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Authors

Rahman, Md

Sobur, Md

Toniolo, Antonio

et al.

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EDITORIAL

Is the COVID-19 pandemic masking dengue epidemic in Bangladesh?

Md. Tanvir Rahman¹, Md. Abdus Sobur¹, Md. Saiful Islam¹, Antonio Toniolo², K. H. M. Nazmul Hussain Nazir¹

¹Department of Microbiology and Hygiene, Faculty of Veterinary Science, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh

²Global Virus Network, University of Insubria, Varese, Italy

ABSTRACT

COVID-19 is now a pandemic. Like other countries, Bangladesh is putting all its efforts to combat this pandemic. Dengue is a mosquito-borne viral infection causing a severe flu-like illness and, sometimes causing a potentially lethal complication called severe dengue. At this very crisis moment, there are reports on new cases of dengue in Bangladesh. More efforts now need to be taken for the control of dengue along with COVID-19 control measures.

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The World Health Organization has declared the Coronavirus Disease 2019 (COVID-19) “a pandemic”. As per the Institute of Epidemiology Disease Control and Research-Dhaka, with an exponential growth or increasing trend, total 1231 confirmed cases of COVID-19 with 50 deaths have been reported in Bangladesh by 15th April 2020. Being the 12th densely populated country of the world, Bangladesh is at great risk for a collapse of the healthcare system and social life. Like COVID-19, Dengue is an acute viral disease caused by the dengue virus. This *Aedes (Aedes aegypti)* mosquito-borne virus often could be fatal for the patients.

Bangladesh suffered from dengue with remarkable mortality in the first official outbreak of 2000. Last year, dengue overcame previous records with 101,354 confirmed cases, including 164 deaths [1,2]. The density of *Aedes* mosquito larvae and Breteau Index are higher than that of last year around this time [1]. Moreover, in 2020 (January–March), 263 dengue cases have been recorded versus only 73 in the same period of 2019 [1], making the possibility of a large epidemic real.

While focusing on COVID-19, the increasing numbers of dengue cases in the pre-monsoon season are not getting enough attention. In 2019, the weakness of the health system came in the spotlight due to inadequate hospital beds, diagnostic kits, and huge deaths, including health professionals [2]. If Bangladesh confront simultaneously dengue and COVID-19, additional diagnostic difficulties may arise as the diseases share clinical and laboratory features [3]. A study from Thailand described a patient with skin rash, petechiae, and low platelet counts who was initially misdiagnosed as dengue. Only when severe respiratory signs manifested, the COVID-19 virus was detected by reverse transcription polymerase chain reaction [4]. False serological results for dengue in COVID-19 patients could also sway diagnosis [3]. So far, there are no reports of coinfection of dengue and COVID-19 in the same patient, but the possibility cannot be excluded. Moreover, like dengue, most of the COVID-19 cases being reported in Bangladesh are from Dhaka (56.4%). Both outbreak at a time in Bangladesh particularly in Dhaka would be a catastrophe.

Correspondence Md. Tanvir Rahman ✉ tanvirahman@bau.edu.bd Department of Microbiology and Hygiene, Faculty of Veterinary Science, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh.

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The major strategy for limiting dengue is controlling its mosquito vector. Last year the mosquito control program was not successful, due to resistance to the utilized insecticides [2]. Under the present circumstances, we stress the need for immediate mosquito control measures before the start of the monsoon season besides COVID-19 control. All the available diagnostic facilities have to be equipped with adequate diagnostic kits and put in full function. In addition, the general public also needs to be aware of mosquito control to keep the dengue cases at a minimum and stop the outbreak.

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Conflict of interests

The authors declare that they have no conflict of interests.

Authors' contribution

All the authors contributed equally. All the authors read the final version and approved it for publication.

References

- [1] The Daily Star. Rise in dengue cases rings alarm. Available via <https://www.thedailystar.net/frontpage/news/rise-dengue-cases-rings-alarm-1881676> (Accessed 30 March 2020).
- [2] NEWAGE Bangladesh. Dengue shakes health system. Available via <https://www.newagebd.net/article/95551/dengue-shakes-health-system> (Accessed: 30 March 2020).
- [3] Yan G, Lee CK, Lam LT, Yan B, Chua YX, Lim AY, et al. Covert COVID-19 and false-positive dengue serology in Singapore. *Lancet Infect Dis* 2020; [https://doi.org/10.1016/S1473-3099\(20\)30158-4](https://doi.org/10.1016/S1473-3099(20)30158-4)
- [4] Job B, Wiwanitkit V. COVID-19 can present with a rash and be mistaken for Dengue. *J Am Acad Dermatol* 2020; <https://doi.org/10.1016/j.jaad.2020.03.036>