International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

Profile of Deferred Blood Donors in Barak Valley District of Assam

Leena Talukdar[1], Shah Alam Sheikh[1], Debashish Datta[2], Rangnath Chaubey[2]

[1]Associate Professor, [2]Professor,
Department of Pathology, Silchar Medical College and Hospital, Silchar, Assam.

Corresponding Author: Leena Talukdar

Received: 16/06/2016 *Revised: 13/07/2016* *Accepted: 16/07/2016*

ABSTRACT

Transfusion of blood and blood products is warranted in quite a few numbers of occasions in present day health care practice. Supply of safe blood and blood products still remains a major challenge. The first step towards supply of safe blood and blood products is selection of a suitable blood donor. While emphasis should be laid on supply of safe blood to the recipient, it is also absolutely necessary that the blood donor is not harmed in any way due to the process of blood donation. This can be achieved by stringent donor deferral criteria. Studies on the deferred donors are essential in order to increase the number of repeated voluntary donors in our country.

Key words: Blood and blood products, Blood transfusion, blood donor, deferred donor.

INTRODUCTION

Transfusion of blood and blood products is warranted in quite a few numbers of occasions in present day health care practices. So, adequate supply of safe blood is of utmost necessity. According to the National AIIDS Control Organization, about 7.4 million units of blood is required annually in India. [(1)] This huge demand of blood is met either through voluntary or replacement blood donation.

Supply of safe blood and blood products still remains a major challenge. Blood bank professionals the world over try to render quality services and ensure that each unit of blood or blood product issued from the blood bank is absolutely safe for the recipient.

The first step towards supply of safe blood is selection of a suitable blood donor. Selection of a suitable blood donor is based on the criteria which are formulated on the basis of informed and accepted medical opinions and a set of universally accepted regulatory rules. [(2)]

While it is absolutely necessary to supply safe blood and blood products to the recipient, it is also essential to ensure that the process of blood collection is safe for the blood donor and does not harm the donor in any way. This is achieved by stringent donor deferral criteria.

Collection of data on the deferred donors is not adequate in India, particularly in North-East India. As a result, emphasis is laid on recruitment of new healthy donors rather than motivating the deferred donors to get rid of the problems leading to their deferral and continuing as regular blood donors.

The present study was therefore undertaken to determine the profile of the deferred blood donors at a tertiary care hospital in the Barak Valley District of Assam in order to review the recruitment and retention strategies for blood donors.

MATERIALS AND METHODS

The present study was carried out in the Blood bank of Silchar Medical College and Hospital, Assam. A total of 200 blood donors who came to the blood bank between the period of January 2015 to December 2015 but, were deferred due to various reasons were included in the study. Both voluntary and replacement donors were included in the study.

Each donor was selected by a qualified medical officer on the basis of detailed medical history and physical examination. Blood bank records provided detailed information on the donor along with the cause of deferral. Blood donors were selected and deferred strictly based on criteria which are provided by the Drugs and Cosmetic Act 1940 (and the rules thereafter) supplemented by the Technical Manual (Directorate General of Health Services, Ministry of Health and family Welfare, Government of Assam).

The deferred donors were then categorized on the basis of age, sex and whether the deferral was temporary or permanent.

RESULTS

Of the total 200 donors who were included in the study, 174 were males and 26 were females. As evident from the figures, 87.0% of the deferred donors were males and 13% were females.

For convenience of categorization, the deferred donors were divided into 5 categories according to their age - namely, 18 to 20 years, 21 to 30 years, 31 to 40 years, 41 to 50 years and 51 to 60 years.

Of the 200 deferred donors, 11 were in the age group of 18 to 20 years, 80 were in the age group of 21 to 30 years, 66 were in the age group of 31 to 40 years, 34 were in the age group of 41 to 50 years and 9 were in the age group of 51 to 60 years.

Again, 140 of the deferred donors were voluntary donors and 11 were replacement donors and 49 were related donors. In case of the related donors, blood or blood components were issued to the patient before they were requested to donate blood.

The reasons of deferral of the blood donors were many. Of the 200 deferred donors, 183 were temporarily deferred and 17 were permanently deferred from blood donation.

These findings are summarized in Table 1 to Table 5.

Table 1: Sex distribution of deferred donors

Sex	Total	Percentage
Male	174	87.0%
Female	26	13.0%

Table 2: Age Distribution of Deferred Donors

Age Group(Yrs)	Total	Percentage
18 - 20	11	05.5%
21 - 30	80	40.0%
31 - 40	66	33.0%
41 - 50	34	17.0%
51 - 60	09	04.5%

Table 3: Distribution of Type of Deferred Donor

Type Of Donor	Total	Percentage
Voluntary donor	140	70.0%
Family donors	49	24.5%
Replacement donor	11	05.5%

Table 4: Distribution of Type of Deferral.

Type Oo Deferral	Total	Percentage
Temporary	183	91.5%
Permanent	17	08.5%

Table 5: age wise distribution of sex of deferred donor, type of deferred donor and type of deferral

Age Gr. (Yrs)	Sex		Type of Donor			Deferral	
	Male	Female	Voluntary	Family	Replacement	Temporary	Permanent
18 - 20	06	05	07	04	00	11	00
21 - 30	67	13	52	22	06	75	05
31 - 40	60	06	50	11	05	57	09
41 - 50	32	02	26	08	00	31	03
51 - 60	09	00	05	04	00	09	00

DISCUSSION

Strict donor deferral is of utmost necessity in order to ensure supply of safe blood and blood products to the recipient. But, eliminating a person with potential risk of disease is definitely advantageous in improving the quality of blood available for transfusion because with the existing screening tests for HIV, a donor may test

negative even though he is infected if he is in the window period. [3]

Deferral of a potential donor may inject negative feelings in the person about his own health and he may not return for future blood donations. [2,4] This may lead to huge losses in terms of available blood for transfusion every year. [5] This retrospective study was therefore undertaken to analyze the profile of the deferred donors with an aim to review the donor recruitment and retention strategies.

