

Transfusion Transmitted Infections in Indian Thalassemics: A Perspective

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To the Editor,

We read with interest the paper entitled “Blood transfusion transmitted infections in multiple blood transfused patients of beta thalassemia” by Vidja et al. [1] in your esteemed journal. Patients with thalassemia major require chronic blood transfusion and thus they are at serious risk of transfusion transmitted viral infections. There are several studies on prevalence of transfusion transmitted infections (TTI) in thalassemics from this country [2–5]. To put in proper perspectives these studies can be classified into three groups. (i) Those conducted prior to or within 2–3 years of Supreme Court order for mandatory testing for HIV. (ii) Those published between 1995 and 2002 when mandatory testing for HCV by serological technique that was not in force but HIV testing was a must. (iii) Post 2002 when serological screening of all three viruses i.e. HIV, hepatitis B and C were undertaken in multitransfused thalassemic patients.

Studies conducted in and around 1988 showed extremely high prevalence of HIV infection in the range of 14–18 % among multitransfused thalassemic patients [2, 3] while prevalence of hepatitis B and C virus infection remained at 14 and 25–38 %, respectively [4, 5]. Post 2002 studies [1, 6, 7] including the present one show interesting data. In the present study (1), the TTI in multitransfused thalassemics have been reduced substantially almost to the level of their prevalence in normal population. However, a similar study conducted from the same state [6] showed extremely high prevalence of hepatitis C infection. This high prevalence of hepatitis C infection is in line with similar contemporary study [7].

Hemophilia in India is still managed with liquid blood products like whole blood, FFP and cryoprecipitate. A study conducted by Ghosh et al. [8] showed high prevalence of hepatitis B and C infections in these patients. Today hepatitis B vaccine is available and it is very effective. Hence all patients who are likely to require multiple transfusions should always be vaccinated. NAT testing is widely recommended to reduce further the transfusion transmitted viral infections. One such study published from this country [9] has shown that blood units seronegative for HIV 1+2, HbsAg and hepatitis C has 1:1,000–1:1,500 NAT positivity rate (infective units) and majority of the positivity (80 %) is due to hepatitis B virus underlining the urgent need of hepatitis B vaccination for all likely multitransfused thalassemic patients.

Variation in prevalence of TTI amongst multitransfused thalassemics even after serological screening could be related to geographical differences in prevalence of the viral infections amongst blood donors, nature of blood donors and nature of care the thalassemia patients are receiving. In centres where thalassemia patients are better cared for may show higher prevalence of these viral infections even if all other factors are constant simply because better cared thalassemics live longer and are exposed to more blood units hence more chances of TTI. Hence while describing prevalence of contracting TTI some normalization is required in terms of mean blood units transfused to patients so that the data becomes comparable.

References

1. Vidja PJ, Vachhani JH, Sheikh SS, Santwani PM (2011) Blood transfusion transmitted infections in multiple blood transfused patients of beta thalassemia. *Indian J Hematol Blood Transfus* 27:65–69

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2. Sen S, Mishra NM, Giri T et al (1993) Acquired immuno deficiency syndrome (AIDS) in multitransfused children with thalassemia. *Indian Pediatr* 30:455–460
3. Bhushan V, Chandy M, Babu PG et al (1994) Transfusion associated HIV infection in patients with hematologic disorders in Southern India. *Indian J Med Res* 99:57–60
4. Amarapurkar DN, Kumar A, Vaidya S et al (1992) Frequency of hepatitis B, C and D and human immunodeficiency virus infections in multitransfused thalassemics. *Indian J Gastroenterol* 11:80–81
5. Sengupta B, De M, Lahiri P, Bhattacharya DK (1992) Ser-surveillance of transmissible hepatitis B and C viruses in asymptomatic HIV infections in haemophilics. *Indian J Med Res* 95: 256–258
6. Shah N, Mishra A, Chauhan D et al (2010) Study on effectiveness of transfusion programme in thalassemia major patients receiving multiple blood transfusions at a transfusion centre in Western India. *Asian J Transfus Sci* 4:94–98
7. Mathur M, Wanjari K, Turbadkar D (2008) Seroprevalence of HIV, hepatitis C and hepatitis B in multitransfused thalassemics. *Indian J Med Microbiol* 26:205–206
8. Ghosh K, Joshi SH, Shetty S et al (2000) Transfusion transmitted diseases in haemophilics from Western India. *Indian J Med Res* 112:61–64
9. Makroo RN, Choudhary N, Jagannathan L et al (2008) Multicenter evaluation of individual donor nucleic acid testing (NAT) for simultaneous detection of human immunodeficiency virus 1 and hepatitis B and C viruses in Indian blood donors. *Indian J Med Res* 127:140–147