A Study of Clinical Profile of Dengue Fever in Punjab, North India

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Background: Dengue fever is the world’s most important viral hemorrhagic fever. Indian data are scarce on the clinical presentation of dengue fever. Data on the relationship of bleeding with thrombocytopenia are conflicting.

Methods: The medical records of 260 patients having positive dengue serology, admitted during an outbreak of dengue fever in 2006, were analyzed. The patients were categorized according to WHO criteria.

Results: Out of the 260 cases, 220 (84.6%) were classified as dengue fever, 35 (13.5%) as dengue hemorrhagic fever and 5 (1.92%) as dengue shock syndrome. The mean age was 31.08 years and maximum number of patients (33.46%) belonged to the age group of 20-29 yrs. The M: F ratio was 3.4:1. Fever (100%), hemorrhagic manifestations (36.15%), vomiting (35.38%) and abdominal pain (20.38%) were the most common presenting symptoms. Gastrointestinal tract was the most common site of hemorrhage (54.25%), followed by skin rash (27.65%), gum bleed (20.2%) and epistaxis (10.6%). The mean hemoglobin and platelet count were 13.91 gm% and 48.27 × 1000/cumm respectively. Hemorrhagic manifestations were noted in 45.7% (16/35) patients with platelet count <20,000/cumm, 34.6% (44/127) patients with platelet count between 20,000–50,000/cumm, and 34.7% (34/98) patients with platelet count >50,000/cumm. Out of the patients who received platelet transfusions, 60 (49.58%) were bleeders and 61 (50.41%) were non bleeders.

Conclusions: Our data showed that there is no correlation between the occurrence of hemorrhagic manifestations and the degree of thrombocytopenia. Other notable features of this study were a high male: female ratio, predominant gastrointestinal symptoms, higher incidence of hemorrhagic manifestations, and inappropriate platelet transfusions. Preventive programs for dengue fever need to be more vigilant, and platelet transfusions need to be appropriate to decrease the treatment costs.

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Prevalence and Factors Associated with Rotavirus Infection Among Children Admitted with Acute Diarrhoea in Mulago Hospital

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Background: Rotavirus remains the most common cause of severe dehydrating diarrhoea among children worldwide. By five years of age almost all children will have had an episode of rotavirus gastroenteritis. Children in developing countries die more because of several factors including poorer access to hydration therapy and greater prevalence of malnutrition. The magnitude of rotavirus disease in Uganda is not known.

Objective: To determine the prevalence and factors associated with rotavirus infection among children 3–59 months admitted with acute diarrhoea to Acute Care Unit (ACU) of Mulago Hospital.

Methods: Three hundred ninety children, aged between 3–59 months with acute diarrhoea were recruited consecutively after consent by the caretakers. Records of clinical history, sociodemographic characteristics, physical examination and laboratory investigations were recorded on a precoded questionnaire. Stool samples were tested for presence of rotavirus antigens using the EIA kit (DAKO IDELA rotavirus EIA detection kit).

Study Results: The prevalence of rotavirus infection was 45.4%. On multivariate analysis rotavirus was significantly associated with a higher education (above secondary) level of the caretaker (P=0.003), more than 4 people in the house (P=0.025) and breastfeeding (P=0.017). Age was significantly associated with rotavirus on bivariate analysis but this association disappeared on multivariate analysis. No significant association was found between rotavirus infection and nutritional status, HIV status and attendance of day care or school.

Conclusion and recommendations: Rotavirus infection is highly prevalent among children with acute diarrhoea admitted to ACU Mulago Hospital. A rotavirus vaccine is therefore recommended and a community based study to identify the type of rotavirus strains circulating in Uganda is needed so that an appropriate vaccine can be used if a decision to give the vaccine is made.

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Influenza Outbreak in National Service Training Camps in Perlis, Malaysia

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Background: In April 2007, we received notifications of increasing numbers of upper respiratory tract infections (URTI) among National Service trainee in two camps in Perlis. Preliminary investigation suspects an outbreak of influenza-like illness.

Methods: A retrospective review of the cases records was done for those who had been diagnosed as URTI prior to notifications in order to come out with a working case definition. Then, active case finding was carried out in order to document the disease nature in terms of person, place and time. Epidemiologic data on clinical features and laboratory tests obtained by means of a retrospective review of the case records, interviews of the trainee and from prospectively recorded case notes. Environmental health assessment of the camp was done.

