is critical in hyper-endemic countries like India, and for future vaccine studies.

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Concurrent dengue and malaria coinfection: Observations from a central Mumbai hospital

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Background: Coinfection by Dengue and Malaria is not uncommon, though studies are scarce. Both remain among the major causes of acute febrile illnesses in India. The objective of this study is to understand and observe the interplay of Dengue and Malaria, compare their clinical and laboratory features and analyze the outcomes.

Methods & Materials: A comparative, retrospective study of Dengue, Malaria and their coinfections was carried out, during 2 consecutive monsoons (June-November; 2014 and 2015), in a Mumbai hospital. Febrile patients, during this period, were investigated for both Dengue and Malaria simultaneously. ELISA (NS-1/ IgM) and peripheral smear examination was done to confirm Dengue and Malaria respectively. Clinical comparison of signs and symptoms, severity and outcomes, as per predefined criteria was systematically carried out. Relevant laboratory parameters were compared.

Results: During 2014, of 156 included febrile cases, 85 (54.48%) were Dengue monoinfection, 55 (35.25%) isolated Malaria and 16 (10.25%) coinfection cases, whereas in 2015, of 417 febrile cases, 272 (65.2%) were Dengue, 117 (28.05%) isolated Malaria and 28 (6.7%) were coinfection cases. The coinfection and Dengue groups presented with a similar clinical picture. Among compared laboratory parameters, transaminits was statistically significant in the coinfection group (p < 0.001). Anaemia was significant in the Malaria group, whereas, the Dengue group presented with raised haematocrit and thrombocytopenia. The coinfection group, with low haemoglobin and haematocrit, was consistent with concurrent Malaria coinfection. Among compared severity parameters, bleeding manifestations, renal dysfunction and jaundice, was notable in the coinfection group, compared to the Malaria group (12% & 3.6% and 6.3% & 3.6% respectively) with 3 mortalities in the Malaria and 1 in the coinfection group during 2014. During 2015, despite increased Dengue and coinfection cases, numerically, with increased jaundice and bleeding manifestations (16% & 8% and 8% & 6% respectively), recovery was total.

Conclusion: Dual infection by Dengue and Malaria was observed by us, for the first time, in 2014. This phenomenon was noticed to recur, subsequently, during 2015, as well; and therefore merits further studies. Awareness and thus routine testing for both helps in effective management and reducing mortality as observed.

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