not be identified. Therefore, we raised a hypothesis that a HCW introduced the rotavirus infection from the community into the hospital and this spread into several units, probably due to faulty hand or environmental hygiene.

Conclusions: the epidemiological data suggested person to person transmission, which involved patients highly susceptible to this type of infection. The outbreak was controlled by means of simple hygiene measures.

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