


**Transfusion-transmissible infections among voluntary blood donors at Government Medical College Thiruvananthapuram, Kerala, India**

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Sir,

Blood transfusion is one of the life-saving interventions but carries the risk of acute and delayed complications and that of transfusion-transmissible infections (TTIs).<sup>[1]</sup> Blood donors are the cornerstone of a safe and adequate supply of blood and blood products and the safest blood donors are voluntary, non-remunerated blood donors from low-risk populations.<sup>[2]</sup>

We have conducted a study to assess the proportion of blood-borne infections among voluntary blood donors of Blood Bank, Government Medical College, Thiruvananthapuram and to find

out the factors associated with TTIs. Prevalence of ABO blood groups among the donors was also estimated. The study design was hospital-based cross-sectional survey and the data were collected during November – December 2010 from the registers using a structured proforma. The major outcome variable was the presence of common blood-borne infections. The exposure characteristics were sociodemographic variables. The data were reported as proportions or mean with standard deviations (SD).

Of the 5 004 blood donors studied, 4 810 (96.1%) were males and the mean (SD) age of the study participants was 28.24 (7.4) years. Persons with blood group O were 2 087 (41.69%) and that of blood group A, B, and AB were 1 263 (25.23%), 1 334 (26.65%), and 320 (6.38%), respectively. The overall prevalence of Rh positivity was 92.85%. Hepatitis B was the most common infection detected with a prevalence of 1.5% (n = 76), 32 (0.6%) had Human Immunodeficiency Virus (HIV) infection, 21 (0.4%) had Hepatitis C Virus (HCV) infection, while 7(0.1%) were detected to have Syphilis [Table 1]. The factors associated with any TTI were found to be elderly, marriage, and low educational status.

In our setting, it was noted that more than 95% of the donors were men. No such gender differences were noted in American population.<sup>[3]</sup> The participation is being reduced in men also as age advances. This phenomenon of lack of inclination among middle aged and elderly has already been noticed and it has been forecasted that the proportion of voluntary blood donors will be decreasing tremendously as the population gets older because of demographic transition.<sup>[4]</sup> The prevalence of blood groups among the study subjects were comparable with that of reported pattern from same ethnic population with a predominance of blood group “O.”

The proportions of TTIs in the target population of the present study were quite low compared with the pattern recognized from other third world countries.<sup>[5,6]</sup> Reported prevalence of HIV and Syphilis seropositivity among blood donors in Delhi were also quite high compared with that of the present study.<sup>[7]</sup> But, some of the other studies from south India has also reported very low prevalence of TTIs like Hepatitis B Virus (HBV) infection.<sup>[8]</sup>

The distribution of TTIs may not be a reflection of the actual burden of the diseases in the community. It has been documented that the prevalence of TTIs detected among the voluntary donors were 50 to 350 times lower to that of the general population.<sup>[9]</sup>

In the light of these evidences, we call for educational and promotional programs encouraging females for blood donation can be implemented to promote voluntary blood donation among them. The campaign should also be aimed toward sustaining the motivation in youngsters toward blood donation even as age advances.

**Table 1: Distribution of detected transfusion transmissible diseases**

Infection	Frequency	Percentage
HBV	76	1.5
HCV	21	0.4
HIV	32	0.6
Syphilis	7	0.1
Malaria	1	0.02

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