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Donor Notification In Reactive Donors And Their Response To Communication.

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ABSTRACT

Blood transfusion is associated with the risk of transmitting transfusion transmissible infections (TTI) even after the thorough mandatory TTI screening of blood units. To prevent disease transmission, it is important to inform, notify and counsel the donors about their sero reactive status at the blood centre. The present study determines the response of various TTI reactive donors for post donation counselling after notification and their persistence in society as reactive donors. It was a retrospective study conducted at tertiary care center from 1 January 2021 to 31 December 2021. Reactive donors were called to the blood bank by telephonic call. Reactive donors on complying at center were retested, counselled and referred to appropriate centre for further management. There were 16945 blood donations over period of 1 year, out of which 418 (2.46%) were reactive donors. Of these HIV reactive donors comprises of 132/16945 (0.77%), HBV 189/16945 (1.11%), HCV 50/16945 (0.29%), Syphilis 40/16945 (0.23%), Malaria 7/16945 (0.04%), 1 donor HIV + VDRL co-infection. A total of 418 TTI reactive donors were identified, out of which (232/418) 55.50% contacted by telephone calls. Out of which only 146 donors reported for post donation counselling i.e. response rate 62.9%. Remaining (186/418) 44.49 % could not be contacted due to wrong contact details of donors, fear of social stigma and variations in their geographical location. Donor notification is essential to minimize TTIs. Challenges faced in Communication failure mainly due to wrong contact details of donors, fear of social stigma and variations in their geographical location. To overcome these challenges, we should emphasize on pre- donation education, counselling and recruitment of outreach worker.

Keywords: Donor notification, Reactive donor, Transfusion transmissible infections.

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INTRODUCTION

Blood transfusion is a life-saving procedure and millions of lives are saved each year globally through this [1]. However, although blood transfusion plays an important role in the supportive care of medical as well as surgical patients, unsafe transfusion practices put millions and billions of people at risk of transfusion-transmissible infections (TTIs) [2].

Unsafe blood transfusion remains a major threat for the global spread of TTIs. World Health Organization (WHO) states that, safe blood is a universal right, which indicates blood that will not cause any harm to the recipient, like hepatitis, malaria, HIV or syphilis [3]. WHO recommends that, minimum, all donated blood should be fully screened for Hepatitis C virus (HCV), Hepatitis B virus (HBV) and Human immunodeficiency virus (HIV) and syphilis. [4]. The Indian national guideline mandates screening all the blood donations for HIV, HBV, HCV, malaria and syphilis to enhance blood safety of donated blood. In India Before 2004, the government policy stated that blood banks discard HIV seropositive blood without informing donors about their status in order to maintain donor confidentiality and avoid stigmatizing those with HIV/AIDS. Disclosure of viral TTI reactivity to the blood donor was not permitted until December 2004; at that time, the National Blood Transfusion Council, Government of India, formulated a strategy for the same [5]. The National Blood Transfusion Council now advocates the disclosure of results of TTI to blood donors. Blood banks are now required to obtain written consent at the time of donation from the donors as to whether they wish to be informed about a reactive test result. They are required to refer donors who tested HIV reactive to the designated Voluntary Counselling and Testing Centres for Disclosure, counselling and referral. All donors reactive to hepatitis B or hepatitis C need to be informed and then referred to a gastroenterologist for further management [6].

TTI-reactive donor notification is very essential for early clinical intervention to minimize their disease and the risk to the partners/close contacts. As per the present protocol, each reactive donor is informed about the abnormal test results, counselled and referred for further confirmation and management to the concerned specialty. Reactive donors are contacted telephonically for one-to-one counselling and repeat sampling and to elicit any high-risk behavior.

METHODS

It was a retrospective observational study conducted in the Department of Transfusion Medicine of Seth G.S Medical College & K.E.M. Hospital which is a tertiary care Hospital from 1 January 2021 to 31 December 2021. As per Drug and Cosmetic Act 1945(revised on 11 march 2020) and departmental SOP, pre- donation education and counselling of voluntary prospective blood donors was done by authorized counselors of our blood centers and eligible donors of both genders with age between 18 to 65 years were selected for whole blood donation. Demographic and detailed contact information of the donors were recorded at the time of registration. Consent was taken from the donors for blood donation and for all the mandatory tests on the donated blood. The consent also included a statement regarding contacting the donor in case of any of the TTI test comes reactive (Consent for disclosing results). Sample of the donors was collected at time of donation. These samples were tested for blood grouping and all the mandatory TTI tests namely human immunodeficiency virus (HIV), hepatitis B (HBV) and hepatitis C (HCV) by third generation enzyme-linked immunosorbent assay (ELISA), malaria by rapid test kit (malaria antigen test by immunochromatography) and Syphilis by rapid plasma reagin. As all these were screening tests the donors coming as positive in the tests are called the Reactive donors. Telephonic calls were made by our counsellor for informing the tests results and they were called to blood center. Once reactive donors came to the blood center, they were counselled and referred to appropriate center for further management. Hepatitis B and C reactive donors were referred to gastroenterology, malaria reactive donors were referred to the medicine OPD, syphilis reactive to the Dermatology and venereal diseases OPD and HIV reactive to the Integrated Counselling and Testing Center of the hospital (Response to communication). During all this process the records of contact with the donor and response from the donor were maintained and were kept confidential in the custody of Counsellor. Contactable were the one who came as TTI reactive donors and picked up call on telephonic contact. Non-contactable were the one who did not pick up the telephonic call, unable to reach, unable to contact, wrong contact number. Type of responses expected were: will / will not report back to blood center for post donation counselling, will / will not visit nearest healthcare center. If not willing to report back to blood center or nearest healthcare