Results: There were 328 and 304 National Service trainees in both National Service Camp of Tasik Meranti and Timah Tassoh, respectively. The terminology used during the investigation of outbreak is viral fever for investigation. The case definition was a trainee with fever and cough with or without other upper respiratory tract symptoms. 102 trainees from Tasik Meranti Camp and 33 trainees from
Timah Tassoh Camp fulfilled the case definition of viral fever for investigation during the outbreak. Only 27 cases from Tasik Meranti Camp were put under isolation and only 2 cases were admitted to hospital. No case fatality recorded. The finding from 24 of 30 cases whom nasopharyngeal swab taken was positive for Influenza A. No environmental risk noted except April is a dry season without any rain.

Conclusions: Influenza A virus infection characterized by fever and respiratory symptoms, infected National Service trainee in two camps in Perlis. The infection was mild and causing no case fatality. Early case surveillance, rapid public health intervention and careful risk communication, controlled the outbreak.

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16.037

Multi-country Comparative Assessment of the Surveillance of Avian Influenza (H5N1) Human Cases in Asian Countries

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Background: Although different opinions exist if the H5N1 will be the next human pandemic strain, a future novel influenza pandemic is considered inevitable. Effective surveillance system, especially in countries with confirmed H5N1 human cases, is vital for early detection of the pandemic that may aid either rapid containment or swifter mitigation measures of public health impacts such as preparation of pandemic vaccines. While international surveillance guidelines exist, actual operation of the surveillance of H5N1 human cases in those countries has not been well-documented. For rational policy instructions in strengthening the surveillance with necessary international assistances, a multi-country comparative assessment of the surveillance was conducted.

Methods: The assessment reviewed published protocols, guidelines and policy documents, and conducted key informant interviews on public health officials, both central and local, regarding implementations of surveillance. We compared different aspects of the surveillance, namely the definitions of reportable condition, reporting mechanisms, reporting sensitivities, specimens collection and shipment, laboratory testing, and responses to avian and human cases in Indonesia, Vietnam, Myanmar, Pakistan and Japan.

Results: The routine reporting of suspected human cases from all health facilities was considered essential, whereas community-based cluster reporting or active searches of cases around poultry outbreaks alone did not ensure sufficient reporting sensitivity and area coverage. Population-based reporting sensitivity ranged from 0 to 0.96 per 100,000 population per annum by country. Countries envisaged either small or large numbers of laboratories in their national laboratory network with the latter posing potential problems of quality control and biosafety. In response operations, household isolation of close contacts of confirmed cases was applied in one country but not in others.

Conclusions: The findings indicate a large diversity in surveillance structures, implementations, and performances across different countries. Knowledge sharing and mutual learning as well as multi-country leadership are essential for optimizing the surveillance in each country.

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16.038

Evidence of Person-to-Person Transmission of Nipah Virus Through Casual Contact

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Background: Investigation of Nipah outbreaks in Bangladesh have concluded that more than half of all Nipah cases resulted from close physical interaction with other Nipah patients. In 2007, we investigated an outbreak of fatal febrile illness in Kushtia district.

Method: The investigation team identified suspected case patients with fever and altered mental status or headache and/or cough by collecting information from the local health workers and community residents. We defined a confirmed Nipah case by the presence of IgM antibodies to Nipah virus in serum and a probable case as a patient who concurrently had similar symptoms, resided in the same area, but died before blood was collected. For each case three unmatched controls were enrolled from the same neighborhood.

Results: A total of eight cases (3 confirmed and 5 probable) were identified. The outbreak was confined to one village and lasted <3 weeks. Five patients (63%) died. On the third day of illness, the index case attended a religious congregation in that community; all subsequent cases also attended. Five cases either sang or shared food at the religious congregation with the index case. They also took care of the index case, fed her, slept with her in the same room, cleaned her oral secretions, carried her and massaged her body when she was ill. However, two subsequent cases had no history of such close contact with the index case. The secondary peak of illness occurred 11 days after the initial case. The only exposure significantly associated with illness was touching a Nipah case during illness (50% versus 0%, p < 0.05).

Discussion: Although direct contact or infection from another route cannot be ruled out, this outbreak suggests that Nipah virus may be transmissible from one person to another without close contact.

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