

## A reply to the response to the article entitled, Health policy implications of blood transfusion-related HTLV-1 infection and disease

We read with interest the response by Ingram *et al.* to our report on transfusion-acquired human T-lymphotropic virus 1 (HTLV-1) infection and disease.<sup>1</sup> Firstly, we accept the error of referring to 100 000 transfusions, rather than donors, in the Norwegian study. Table 2 correctly refers to the donors.

Routine testing for HTLV-1 in any country with a prevalence of  $\leq 1:100\ 000$  positivity is of questionable value. So quoting the comment by Stigum *et al.*<sup>2</sup> that their study reflects the “Norwegian situation” is irrelevant to the discussion. None of the more than 200 black African patients seen with HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP) provided a history of receiving any blood products. Thus, they were not the focus of our paper.

Ingram *et al.* are incorrect when referring to the “three non-white cases”. One was a white patient, and the other two were of Indian origin. We are well aware that the 2013 sample was weighted, and indicated so in Table 1. While transmission by transfusion is not “100% efficacious”, it is the most effective mode of transmission owing to the high viral load inoculated. The period from infection to disease is also shorter when compared to that for naturally acquired infection.<sup>3</sup>

Quoting Hewitt *et al.*, the authors indicated that the prevalence of transfusion transmission after leukoreduction was less than 1%.<sup>4</sup> However, the figure given in the paper was 3.7%. Hewitt *et al.* also expressed uncertainty as to whether the low rate of transmission related to leukoreduction or the age of the transfused component. The authors incorrectly cited reference 6 to indicate that only 1% would develop HAM/TSP. This reference<sup>5</sup> concerns the development of adult T-cell leukaemia (ATL), a vastly different disease which is the result almost exclusively of vertical transmission of the disease. The transfusion-related development of ATL is exceptionally rare. It does not take as long as 40 years to develop HAM/TSP in predisposed individuals.

The authors undertook weighted testing in their 2013 study, based on “historical prevalence rates”. They did not elaborate further, although a detailed explanation may be forthcoming in their second publication to which they refer. Because of the chronic shortage of blood, a possible reason could be the decision to undertake a concerted drive to secure donors from the largely untapped black section of the community. When one appreciates that the clustering of infection occurs in certain groups, even in endemic areas, it is our view that some form of intervention becomes imperative.

The authors misquoted the World Health Organization (WHO) recommendations of 2010.<sup>6</sup> The WHO indicates that testing should be based on local epidemiological evidence, and that

decisions on screening should take into consideration the impact of testing on the blood supply.

The authors refer to the “psychological effects... cost ... and counselling of donors”. If a system is already in place for human immunodeficiency virus, the additional resources that are required will be minimal. A possible added advantage is that the measures put in place will help curtail the spread of HTLV-1 in the community. It would have been of interest to learn of the approach of the South African National Blood Service to donors who tested positive in the 2013 survey. Have they been counselled, or have they been allowed to be repeat donors?

While we cannot claim to be knowledgeable in transfusion medicine, as we are at the coalface, we have first-hand experience of the disability with which HAM/TSP patients have to cope. The authors’ attempt to minimise the risk of transmission and morbidity raises an ethical dilemma. It would be unacceptable for a patient to acquire the infection via a route that was totally preventable. Hypothetically, would any of the authors accept a transfusion from a known positive donor?

We stand by our suggestion that some form of intervention is necessary. A compromise may be to test all first-time donors from a high prevalence area, e.g. KwaZulu-Natal, and compare the results with those from a low prevalence area, e.g. the Western Cape.

**Conflict of interest:** The authors do not declare a conflict of interest.

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