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Weather Factors Influence The Incidence Of Non Dysentery-Form Diarrhea (Rotavirus) Among Children At Hasan Sadikin Hospital Bandung, West Java In Indonesia

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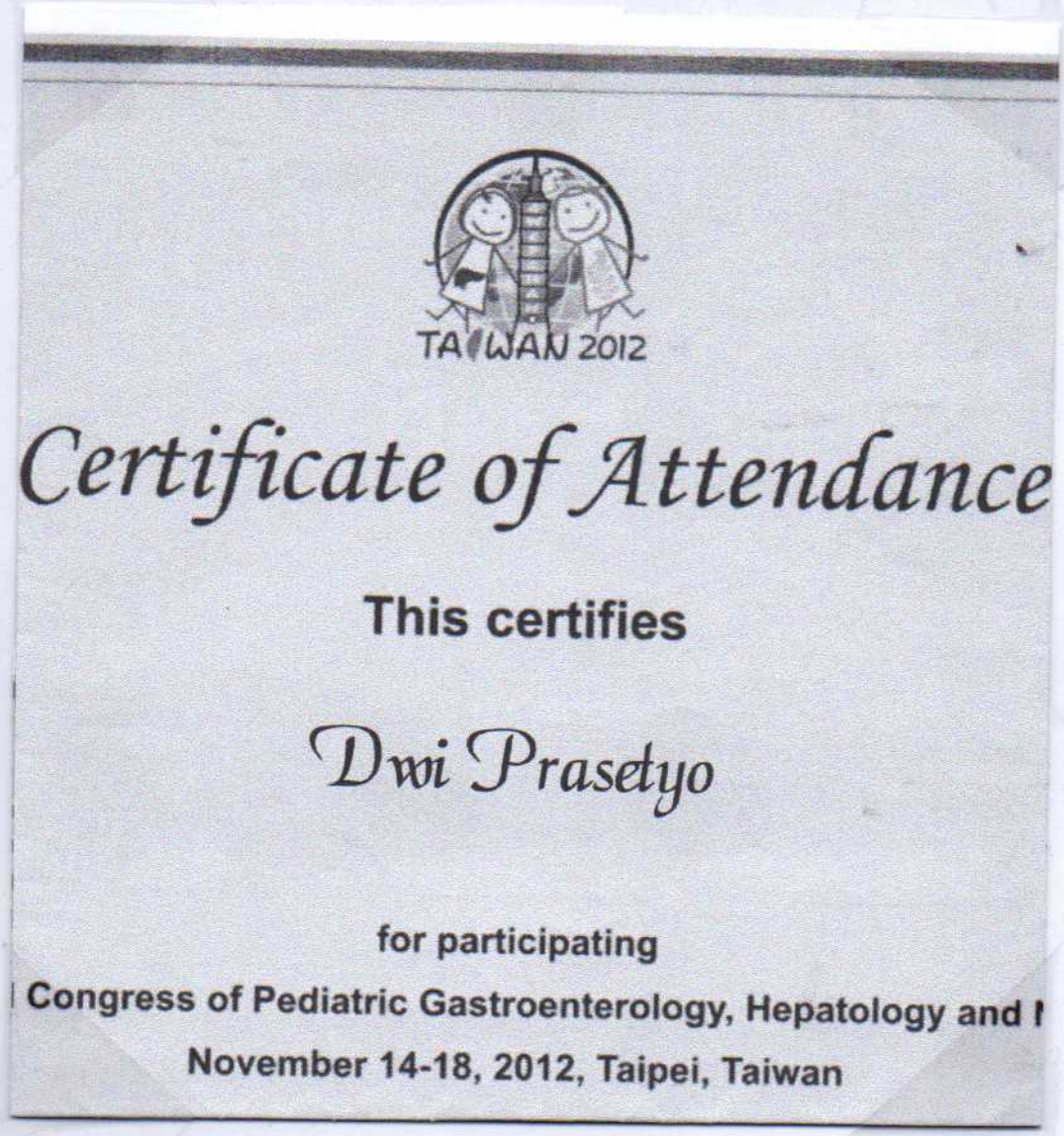

WEATHER FACTORS INFLUENCE THE INCIDENCE OF NON DYSENTERY-FORM DIARRHEA (ROTAVIRUS) AMONG CHILDREN AT HASAN SADIKIN HOSPITAL BANDUNG, WEST JAVA IN INDONESIA

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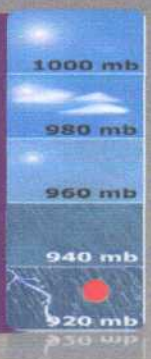
Background and aims

Non dysentery-form diarrhea in children the most frequent cause by rotavirus about 70-80% of all cases diarrhea in the developing country. Rotavirus infections occur mostly in winter, but in the tropics country like Indonesia they occur throughout the year. Diarrhea have been made by relating disease incidence to weather factors, the difference is partly explained by seasonal changes in temperature and humidity. The Aim this study to find weather factors influence with hospital visits for diarrhea.

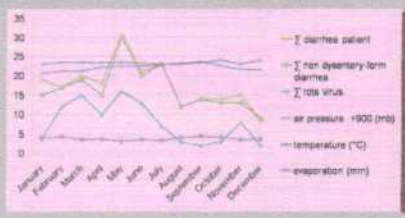
Methods

The study included all children aged < 5 years inpatients and outpatients who presented with acute diarrhea at Hasan Sadikin Hospitals (Bandung, West Java), from January through December 2011, a fresh fecal specimen was obtained from enrolled children within 24 h after admission and was stored at 4°C-8°C until laboratory testing. The weather information every month obtained from climatology meteorology and geophysics Bandung agency.



Results

From 211 children between 1-59 months aged obtained 143 (68%) boys and 68 (32%) girls were hospitalized for acute Non dysentery-form diarrhea in Hasan Sadikin Hospitals, the incidence of age at more then 6 month, from 200 sample with 95 (48 %) rotavirus positive, for dehydration degree were 39% no dehydration, 54% mild dehydration and 7% severe dehydration, 162 subjects (76.8%) with vomiting complaints,156 (73.3%) fever, 18 (8.5%) bloating, perianal rash 36 (18.5%) and 109 (52%) with exclusive breastfeeding. Diarrhea occurred with a peak during the colder months of May and July, climatology within one year for temperature between 18.2-30.4°C on average 23.4 °C, the lowest rainfall 3.1 mm and 381.5 mm the highest with air pressure ranged from 920.7-923.6 millibar with 76% relative humidity, lower evaporation 3.2 mm and the highest wind direction to the west.



Conclusions

Weather factors influence the incidence provide evidence that factors associated with incidence of diarrhea increase and be affected by low temperature, humidity, evaporation and rainfall

Keywords:
Children diarrhea, dehydration, rotavirus, temperature, weather

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