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Letters to the Editor

HIV and iron-deficiency anaemia

Predictors of HIV and iron-deficiency anaemia: a comment

Madam

I read the recent article on HIV and Fe-deficiency anaemia by Finkelstein *et al.*, published online in your journal, with great interest[1]. The authors reported that 'micronutrient supplementation and infectious disease control, is warranted in HIV-infected women in resource-limited settings'[1]. I agree completely with this useful suggestion. Indeed, the prevalence of both HIV and anaemia is still high in developing countries and these two diseases need focus in antenatal care[2]. However, some facts should be noted. First, in a recent publication it is mentioned that HIV does not increase the risk of anaemia among the pregnant[2]. This report might be discordant with Finkelstein *et al.*'s finding that immunity, specifically CD4 T-cell count, can take a role. The explanation might lie in the different settings and numbers of subjects. Second, in Finkelstein *et al.*'s work, although the authors tried to study several parameters, there might be some pitfalls. The quality control of the determination of Hb should be discussed. Also, there is no proof for Fe-deficiency anaemia by Fe status in the study subjects. It should be noted that a similar picture, i.e. presentation of anaemia with hypochromic microcytic blood, can be seen in cases with congenital Hb disorder such as thalassaemia and this can be a confounding factor that was not well controlled for in Finkelstein *et al.*'s work.

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2. Oladeinde BH, Phil RM, Olley M *et al.* (2011) Prevalence of HIV and anemia among pregnant women. *North Am J Med Sci* **3**, 548–551.

HIV and iron-deficiency anaemia

Reply to 'Predictors of HIV and iron-deficiency anaemia: a comment'

Madam

We read with interest the letter by Dr Wiwanitkit in reference to our recent article, 'Predictors of anaemia and iron deficiency in HIV-infected pregnant women in Tanzania: a potential role for vitamin D and parasitic infections'[1].

We agree that anaemia and HIV should remain the focus of antenatal care providers, particularly in Sub-Saharan Africa. Anaemia is one of the most frequent haematological manifestations of HIV infection[2–4], and the risk of anaemia may increase with HIV disease progression[5]. Dr Wiwanitkit notes that 'HIV does not increase the risk of anaemia among the pregnant' based on a recent publication[6]. In the cited cross-sectional study, however, HIV-infected individuals had a significant fivefold increase in the odds of being anaemic. A longitudinal cohort study with both HIV-infected and uninfected women may be more appropriate to examine this question.

We agree with Dr Wiwanitkit that the use of Hb and hypochromic microcytosis as the only indicators of Fe status is a study limitation, and have mentioned this in the paper's discussion section[1]. In addition to Hb concentrations, serum ferritin and transferrin receptor, and at least one acute-phase protein, such as C-reactive protein or α-1 acid glycoprotein, would further improve Fe assessment in the context of inflammation and infection. With an average of nine Hb measurements per person (over 9000) collected prospectively at the time of the study, it was not possible to conduct a more detailed analysis of Fe status on all samples collected prospectively in the ancillary analysis[1]. However, we previously published a detailed analysis of Fe status in the same cohort to examine the proportion of anaemia attributable to Fe deficiency among 584 HIV-infected women, including Hb, serum ferritin, serum transferrin receptor and C-reactive protein concentrations[7]. Prevalence estimates were 39·7 % for Fe deficiency and 23·6 % for Fe-deficiency anaemia; 48·9 % of anaemia cases were associated with Fe deficiency[7].

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