

### **Profile of deferral of blood donors in regional blood transfusion center in North India**

Sir,

Safety of blood and blood products is a major problem all over the world. Stringent donor screening criteria are designed to protect both the blood donor and recipient from harm. The present study was conducted with an objective to assess the current rate and reasons for donor deferral, and to guide the proposed donor education and recruitment strategy.

A retrospective analysis of data of blood donors presenting in our hospital was done from January 2011 to June 2011. Deferral reasons were analyzed among replacement/voluntary, male/female,

**Table 1: Distribution of common causes of deferral by sex and replacement/voluntary**

	Male	Female	Replacement	Voluntary	Total
Low hemoglobin	291 (40.4%)	194 (75.8%)	352	133	485 (49.7%)
On medication	101 (14%)	14 (5.5%)	73	42	115 (11.8%)
Alcohol intake in 24 hours	84 (11.7%)	—	72	12	84 (8.6%)
Fever/infection	51 (7.1%)	3 (1.8%)	46	8	54 (5.5%)
Hypertension/cardi-vascular problems	30 (4.2%)	7 (2.7%)	20	17	37 (3.8%)
H/o Jaundice/hepatitis B/C	25 (3.5%)	7 (2.7%)	25	7	32 (3.3%)

**Table 2: Deferral reason comparison in different age group donors**

	18–25 years	26–35 years	36–45 years	46–55 years	56 years and above
Low hemoglobin	138	202	115	26	4
On medication	36	49	20	9	1
Alcohol intake in 24 hours	9	45	25	5	—
Fever/infection	21	26	5	2	—
Hypertension/cardi-vascular problems/surgery	2	3	17	13	2
H/o Jaundice/hepatitis B/C	13	13	6	—	—

various age group categories, and whether deferral was temporary or permanent.

A total of 19,125 donors presented in the hospital and voluntary donation camps during the study period, out of which 18,343 (95.9%) were males and 782 (4.1%) females. There were 5224 (27.3%) replacement and 13,901 (72.7%) voluntary donors. Total number of deferred donors were 976 (5.1%), and the deferral rate was comparable with earlier reports,<sup>[1,2]</sup> however, deferral rate as high as 16.4% has been reported.<sup>[3]</sup>

Out of the total 976 deferred donors, 720 (73.8%) were males and 256 (26.2%) females, the rate of deferral being significantly higher for females than that for males (32.7% and 3.92%, respectively,  $P < 0.001$ ). There was significant difference in rates of deferral in replacement and voluntary donors (13.5% and 2%, respectively,  $P < 0.001$ ). Agnihotri found that the related donors had a significantly low deferral rate as compared with voluntary donors.<sup>[4]</sup> Rates of deferral increased significantly as the age increased ( $P < 0.001$ ). There were 864 (88.5%) temporary and 112 (11.5%) permanent deferrals out of the 19,125 donors ( $P = 0.339$ ), which was similar to reports from earlier studies.<sup>[1,3]</sup>

In our study, overall, the most common cause of deferral was low hemoglobin (49.7%), similar to earlier studies<sup>[1–4]</sup> followed by ongoing medication(s) (11.8%), intake of alcohol within 24 hours

(8.6%), and fever and/or infection (5.5%) [Table 1]. Majority of such donors were aged 26–35 years [Table 2].

The most common cause of permanent deferral was hypertension and cardiovascular problems (3.8%), followed by history of jaundice/hepatitis B/C (3.3%) [Table 1]. Those deferred due to hypertension/cardiovascular problems were mostly aged 36–55 years and were mostly males [Table 2]. Previous studies have reported hypertension<sup>[1,4,5]</sup> as the most common cause of permanent deferral whereas others have reported history of jaundice<sup>[6]</sup> as the most common cause.

In conclusion, variations in rates of donor deferral may be attributed to different donor selection criterion in different regions and centers. Efforts must be taken to increase awareness among deferred donor and encouraging them for future donation to reduce much of the loss of useful units of blood. Raising general awareness for blood donation and encouraging related donors to become regular donors may help increase the number of voluntary donations. Donor recruitment strategies with more liberal criterion may reduce the number of deferrals.

**Tanya Sharma, Bharat Singh, Girish Chandra Bhatt<sup>1</sup>**

UCMS and Associated GTB Hospital, <sup>1</sup>All India Institute of Medical Sciences, Bhopal, India.

**Correspondence to:** Dr. Tanya Sharma, 20/19, Third Floor, Old Rajendra Nagar, New Delhi, India.  
E-mail: drtanya83@gmail.com

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Website: <a href="http://www.ajts.org">www.ajts.org</a>	Quick Response Code:
DOI: 10.4103/0973-6247.115603	