

## Correspondence

To the Editors

# Annual detection rate of enteric adenovirus associated acute gastroenteritis in paediatric patients and rainfall: an appraisal on relationship from an Indochina country

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(Key words: Annual detection rate, Enteric adenovirus, Acute gastroenteritis, Child, Rainfall)

Dear Editors,

Acute gastroenteritis is an important clinical problem in paediatrics. It has many causes. Enteric adenovirus associated acute gastroenteritis is a common infectious disease in many developing countries<sup>1</sup>. Thailand, a country in Indochina, also has a high prevalence of enteric adenovirus associated acute gastroenteritis. Many factors are related to its prevalence. Here, the authors reappraised published data on enteric adenovirus associated acute gastroenteritis in Thailand. The association between detection rate of enteric adenovirus associated acute gastroenteritis in the paediatric patient and rainfall was assessed. The analysis is based on the standard technique described in referencing publications<sup>2,3</sup>. The primary data are from an endemic setting, northern region (GPS 18.797703826613354, 99.00755312111589), and during years 2011 to 2017<sup>4</sup>. The data on local total rainfall is according to Royal Department of Irrigation ([www.rid.go.th](http://www.rid.go.th)). According to the analysis, the relationship between detection rate of enteric adenovirus associated acute gastroenteritis in the paediatric patients and rainfall is presented in Figure 1. The detection rate of enteric adenovirus associated acute gastroenteritis in paediatric patients is non-significantly negatively related to annual overall rainfall ( $r = -0.64$ ).

In tropical countries, there are many infectious diseases. The relationship between the infection rate and local climatic parameter, rainfall is reported in some infections such as Chikungunya virus infection and dengue-2<sup>2-3</sup>. In the present report, the association between gastrointestinal viral infection in paediatric population (%) and total rainfall (mm) is reported. Here, a non-significant negative relationship between detection rate and total rainfall is detected. The observed trend in this report is concordant with a previous report from China<sup>5</sup>. It can confirm that the meteorological factor is an important consideration in planning for epidemiological infectious control against adenovirus gastroenteritis among children in an endemic area.

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\*Pathum Sookaromdee<sup>1</sup>, Viroj Wiwanitkit<sup>2</sup>

<sup>1</sup>TWS Medical Centre, Bangkok Thailand

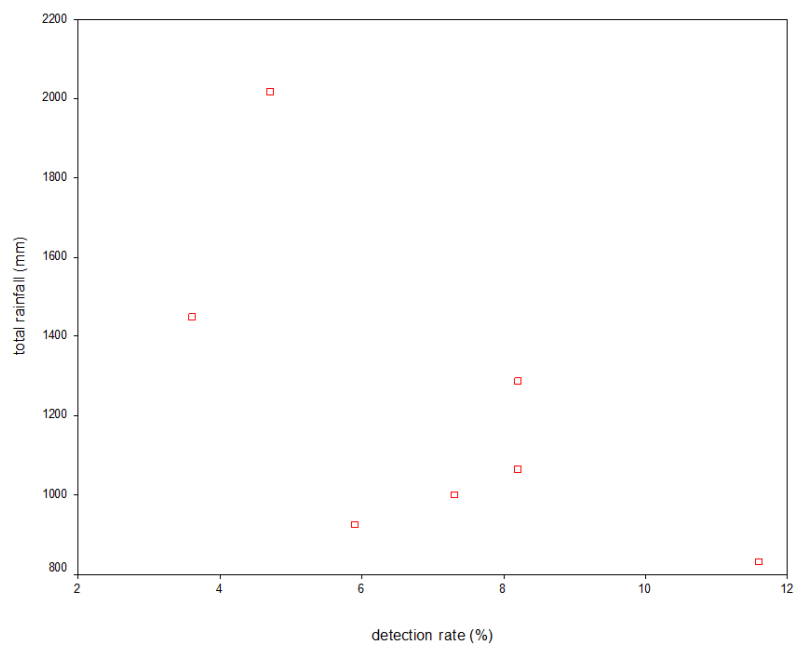
<sup>2</sup>Honorary Professor, Dr. DY Patil University, Pune, India

\*Correspondence: [pathumsook@gmail.com](mailto:pathumsook@gmail.com)



<https://orcid.org/0000-0002-8859-5322>

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**Figure 1:** Relationship between detection rate of enteric adenovirus associated acute gastroenteritis in paediatric patient and rainfall