

ARTICLE

Notification of transfusion transmitted infection

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The National Blood Policy of India, 2002, advocates the disclosure of results of transfusion transmitted infections (TTI) to blood donors. However, in the absence of well-defined notification processes, and in order to avoid serious consequences resulting from unguided disclosure, blood bank personnel discard blood that is TTI-positive. We report on a survey of 105 voluntary blood donors in Kerala. Only two out of three participants had filled the donor form in the last year. Only half were aware that the blood bank was supposed to inform them if they tested positive for TTI. Fifty-seven per cent of donors wanted to be informed every time they donated blood, irrespective of a positive or negative result.

Background

The World Health Organization (1) and National Blood Policy of India (2) recommend that national blood services should be based on voluntary, non-remunerated blood donation. Every unit of collected blood in India is tested for five infections, namely, HIV, hepatitis B, hepatitis C, malaria and syphilis, collectively known as transfusion transmissible infections (TTI). As a standard procedure for selecting healthy donors, blood banks ask donors to fill a consent form with a declaration on various aspects of his/her health. By signing it the donor agrees for his/her blood to be tested for TTI. Confidentiality and notification are important issues with regard to TTI, and especially with regard to HIV. The National Blood Policy (NBP) advocates disclosure of positive test results, but in practice the onus is on the donor to find out his/her results. As a single rapid HIV test is done in blood banks, which is a screening and not a diagnostic test, donor notification cannot be based on this. The screening test also has the potential to record both false positives and false negatives. It is, therefore, important for blood bank authorities to interpret and inform the test results carefully. Samples should be retested using different assays after the first test is found positive (3). Blood banks in India are grappling with issues like how and when to inform the donor of his TTI status. A previous study revealed that the main reason for not informing donors was fear of breach in confidentiality during notification (4). In order to find out donors' experiences with blood banks regarding notification and their preference on how they would like to be contacted after blood donation, we conducted a study among blood donors in Kerala, India.

Methodology

Participants comprised a group of voluntary blood donors

at the World Blood Donors' Day meeting in July 2006 in Trivandrum, Kerala. All 119 voluntary donors present during the meeting were approached, and 105 responded. After explaining the objective of the study and obtaining their informed consent, data were collected using a structured questionnaire comprising 10 questions. Apart from demographic information (age and sex), two questions were on blood donation—the number of times the participant donated blood in the last one year, and number of times he/she filled the donor form. Another question was about each donor's awareness about his/her donated blood being tested for TTI, the number of times the donor was contacted in the last one year by the blood bank, and whether donors sought their test reports. The remaining questions were on whether donors want to be informed about their TTI status, and when and how they would like to be contacted.

Results

Although 105 blood donors returned the questionnaires, not all of them responded to all the questions. The respondents were 77 per cent ($n=81$) male and 23 per cent ($n=24$) female, with a mean age of 31.18 years. Only 68.3 per cent ($n=71$) reported that they filled donor forms before donating blood in the past year. The mean number of donations was 2.06 in the last one year (SD 1.0). Table 1 gives information on donors' awareness of TTI and *when* they would like to be informed about their status. Table 2 gives information on donors' preferences regarding mode of communication for notification, about *how* they would like to be notified by the blood bank.

In all, 103 donors responded to the question regarding the number of times the blood bank contacted them. 88.3 per cent ($n=91$) were never contacted, 9.7 per cent ($n=10$) were contacted once, and 1.9 per cent ($n=2$) were contacted twice in the last one year. Among those who responded whether they sought a report ($n=77$), 20.95 per cent ($n=22$) had asked the blood bank for the report, but had not received it, while the rest of them had not asked for one. Reasons for not seeking a report were:

1. 51.4 per cent ($n=52$) perceived that they did not have blood-borne infections; and
2. 2.87 per cent ($n=3$) thought that if they asked for a report people might think that they had blood-borne infections.

Table 1: Donors' TTI awareness and when they would like to be notified

Variable	Response	Proportion (n)
1. Aware about blood being tested for TTI	Yes	53.4% (48)
	No	46.6% (55)
	Total	103 (2 did not answer this question)
2. Aware that blood bank should inform donor if tested positive	Yes	53% (48)
	No	47% (56)
	Total	104 (1 did not answer)
3. When donor would like to be informed about TTI	After every donation	57.1% (56)
	Only when TTI positive	38.8% (38)
	Not at all	4.1% (4)
	Total	98 (7 did not answer)

Table 2: How donors would like to be notified

Preferred method of contacting	Frequency	Percentage
Mobile phone	54	54.00
Land phone	24	24.00
Post	8	8.00
E-mail	2	2.00
In person, soon after donation	9	9.00
In person, at a later date	3	3.00
Total	100	100.00

Sixty-eight per cent of donors preferred a personal method of notification (mobile phone, e-mail or collecting the test report in person have been clubbed as personal).

