Section: Pathology

Original Research Article

COUNSELLING AND DONOR NOTIFICATION OF REACTIVE BLOOD DONORS IN A TERTIARY CARE HOSPITAL, NORTHEAST INDIA

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Received *: 28/01/2025*
Received in revised form *: 03/04/2025*
Accepted *: 19/04/2025*

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DOI: 10.70034/ijmedph.2025.2.126

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2025; 15 (2); 701-704

ABSTRACT

Background: Blood transfusion is an indispensable component of healthcare delivery system. As the blood donors are young, energetic, benevolent and ready to save lives of people they even do not know, it is our duty to ensure their safety from emotional and social distress. This study was conducted to know the blood donor notification for TTI reactivity, methods of notification and response to notification and challenges for the same in north east India over a period of three years.

Materials and Methods: This observational descriptive study was conducted at a tertiary care center northeast India. The study period spanned from January 2022 to December 2024.

Results: A total of 35422 blood donation. 100% of the TTI reactive were male. Out of 305 reactive donors only 251 (82.3%) could be communicated (notified donors) and 54 (17.7%) couldn't be communicated (non notified donors). Response rate in first time donors is found to be higher 70% (145/207) than the repeat donors 51% (98/50). Majority of non responders 37.5 % was due to out of the city residence.

Conclusion: In conclusion the response rate of the donors & further confirming and receiving appropriate treatment is low in our geographical area. Blood banks should plan audit at regular intervals to measure the satisfaction of the donors, giving them provisional reports, free assisted, hassle free confirmation test and treatment may help in improving donor compliance and a tribute to these young altruistic blood donors.

Keywords: Blood donors, HIV, TTI.

INTRODUCTION

Blood transfusion is an indispensable component of healthcare delivery system. Dr. Physick Syng Philip in 1795 carried out the first human blood transfusion.[1]

As reported by WHO 6.6 donations in lower-middle-income countries like India is seen based on samples of 1000 people.[2] It is a life saving procedure in a sizeable range of health conditions with inherent risk of transmitting infectious agents known as transfusion-transmissible infections (TTIs), posing a significant risk to recipients if the donors not properly screened. Drugs and cosmetic act of India mandates every blood donated to be screened of TTIs prior to transfusion to recipients.[3,4]

As the blood donors are young, energetic, benevolent and ready to save lives of people they even do not know, it is our duty to ensure their safety from emotional and social distress. We should instill trust among the blood donors so that the pool of donors increases along with enhancing transfusion safety.

This study was conducted to know the blood donor notification for TTI reactivity, methods of notification and response to notification and

challenges for the same in north east India over a period of three years.

MATERIALS AND METHODS

This observational descriptive study was conducted at a tertiary care center northeast India. The study period spanned from January 2022 to December 2024, during which data from 35422 blood donors and all sero reactive blood donors were reviewed and analyzed. At the time of pre donation counselling, consent is taken whether the donor wants to be informed about TTI status.

In every case of TTI reactive donor, a day time telephonic notification was provided 3 times at an interval of 2 weeks at least. The donors who couldn't be contacted even after 3 calls were considered as non-notified donors. The donors who could be contacted within 3 months were considered as notified donors.

After reconfirmation of notified donors by the dedicated counselor, they were notified that the sample tested on the day of donation is with discrepant result and to visit for counselling and confirmation of test. Among the notified donors, those attended for counselling were considered responders and those who failed to attend for counselling within 3 months considered non responders. The responders again counseled face-to-face taking care of their emotional state and briefed about screening test report maintaining confidentiality at each step.

The HIV & syphilis sero reactive donors were sent to ICTC & Suraksha clinic with referral form for confirmation. The HBsAg & HCV sero reactive donors were referred to Medicine clinic.

RESULTS

A total of 35422 blood donation were received of which 23590 (66.6 %) voluntary donors & 11832 (33.4%) replacement donors were screened within the study period of 3 years from January 2020 to December 2024.[Table 1]

The male donors dominate with 34494 (97.38%) in compare to female donors 928 (2.62 %).

The number of donors who were found reactive to TTIs was 305 (0.86 %). [Table 1]

100% of the TTI reactive were male. Not a single case of malaria was found in this period of our study. Out of 305 reactive donors only 251 (82.3%) could be communicated by telephone by our counselor (notified donors) and 54 (17.7%) couldn't be communicated (non notified donors). [Table 2]

Among the non notified donors 28 didn't picked up the call, 18 donors with wrong phone number & 8 donors not reachable or no incoming call facility.

Out of 251 notified donors, 195 (77.7%) donors visited for counselling were considered responders Total non responders were 56 (22.3%). [Table 2]

Out of the Total 61 donors who were screened reactive for HIV during the study period only 25 (40.9%) actually presented to ICTC to confirm the test result. Out of the 25 reactive donors 16 (64%) were confirmed positive and are on ART. [Table 3]

Response rate in first time donors is found to be higher 70% (145/207) than the repeat donors 51% (98/50).