The rate of deferral varies widely from region to region and also within the same region from centre to centre. [6] Also, the profile of the deferred donors varies in different regions.

In our study, it was seen that 87% of the deferred donors were males and 13% were females. There were no deferred female donors in the 51 to 60 years age group.

While classifying the deferred donors into different age groups it was found that 5.50% of the deferred donors were in the age group of 18 to 20 years, 40.0% were between 21 to 30 years, 33.0% were between 31 to 40 years, 17% were between 41 to 50 years and only 4.50% were between 51 to 60 years. This may be because in India, majority of the donor population is young and under 35 years. [7] Students usually form the target group when the blood banks organize voluntary blood donation drives as, they can be easily motivated and retained as repeat voluntary donors. [7] Education generates awareness. [8] Hence, the donor population comprises a large number of students. As a result, majority of the deferred donors fall in the under 40 years age groups.

In our study, it was found that 70.0% of the deferred donors were voluntary donors, 5.5% were replacement donors and 24.5% were family or related donors. There were no deferred replacement donors in the 18 to 20, 41 to 50 and 51 to 60 years age groups. In our study, in case of the replacement donors, blood or blood components were already issued to the patient before the attendants were requested to donate blood. So, they were under no obligation to donate blood. In such cases, the donors may have a tendency of "self deferral" and only those donors who have a high knowledge and awareness about blood donation procedures present themselves for blood donation. This may be the cause of low rate of deferral among such donors. Similar observations were made in studies by Agnihotri et al in Western India [5] and Zou et al. [9]

However, findings made in studies by Charles et al in Trinidad and Tobago [10] are not in accordance with findings of our study. Their studies did not reflect any significant difference in the rates of deferral amongst voluntary and replacement donors.

Causes of deferral were broadly classified depending upon the duration of deferral into temporary and permanent causes. In our study, temporary causes of deferral predominated with 91.50%. There were no permanently deferred donors in the 18 to 20 and 51 to 60 years age groups. Other studies by Sundar et al in South India also showed a predominance of temporary causes of deferral with 84.0%. [11]

CONCLUSION

Supply of safe blood and blood products still remain a major challenge for health-care professionals in India despite the huge advances made in the field of medicine. So, strict and scientific criteria are required for selection a deferral of blood donors. Furthermore, in order that the deferred donors do not harbor any negative feelings towards the transfusion practices and also in order that he may feel safe enough to return for blood donation in future, proper advice and medical care should be given to the deferred donor. This will definitely help in increasing the number of voluntary, repeated blood donors in our country.

REFERENCES

1. Department of AIDS Control, Ministry of Health and Family welfare,

Government of India Annual Report. 2008-2009:27.
2. Newman B. Blood donor suitability and allogenic whole blood donations. Transfus Med Rev. 2001; 15(3):234-44.
3. Sawanpanyalert P, Uthaivoravit W, Yanai H, Limpakarnjanarat K, Mastro TD, Nelson KE. Donation deferral criteria for human immunodeficiency virus positivity among blood donors in northern Thailand. Transfusion 1996; 36: 242-9.
4. Custer B, Chinn A, Hirschler NV, Busch MP, Murphy EL. The consequences of temporary deferral on future whole blood donation. Transfusion. 2007; 47(8):1514-23
5. Agnihotri N. Whole blood donor deferral analysis at a centre in Western India. Asian J Transfus Sci 2010; Vol 4(2):116-122.
6. Galea G, Gillon J, Urbanaik SJ, Ribbons CA. Study on medical donor deferrals at sessions. Transfus Med. 1996; 6:37-43.
7. Unnikrishnan B, Rao P, Kumar N, Ganti S, Prasad R, Amarnath A, Reshmi B, Kaur V, Kesharwani P, Seetha M, Nautiyal A, Goel P, Aggarwal P. Profile of blood donors and reasons for deferral in coastal South India. Australas Med J. 2011; 4(7):379-385.
8. Shahshahani HJ, Yavari MT, Attar M, Ahmadiyeh MH. Knowledge, attitude and practice study about blood donation in the urban population of Yazd, Iran. Transfus Med. 2006;16:403-9
9. Zou S, Musavi F, Notary EP, Rios JA, Trouern-Trend J, Fang CT. Donor deferral and resulting donor loss at the American Red Cross Blood Services, 2001 through 2006. Transfusion 2008; 48(12):2484-6.
10. Charles KS, Hughes P, Gadd R, Bodkyn CJ, Rodriquez M. Evaluation of blood donor deferral causes in the Trinidad and Tobago National Blood Transfusion Service. Transfusion Med 2010; 20(1):11-14.
11. Sundar P, Sangeetha SK, Seema DM, Marimuthu P, Shivanna N. Pre-donation deferral of blood donors in South Indian set-up: An analysis. Asian J Trans Sc. 2010:4(2):112-115.

How to cite this article: Talukdar L, Sheikh SA, Datta D et al. Profile of deferred blood donors in Barak valley district of Assam. Int J Health Sci Res. 2016; 6(8):94-97.

****