Discussion

Main findings:

1. Only half (53 per cent) of the donors were aware that the blood bank is supposed to inform them if they test positive for TTI.
2. Only two out of three donors had filled the donor form before blood donation in the past one year.
3. A little more than half (57 per cent) of donors would like to know about their TTI status every time they donate blood, irrespective of a positive or negative result.
4. Almost half the donors thought that they did not have blood-borne infections. This is important as most TTI are contracted without the donor's knowledge, some are fatal, and can be transmitted through sexual contact. Donors

who are TTI-positive and unaware of it may unknowingly transmit these diseases to their partners.

Pre-donation: donor form and awareness about TTI

Ideally all donors should be aware that their blood will be tested for TTI. In this study, however, only 53 per cent knew, and this calls for awareness generation among present and prospective donors (see **Table 1**). The WHO and UNAIDS advocate for careful selection of donors as an efficient method of minimising the risk of TTI transmission. In this regard, filling the donor form is considered as a method of screening and opportunity for self-referral. It provides information about tests that the blood will be subjected to after donation, and is also useful in donor notification because there is an entry for contact address. Nevertheless, even among the highly motivated donors that we studied, only two-thirds reported filling the donor form. This not only makes notification difficult, but also reconfirms the poor level of awareness and need of counselling in blood banks.

Post-donation: counselling, testing and notification

Voluntary blood donors are regarded as the cornerstone of the safe blood campaign in India. They are young, altruistic, and have rolled up their sleeves to save lives of people they do not even know. Maybe that is why two-thirds of the donors wanted to be informed of their test result, irrespective of it being positive or negative. Blood banks that can afford a marginal increase in cost should consider providing this service in return for donors' altruism. According to the Drugs and Cosmetics Act of India, it is mandatory to test every unit of blood for malaria, anti-HIV 1 and 2, anti-HCV, HBsAg and RPR for syphilis (5). For most of the diseases under TTI, testing blood is the only way of diagnosis (3). In voluntary counselling and testing centres (VCTC) for HIV, the client is counselled and requested to collect the blood test results personally. This is possible because rapid HIV testing kits are available at VCTCs. In blood banks, however, testing methods are different. TTI tests are conducted mostly in batches of 48 or 96. The donor may not want to wait at the blood bank for several hours to get his/her report. In addition, donors in the window period will most likely test negative, while in fact carrying the infection. This has serious implications both for maintaining safe blood supplies and for donor notification. Rapid test kits should be made available at blood banks along with confirmatory tests to expedite notification.

Informing donors who test positive is an important component of maintaining blood safety, in retaining voluntary donors, and deferring those with high risk behaviour (6). A previous study on donor notification practices shows that blood banks do not disclose results even if they are positive due to perceived problems of disclosure (4). The serious fallout on safe blood supply cannot be overlooked, especially because the prevalence of TTI is around 3 per cent (7). A person who thinks that she/he is healthy may not take the trouble of finding out the result from the blood bank. Another drawback is that testing in blood banks is done without counselling, unlike in VCTCs, which by the way, provide counselling and testing only

for HIV, not for TTI.

Counselling, testing and notification together form the vital link between the donor and safe blood. This study shows that counselling is almost non-existent, testing methods need improvement, and notification is not done because blood bank staff are not sure how to notify donors. In this context, it is imperative to find out how the donor would like to be notified regarding his TTI results. Trying to contact donors without predetermining their preference on mode of communication may be totally ineffective. A leading hospital in New Delhi tried to notify donors who tested positive for hepatitis B. Only 10 per cent had responded (8). In our study 68 per cent of donors preferred personal methods of notification (by mobile phone, e-mail or collecting the test report themselves; see Table 2). This is understandable, since all are methods that guard donors' confidentiality. It ensures protection of personal information to a greater extent than if test reports were sent by post or land line, which increase others' access to confidential information.

Conclusion

Voluntary blood donors are the main source of safe blood in India. But most blood banks do not notify donors of their TTI status even when positive for fear of compromising confidentiality. Finding out the preferred method of notification from donors themselves and modifying the notification procedure accordingly will ensure the recruitment

of safe donors. Notification of positive results should be made mandatory, but care should be taken to make it general, without referring to any specific disease. TTI results should be presented and explained only in a person-to-person interview. Donors should be counselled before every donation on the importance of filling the donor form, about TTI, and its relevance with respect to the transmission of HIV, to even hope to reduce the spread of such infections.

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