Majority of non responders 37.5 % was due to out of the city residence. [Table 4]

Table 1: Distribution of TTIs among blood donors

Year	Total donors		TTIs reactive									
			HIV		HBsAg		HCV		Syphillis		Malaria	
	VD	RD	VD	RD	VD	RD	VD	RD	VD	RD	VD	RD
2022	7673	3079	5	8	15	6	34	25	2	0	0	0
2023	7953	4465	12	7	14	10	30	19	3	2	0	0
2024	7964	4288	15	14	11	4	31	34	2	2	0	0
	23590	11832	32	29	40	20	95	78	7	4	0	0
	35422		61		60		173		11		0	

Table 2: Responders among TTI reactive donors

	Total donors reactive	Total notified	Responders
HIV	61(0.17%)	49 (80.3%)	43 (87.8%)
Syphillis	11 (0.03%)	10 (90.9%)	9 (90.0%)
HCV	60 (0.17%)	47 (78.3%)	38 (80.9%)
HBsAg	173 (0.49%)	145 (83.8%)	105 (72.7%)
Malaria	0	-	-
	305 (0.86 %)	251 (82.3%)	195

Table 3: HIV reactive donors to HIV positive donors on ART

HIV reactive donors	Total notified	Responders	Visited ICTC	Declared positive & on ART
61 (0.17%)	49 (80.3%)	43 (87.8%)	25 (58.2%)	16 (64%)

Table 4: Reasons for non respondingsero-reactive donors

Reasons	No.	%
Donors busy schedule	12	21.4

Out of city residence	21	37.5
Un acceptability of result informed / Fear of positive result	8	14.3
Want to confirm test in their locality or visit preferred doctor	15	26.8

DISCUSSION

Blood donors are asset of our country; they are young healthy individual ready to save lives of people. Screening of the donors is an imperative step in preventing the spread of TTIs. The aim of donor notification process is not only to ensure safe transfusion or prevent the spreading of TTIs but also to reduce the morbidity by early detection and treatment of reactive donors. Since these are screening test permanent deferral of the donors will further deplete the finite donor pool of our country so confirmation & treatment is necessary.

During our study period we recorded 0.86% of TTI, similar result were declared by Md. Adnan Hasan Masud et al. 2023 in our neighboring country,0.95%,[5] Bhasker PM, Aluri A et al. reported 1.07%.[6] However higher percentage was reported by, 4.36% Rawat et al. in a study in north India,[7] 2.22% overall reactivity as shared by Pallavi p et al.[8]

In the present study, the response rate was 63.9% which is consistent with Dholokia et al.2021 52.8%,[9] Raturi et al.58.1% 2018.[10] A lower response is reported by Bhasker PM, Aluri A et al. 26.8 %,[6] A Handa et al. 21% 2019.[11] However a very high response rate, 88% reported by Tynell et al. in a study in Sweden.[12] During our study period a single method, day time telephonic communication was used.

In the present study 54 (17.7%) reactive donors couldn't be contacted and informed depriving them from early detection and treatment. Out of network area, wrong cell phone numbers were the main reason for it. As all communication were done during day time only, possibly we can bring down the number of non notified donors by off hours communication and contacting them using the network of peripheral social workers operating in their area.

In our study we found that out of the 43 HIV reactive responders, 25 (58.2%) followed up to ICTC after post donation counselling. Out of those who were counselled and tested in ICTC at our facility 16 (64 %) were found positive and on ART. Bansal et al. reported 46% and Agarwal et al. 43.7 %.[13,14] However hepatitis B & C reactive donor's data couldn't be traced completely due to inability to perform confirmatory tests at our own center. Asking donors to visit other facility without formal report is one of the limiting steps in the process of post-donation counselling and referral. Most responders are in mode of dissent and are arduous for them to believe their reactive state.

We observed response rate in first time donors to be higher 70% than the repeat donors 51%. Similar observation was reported by kumari et al. 43.6% vs 27.9 %, Syal et al. reported 60% vs 0 % first time donors to the repeat donors.[15,16] However response among repeat donors 67.5% found better as compared to the first time donors 54.0% as reported by Raturi et al. 2018.[10] As the repeat donors had no apparent risk factors and donated blood elsewhere earlier and were not aware or informed of their reactive test results it is hard for them to believe without a report.

In our study majority, 37.5 % out of the city residence & donor's busy schedule were the main reason behind reactive non responders. Similar observation of Outstation donors as the main reason for non responders reported by Rasika et al. in a study in New Delhi 2024.[17] Anonymous linking of referral facilities and counselling center with follow up with peripheral social worker will help in compliance of non responders.

CONCLUSION

In conclusion the response rate of the donors & further confirming and receiving appropriate treatment is low in our geographical area. Blood banks should plan audit at regular intervals to measure the satisfaction of the donors, giving them provisional reports, free assisted, hassle free confirmation test and treatment may help in improving donor compliance and a tribute to these young altruistic blood donors.

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