

## SHORT COMMUNICATION

# Blood group AB is associated with severe forms of dengue virus infection

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**Abstract** Several viral and host factors are believed to contribute to the development of severe form of dengue such as dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS) following a dengue virus (DENV) infection. The pathogenesis of DHF/DSS is not fully understood, however, host factors like ABO blood groups have been shown to contribute to the severity of DENV infection. The present study investigated the association of blood groups with severity of DENV infection in the northern region of Sri Lanka. The blood-groups of 405 patients positive for DENV NS1 antigen and anti-DENV IgM/IgG were determined using the standard haemagglutination assay recommended by the national blood bank/s. The occurrence of severe dengue in patients with certain blood groups was significantly different ( $p < 0.00$ ) to those with other blood groups. Patients with AB blood group had more than 2.5 times higher risk of developing DHF than those with other blood groups. On the other hand, patients with blood group O were significantly under represented for DHF relative to the proportion of this blood

group in the general population. Thus dengue patients with blood group O appear to have a low risk of developing DHF than those with other blood groups.

**Keywords** Dengue fever · Dengue haemorrhagic fever · ABO blood groups

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