center reason for the same. Type of responses noted in case record form and analyzed qualitatively in the form of descriptive data. The data of reactive donors was taken from the records which was kept with the Counsellor. The following data was collected - date of donation, date of testing, TTI results reactive for, consent for disclosing results, date of contacting and response to communication was collected and documented in case record form. Donors identified with their names, all the precautions to maintain the confidentiality of donors was taken and data was in the custody of Principal Investigator.

RESULTS

There were 16945 blood donations over period of 1 year, out of which 418 (2.46%) were reactive donors. Of these HIV reactive donors comprises of 132/16945 (0.77%), HBV 189/16945 (1.11%), HCV 50/16945 (0.29%), Syphilis 40/16945 (0.23%), Malaria 7/16945 (0.04%), 1 donor HIV + VDRL co-infection. A total of 418 TTI reactive donors were identified, out of which (232/418) 55.50% contacted by telephone calls. Out of which only 146 donors reported for post donation counselling i.e. response rate 62.9%.Remaining (186/418) 44.49 % could not be contacted due to wrong contact details of donors, fear of social stigma and variations in their geographical location.

Rationale Of Study

The present policy dictates information and referral of HIV-reactive donors to the ICTC for further management and referral of HBV- and HCV-reactive donors to the gastroenterologist. Pre-donation education, counseling, testing, and notification together form the vital link between the donor and safe blood. [7]

However, there is a lacuna of information regarding donor counselling and referral follow-up in India [6]. Most blood banks discard blood that is TTI reactive but do not notify donors of their TTI status due to lack of resources and trained counsellors [8]. Hence, there is very little information available regarding the counselling success rate and referral care provided. Therefore, this study will be carried out to assess the attitude of the reactive blood donors in response to post-donation notification and counselling.

DISCUSSION

Safe blood transfusion mandate proper pre donation counselling and TTI screening with post donation counselling and notification to the TTI reactive donors. Society and donor both benefits from the notification as the results can be confirmed and donor can take proper treatment. Failure to achieve 100% TTI free blood donation is attributed to breach in notification and pre donation education and thus leads to reluctance to respond to the reactivity status and leading to low respond status.

In present study, the combined sero-reactivity rate of all five mandatory TTIs markers is 1.09% which is comparable to Agarwal N et al, Patel SG et al and Leena MS et al and Mohd S et al, i.e. 0.87%,1.41% and 1.35% respectively [13]. While studies done by Kumari AB et al, Kotwal U et al and Kumar R et al, showed little higher rates i.e. 2.81%, 3.02%, and 4.57% respectively [14-16]. Lower rate of TTI markers may be because of >99% of blood collection was from voluntary donors and deferral rate was 10.37%. In present study failure to communication was observed in 39.4% cases, which is comparable to Kotwal U et al, i.e. 49.4%, but was 10.5% by Kaur G et al, reasons being either the address of the donors are not valid or their cellular phones were switched off or unavailable when contacted during the day time, wrong phone numbers and address given by the donors [15, 17].

Reasons for failure of communication with donors in present study were due to wrong phone numbers and postal addresses given by donors, phone numbers and addresses given by donors is of patients relatives instead of donor itself and donors don't pick calls even after multiple attempts of calling. Authors assume this high percentage of false information may be due to unawareness towards TTI's and not understanding the importance of giving their correct phone numbers and addresses. There is also possibility of known reactive status and act of purposely giving wrong phone numbers and address in attempt to conceal their identity. Authors recommend emphasis on strict pre donation counselling and privacy be maintained to gain the donor confidence. Government provided I-

cards be procured from donors for documentation or the use of biometrics for donor identification is also recommended.

Response rate of 62.90% in present study after notification for post donation counselling and further management was comparable to Kaur G et al. and Kleinmann S et al, at 42% and 59.8% respectively [17, 18]. However, the other studies have reported higher responding rate of 88% and 98.2%.15,19 Comparative Response rate of different studies shown in (Table 1)

Table 1

Comparative response rate among reactive blood donors in different studies	Responded donors in percentage
Agarwal et al [11]	59.80
Kotwal et al [15]	98.20
Kour et al [17]	38.90
Kleinman et al [18]	42.00
Tynell et al [19]	88.00
Patel et al [12]	81.56
My study	62.90

CONCLUSION

In present study the main reasons for non-responding/returning of donors when called include donors belonging to far flung hilly areas which are inaccessible during winter months, donors already know their reactive status and not bothered about results, due to lack of awareness of returning to the blood bank for TTI confirmation. According to Kotwal U et al, the higher response rate was due to donor's better concern for knowing their test result status, and according to Kaur G et al, the low response rate in their donors may be attributed to poor health-care knowledge and poor understanding of the screening results.15,17

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