

Concurrent dengue infection in a patient with pulmonary tuberculosis: the first world report

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J Thorac Dis 2013;5(3):E118-E119. doi: 10.3978/j.issn.2072-1439.2012.01.13

Sir, both dengue and tuberculosis are important tropical diseases at present (1). Both diseases affect thousands of world population each year (1). Here, the authors presented and discussed on an interesting concurrent case of dengue and pulmonary tuberculosis. The case is a 35 years old male patient. He has been diagnosed for pulmonary tuberculosis for 2 months and got the standard antituberculosis drug regimen (2HRZE + 4HR). On the present visit, he complains for high fever for 2 day and his body temperature is equal to 39 degree Celsius. Since this is not the common clinical presentation of tuberculosis, the patient was further investigated for the cause of fever. The complete blood count was done and the classical triad of dengue infection, thrombocytopenia (platelet =65,000), atypical lymphocytosis (atypical lymphocyte =8%) and hemoconcentration (Hct=47%) can be observed. The patient is presumptive diagnosed to have dengue infection and admitted to the hospital. On the 2nd day of hospitalization (4th day of illness), the patient develops hemoptysis hence the sputum examination was done but revealed no acid fast bacilli. This patient gets intensive fluid replacement therapy and improved within 5 days (7th day of illness). The spontaneous resolution of the hemoptysis was also observed. The complete blood count returns to normal. The serological study also confirms dengue infection. Hemoptysis in this case is believed to be triggered by dengue hemorrhagic fever. After this illness, the patient continuously received the antituberculosis drug and the complete successful treatment can be observed at the 6th month. Of interest, although dengue and tuberculosis share the common geographic pathological pattern, tropical setting with poor population,

there has never been any report on concurrent infection of two diseases. This case is the first world documentation on this topic. It can be seen that the case management for dengue in pulmonary tuberculosis patient requires standard therapy. The trigger of hemoptysis as bleeding presentation of dengue hemorrhagic fever can be possible. However, it should be noted that is case is a co-infection between dengue and ongoing treated tuberculosis. The nature of co-infection between dengue and naïve tuberculosis cannot be represented in this case. The summary on the interaction between both infections are presented in Table 1. Based on this case, the lesson that we can learn on the concurrent infection include (I) the concurrent infection between dengue and tuberculosis is possible and should be kept in mind of the practitioner; (II) the abrupt high fever without explanation in tuberculosis patient undergoing antituberculosis treatment might imply new problem including to dengue; (III) the bleeding complication as lung bleeding can be seen dengue and might be a possible first clinical presentation of concurrent infection.

Acknowledgements

Disclosure: The authors declare no conflict of interest.

References

1. Boutayeb A. The double burden of communicable and non-communicable diseases in developing countries. *Trans R Soc Trop Med Hyg* 2006;100:191-9.

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Submitted Jan 23, 2012. Accepted for publication Jan 26, 2012.
Available at www.jthoracdis.com

ISSN: 2072-1439

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Table 1. The summary on the interaction between dengue and pulmonary tuberculosis.

The causes	Effect on disease manifestation	Effect on patient care
Dengue	(I) Lung bleeding (II) Easy lung dysfunction in case with dengue shock	(I) Bleeding precaution
Tuberculosis	(I) Increased chance of respiratory failure in severe dengue	(I) Respiratory infection control (II) Difficulty in fluid management, has to concern on impaired lung function



Cite this article as: Joob B, Wiwanitkit V. Concurrent dengue infection in a patient with pulmonary tuberculosis: the first world report. J Thorac Dis 2013;5(3):E118-E119. doi: 10.3978/j.issn.2072-1439.2012.01.13