



A RETROSPECTIVE ANALYSIS OF RESPONSE RATE OF SEROREACTIVE BLOOD DONORS AFTER NOTIFICATION AND COUNSELLING IN A TERTIARY CARE HOSPITAL

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ABSTRACT

BACKGROUND: In order to ensure safe supply of blood and blood products to transfusion recipients, blood donor screening and Transfusion transmitted infections testing have become more stringent all over the world. Notification and counselling of reactive blood donors is an effective method of curtailing Transfusion transmitted infections.

AIM: To assess response rate and attitude of seroreactive donors towards donor notification and counselling

MATERIALS AND METHODS: It was a retrospective study done in our department for a period of 2 years during which response rate of TTI reactive donors towards donor notification and counselling was analysed from reactive donor registry.

RESULTS: During the study period of 2 years, there were 4768 blood donations, 73 of the donors were reactive for various TTIs as follows 51 for Hepatitis B (HBV), 1 for Hepatitis C (HCV), 7 for Human Immunodeficiency virus (HIV), 14 for Syphilis. Out of the 73 reactive donors only 41 (56.16%) could be contacted. Out of the contacted donors only 22 of them responded for counselling. Response rate was (53.66%)

CONCLUSION: Donor notification and counselling is a very important tool to reduce TTIs. Universal guidelines and protocol must be framed and followed by every blood centre. Knowledge of response rate of TTI reactive donors will guide to frame guidelines to track non-responding donors who are the major threat to healthy donor pool.

KEYWORDS : Transfusion transmitted infections, notification, response rate

INTRODUCTION

Blood transfusion saves millions of lives each year globally⁽¹⁾. There is no substitute for this precious resource. Safe and adequate supply of blood and blood components is a crucial part of all Blood Transfusion Services. To achieve these goals blood banks worldwide have implemented various methods like continuous improvements in donor selection and retention criteria, more sensitive serological tests for various Transfusion transmitted infections (TTIs) like human immunodeficiency virus (HIV), hepatitis B (HBV), hepatitis C (HCV), syphilis (VDRL), malaria.

Though there are stringent methods and criteria for donor screening and testing worldwide but transfusing blood to recipients with zero risk (ie) free from all TTIs is far from reality⁽²⁾. Blood transfusion services (BTs) have duty of care both towards blood donors as well as transfusion recipients. Counselling is an integral part of BTs and duty of care for all those who present themselves for blood donation^(3,4). Post donation counselling should include informing reactive donors about their serological, deferral status, risk of transmitting infections to others, emotional and psychological support, proper referral and follow up⁽²⁾.

But communication of positive results to donors is not a universal procedure⁽⁵⁾. Previous studies have revealed that main reason for not informing donors was fear of breach in confidentiality during notification⁽⁶⁾. Such donor notification can leave a negative feeling towards blood donation^(7,8), some donors do not respond at all while some donors may continue to donate despite of notification. At the same time concealing information of TTI to seroreactive donors can deprive them the right to know health status, receive necessary treatment at the earliest.

The aim of the current study was to assess response rate and attitude of reactive donors towards post- donation counselling and notification.

MATERIALS AND METHODS

The present study was carried out in the Department of Transfusion Medicine in our Tertiary care Hospital. All donors who attended our blood Bank both (replacement and Voluntary donors) were screened by a donor questionnaire which was formulated in par with rules laid by Drugs and Cosmetics Act, Ministry of Health and Family Welfare, Government of India.⁽⁹⁾ Following screening informed consent was obtained from every donor, that their blood will be tested for the five mandatory TTIs (HIV, HBsAg, HCV, syphilis, malaria). Donors were also asked and given an option whether their test results can be informed to them or not.

Post blood donation all donor samples were tested by Automated Eliza (Mago 4) for all TTIs. All donors' samples which were reactive from the first sample (pilot tube), the tests were repeated from the blood bag

(second sample), as well as by Rapid Card test and was recorded in a separate register (reactive donor registry) and notified. In case of Hepatitis B positive (or) Hepatitis C positive donor's notification was done through telephone and donors were called for face to face counselling (or) given an option for consultation outside. Those donors who were not able to be contacted (either phone switched off, wrong number) were recorded as non-responders. Those blood donors who attended Blood bank following telephonic conversation were counselled and referred to Gastroenterologists for further treatment and follow up.

HIV reactive donors were referred to ICTC and syphilis positive donors were referred to STD clinic. All Blood Bags which were found to be reactive were discarded according to hospital standard operating procedures. The demographic details regarding gender, address, age, phone no, replacement or voluntary donors was obtained from Blood Donor registry.

RESULTS

During the retrospective study of 2 years, total 4768 donors have donated blood in our blood bank. Out of 4768 blood donors, 2737 (57.4%) were voluntary donors and 2031 (42.6%) were replacement donors. Males 4721(99%) of them contributed for the blood donation whereas only 47 females (1%) donated blood.

Out of 4768 donors who were screened for various Transfusion Transmitted infections in our Blood Bank, 73 donors were found to be seroreactive for various TTIs as follows; 51(1%) for HBV, 1 (0.02%) for HCV, 7(0.1%) for HIV, 14(0.3%) for syphilis, there were none who were reactive for malaria. Total prevalence of TTI in our study population (n=4768) was 1.5% (Table 1)

TABLE 1: TTI REACTIVITY AMONG BLOOD DONORS

TTI REACTIVITY	NUMBER	PREVALENCE (n 4768)
Hepatitis B	51	1%
Hepatitis C	1	0.02%
HIV	7	0.1%
Syphilis	14	0.3%
TOTAL	73	

Out of the total 73 reactive donors, all were males, none of the female donors were reactive. Out of 73 reactive donors 41(56.16%) of them could be contacted telephonically while 32 (43.84%) could not be contacted, either their phone not reachable, or they have given a fake no, or phone switched off. Donors were called atleast 3 times on 3 different days before categorizing as not-contactable (Table 2).

