LETTERS TO THE EDITOR

CONCURRENT INFECTION WITH DENGUE AND MALARIA

Sir,

Concurrent infection with two infectious agents, can result in an illness having overlapping symptoms, resulting in a situation where both diagnosis and treatment of a patient may become difficult for a physician. We encountered one such case of concurrent infection with falciparum malaria and dengue virus, in a young girl.

This 21-year old girl, a hosteller in New Delhi, developed high grade fever with chills, along with severe headache and backache. Two days later, she developed multiple, progressively increasing, reddish macular spots over her legs. No other localizing signs were found on examination. In view of thrombocytopenia (platelet count 35,000/mm\(^3\)) and a positive IgM ELISA for dengue, the diagnosis of dengue fever was made. She was treated symptomatically with antipyretics. The platelet count subsequently increased and the rash subsided, but fever spikes persisted, for which she had been referred to our hospital. On clinical examination, she was found to have fading rashes on her legs with no pallor, icterus, nor any lymphadenopathy, but the spleen was enlarged. Peripheral blood smear examination revealed a normal platelet count (1,59,000/mm\(^3\)) and presence of ring forms of Plasmodium falciparum, with a parasite count of 0.5%. Repeat IgM for dengue on day seven, was again positive. Her liver and renal function tests were normal. She responded to oral 600 mg chloroquine stat, followed by 300 mg after 8 hours and 300 mg daily for the next two days. She became afebrile within 24 hours. Repeat blood smear examination after 48 hours showed complete malaria parasite clearance, but there was presence of falciparum gametocytes, for which she was advised a single dose of primaquine (45 mg), at discharge after seven days.

In malaria and dengue endemic areas, the instances of mixed infections of pathogens is a well known fact. Malaria is known to co-exist with filariasis and other pathogens.\(^1\) To the best our knowledge, this is the first report from India, of mixed infection of \textit{P. falciparum} with dengue virus. A similar case has been reported by Charrel \textit{et al} recently, from France.\(^2\) The accuracy of serological diagnosis of dengue fever in patients experiencing malaria has been questioned previously, because of nonspecific reactivity by certain rapid serologic assays.\(^3\) IgM ELISA used, has more than 90% specificity for dengue and in our patient, the fact that serological tests were positive from two different laboratories, makes us believe that this patient indeed had an infection with dengue virus. Delhi, being endemic for both dengue and malaria, with increased incidence during the month of October-November 2005; the acquisition of both the vector borne infections concurrently, is possible. There are six published case reports of concurrent infection of dengue virus and a bacterium (\textit{Salmonella typhi},\(^4\) \textit{Shigella sonnei}, \textit{Leptospira} spp.) or a virus such as

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Chikungunya virus. Further investigations are required, because this situation is likely to occur more frequently in nature and may cause problems in diagnosing true illnesses.

REFERENCES


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