LETTER

DENGUE INFECTIONS AND PREGNANCY: CAUTION IN INTERPRETING HIGH RATES OF PREMATURE DELIVERIES AND MATERNAL MORTALITY

Dear Sir,

Ismail *et al* (2006) reported their experience with dengue infections during pregnancy in a Malaysian cohort. They correctly suggest that in dengue endemic regions, dengue must come into the differential diagnosis in febrile pregnant patients. We recently reviewed published reports on dengue infections during pregnancy (Waduge *et al,* 2006) and wish to clarify some observations in the Malaysian cohort.

Disturbingly, 3 of 16 patients (18.8%) studied by Ismail *et al* (2006). Little explanation was offered for this worrying level of mortality, except that all women that developed dengue shock syndrome died. They developed renal failure and disseminated intravascular coagulation. Points that would be interesting to know are: did these patients present late to hospital, did they have other co-morbid conditions and were they treated per WHO recommendations? During the study period (2000-2004), the average dengue mortality rate in Malaysia was less than 1%. The level of mortality reported by Ismail *et al* (2006) is the highest reported so far for dengue infections during pregnancy (Waduge *et al,* 2006). Although both maternal and fetal complications have been reported previously, hardly any dengue related maternal deaths were noted. Possible reasons for this significantly high mortality rate may include: the presence of unrelated co-morbid conditions in the mothers that died, skewing their results due to small sample size, or that dengue in pregnancy in Malaysia may be different to that seen elsewhere. Do the authors know the viral serotype responsible for the dengue infection in these women?

Fifty percent of pregnant women with dengue were reported as having premature deliveries (Ismail *et al,* 2006). This is possibly an overestimate and should be interpreted with caution. A closer look at the information presented in their paper shows that four (25%) of 16 women were lost to follow-up, three died and one had an abortion. Therefore their calculation for premature deliveries is based on the eight deliveries they followed up. As numbers are small, events in the women that were lost to follow-up could have altered calculations substantially. The inclusion of more details on the women who delivered prematurely would have allowed assessment of its true relationship to dengue infection or if it was due to other causes. Possible overestimation of the risk for premature birth was highlighted in a previous report from French Guiana (Carles *et al,* 2000). Here, two separate accounts on practically the same cohort of patients gave widely different estimates (Carles *et al,* 1999, 2000). Subsequent reports preferred quoting the higher value and forgetting the other. The danger is that unreliable estimates will continue to be quoted blindly in future reports. Few check the validity of their presumption. The negative effect of this is that wrong prognostic information could be given to pregnant patients about the risk from dengue to the woman and her fetus.

It is reassuring to see more reports on cohorts of dengue during pregnancy from different regions of world. This may allow the formulation of more evidence-based guidelines for managing such patients. As the number of cases in each cohort appears to be small it is our duty to provide as much information regarding individual patients as possible in any published report.

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