TABLE 2: REACTIVE DONORS CONTACTED

	HBV	HCV	HIV	SYPHILIS	TOTAL	PERCENTAGE

TOTAL	51	1	7	14	73	
CONTACTED	24	0	5	12	41	56.16 %
NON-CONTACTED	27	1	2	2	32	43.84 %

Out of the 41 contacted donors, only 22 donors responded and attended blood bank counselling. The response rate among contacted donors was 53.66% (Fig 1). Among the responded donors, 9 donors who were positive for HBV was referred to Medical gastroenterologist for further treatment and follow up. 4 HIV positive donors and 9 syphilis positive donors who attended blood bank counselling were referred to Sexually transmitted Infection Clinic (Department of dermatology) and then to ICTC (Table 3).

FIG 1: RESPONSE RATE AMONG CONTACTED DONORS

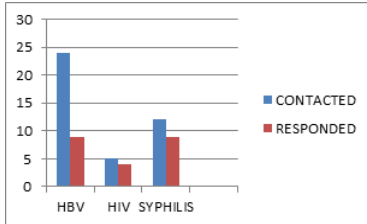


TABLE 3 RESPONSE RATE TTI REACTIVE DONORS

TTI REACTIVITY	CONTACTED	RESPONDED	NOT RESPONDED
HBV	24	9	15
HIV	5	4	1
VDRL	12	9	3
TOTAL	41	22 (53.66%)	19(46.34%)

Out of 19 non-responders (15 positive for HBV, 1 retro positive, 3 positive for syphilis) agreed to take outside consultation. The non-response rate was 46.34% (Table 3).

DISCUSSION

Blood Transfusion saves millions of lives every year. In order to donate blood, donors should be in good health and free from any infections that can be transmitted through blood transfusion. Blood transfusion services cares both for donors as well as for recipients. It is the duty of all Blood Transfusion services to inform donors in case of unusual and abnormal test results. Notification of blood donor has its own psychological and social impact (10). Donor notification involves providing information to donors that is prompt, accurate and confidential (5, 11). It also includes referral to suitable medical practitioners. Donors who do not respond (or) seek counselling continue to be a major Threat to the public, families and Blood Transfusion services (12).

In the present study, total prevalence of TTI was 1.5% which is similar to other studies in literature ranging from 0.8-1.4% and contrast to other studies ranging from 2.8-4.5% (10-15). The lower rate of TTI in our study may be due to reason that majority of blood donation was made by Voluntary blood donors (57.4%) which is similar to the study reported by Patel et al (10). In the present study all TTI reactive donors were only males as majority (99%) of blood donation were made by males whereas only 1% of female donors contributed for blood donation during study period. This was similar to the study reported by Vujhini et al (17) and contrast to other studies where donation by female donors ranged from 1.5 to 4.81% (10,16).

Out of 73 TTI reactive blood donors, only 41(56.16%) could be contacted which is higher to other studies reported in literature by Kotwal et al (49.4%) (10), Kaur et al (10.5%) (18) and lower to the study reported by Moyer et al (65.52%) (19). Out of the 41 contacted donors only 22(53.66%) of them responded by attending blood bank counselling, the response rate was similar to the one reported by Kaur et al (18) and contrast to the study reported by Kotwal et al, Agarwal et al, Patel et al (10,12,16).

With the development of more sensitive methods to detect TTI, incidence of false positive results have increased, notifying blood donors such results can lead to unnecessary anxiety among blood donors (12). Donor notification is crucial that helps to protect the health of the donor and his/her family and guides donors to seek appropriate treatment at the earliest (16). Donors who come for counselling are

benefitted by various ways, donors are given an opportunity to ask questions, clarify myths and facts about blood donation.

In the present study donors who were non-responsive were 19(46.34%). Such non-compliance could be due to several reasons like level of confidence of blood donors towards blood bank personnel, education status of blood donors, clarity of information provided to blood donors regarding risk of infection and window period, available treatment options during predonation and post donation counselling. For those Blood donors who are non-responsive every step must be taken from Blood centers to notify local government authorities about TTI reactive donor status in a confidential manner which does not breach donor's privacy. A team consisting of medical personnel, counsellor can be arranged to pay home visits of concerned donor to provide necessary counselling and guidance for appropriate treatment at the earliest.

The present study and various studies in literature reveals that there is no uniform guidelines and protocol for notifying TTI reactive blood donors which needs to be formulated

CONCLUSION

Donor notification and counselling is an important tool in minimising risk of TTIs and increasing healthy donor pool. It is necessary for every blood Donor center to analyse the response rate of TTI reactive donors towards donor notification and counselling so that necessary steps can be taken to train blood bank staff and Medical personnel about modes of communicating and developing rapport with TTI reactive donors so that they attend Blood Bank Counselling without fail. Steps can also be taken to provide treatment free of cost. To conclude it is necessary that uniform guidelines and protocol must be framed and universally approved and modified with suggestions and followed by every blood donor center for donor notification and counselling to make healthy and safe blood.

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