

CAUSE OF BLOOD DONOR DEFERRAL AT A TERTIARY CARE CENTER IN NORTH EAST INDIA

Pathology

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ABSTRACT

Introduction: Deferral of blood donors leads to loss of precious blood especially in cases of temporary deferral, which could have been availed for transfusion or component separation. **Aims and Objectives:** To study the causes and incidence of donor deferral of blood donors. **Material and Methods:** By using the guidelines and standard operating procedures set by National AIDS Control society for donor selection and deferral for a period of five consecutive years from January 2018 to December 2022. Cut off for Hb% is taken 12.5% done by Copper Sulphate and Haemocure method. **Results:** Total donors in five years study was 1,22,044 out of which 11,838 were deferred i.e. 9.70% and 3.01% were females out of total donors. Females were deferred due to low haemoglobin, menstruation and lactation. The most common cause of temporary deferral was alcohol consumption 38.20%, followed by low haemoglobin 30.80%, co-morbid condition like diabetes, hypertension and thyroid disorders 13.79%, Covid 19 vaccinations 4.97%, recent infection with Covid 19, malaria, viral fever was 4.68%, low body weight below 45 kg 3.19%, 1.3% recent tattoo within one year, recent surgery 4.68%, low body weight below 45 kg 3.19%, 1.3% recent tattoo within one year, recent surgery 1.3%, age below 18 years 1.02% less interval of donation (less than 3 months) 0.52%. **Conclusion:** Donor deferrals leads to loss of precious blood donors. They feel rejected, thus avoid revisiting blood center for donation leading to enormous crisis of blood

KEYWORDS

INTRODUCTION

Blood transfusion is an altruistic medical act of ethical responsibility.¹ Blood comes only from human beings and is a precious resource with a limited shelf-life.² Transfusion safety goes beyond the intrinsic safety of all transfused therapeutic products depending on a series of closely interconnected processes which start with the donor and finish with the recipient.³ The international society of blood transfusion states that blood donations in all circumstances must be voluntary and non-remunerated. Donor should provide informed consent to donation of blood and subsequent use of blood by the blood centre.⁴ The donors health and safety must be protected. The national blood policy in India relies heavily on voluntary blood donors as they are assumed to have low transfusion transmitted infection (TTIs).⁵ Transfusion services have a process of donor selection based on criteria of subjecting donors to a questionnaire, physical examination and hemoglobin testing before blood donations and only those who meet the requirements qualify as blood donors. The criteria's are designed to protect both the blood donors and blood recipients from harm. The criteria for prospective blood donor selection and deferral in India are provided by drugs and cosmetic act 1940.⁶ The present study was undertaken to analyze the deferral incidence and causes of deferral of donors in a blood centre in a tertiary care centre.

MATERIALS AND METHODS

By using the guidelines and standard operating procedures set by National AIDS Control society for donor selection and deferral, all the potential blood donors who come to the blood centre from the period of January 2018 to December 2022 were included in the study. Haemoglobin was screened by CuSO₄ finger prick method, cut off being 12.5 gm/dl. Weight was checked and cut off was more than 45 kg. The donors were subjected to a questionnaire, followed by physical examination, systolic blood pressure between 100 to 160 mm of Hg and diastolic between 60 and below 100 mm of Hg with or without medication were accepted for blood donation.

RESULTS

A total number of 1,22,044 prospective blood donors registered for blood donation and out of which 11,838 were deferred. The deferral percentage was 9.7% among the deferred donors, 96.99% were males and 3.01% were females.

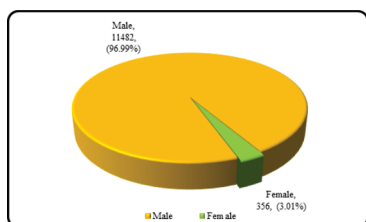


Figure-1: Gender Distribution

92.41% were deferred on temporary basis while 7.59% were deferred on permanent basis.

Maximum donors that were deferred were of the age groups of 28-37 years of age followed by 38-47 years, then 48 to 57 years. (Figure-2)

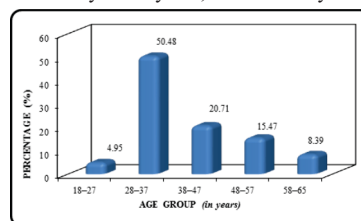


Figure-2: Age Distribution

92.41% were deferred on temporary basis while 7.59% were deferred on permanent basis.

Table-1: Reasons for Temporary and Permanent Deferral

Variable	Number	Percentage
Temporary Deferral	10939	92.41
The reasons of temporary deferral were:		
Alcohol intake (within 24 hrs.)	4522	38.20
Low Haemoglobin	3646	30.80
Hypertensive	852	7.20
Covid Vaccination	588	4.97
Recent Infection (Covid 19, Malaria, Viral fever)	554	4.68
Low body weight	378	3.19
Recent tattoo (within one year)	154	1.30
Surgery (Recent)	154	1.30
Age below 18 years	121	1.02
Less interval of blood donation (< 3 months in males, <4 months in females)	62	0.52
Intake of antibodies, antipyretics	178	1.50
Permanent Deferral	899	7.59
The reasons for permanent deferral were:		
Diabetes on insulin	495	4.18
Thyroid disorders	285	2.41
Asthmatic	118	1.00

DISCUSSION

By the process of proper donor counseling and screening before donation, we can select eligible blood donors. Moreover, the deferred donors are explained very well about the reasons of deferred. In a study

by Shrivastava et al, majority of the donors were deferred due to jaundice and the rate of deferral was 11.5% Among the deferred, 83.3% were Males and 16.7% were females and maximum deferral were in the age group of 18-28 years.⁷

Another study by Bahadur et al⁸ stated that low Hb% was the main reason for deferral (32.9%) In another study by Agnihotri et al⁹ also got low Hb% as the most common cause of donor deferral but the most common age group of deferred was more than 40 years in a study in South India by Sunder et al¹⁰ low haemoglobin was the most common cause but deferral rate was low 5.04% and the most common age group was between 18-25 years of age.

In a study by Sharma et al,¹¹ alcohol intake within twenty four hours was 8.6% which ranked third in this list of deferral.

In a study by Kasraian et al of Iran,¹² their deferral rate was comparatively higher among women and common in the age group of 17-30 years old and major reasons were HIV and hepatitis infection (43.6%).

In another study conducted in Trinidad by Charles et al,¹³ the most common causes were exposure to high rise sexual activity (27.6%) followed by low Hb%. This study exposed lack of public awareness as the principal reason for an unacceptably high rate of donor deferral. In such situations, donor education and public awareness is the urgent need.

In another study by Madrona et al¹⁴ of Western Spain, females were the majority of donors 52.3% but only 43.9% of women could donate due to low haemoglobin. The other difficulties were venous access and vasovagal reactions frequently seen in female donors.

Another study conducted among Northern Japanese students by Ngoma et al¹⁵ a common reason for deferral was taking of medications.

CONCLUSION

The results obtained from the study gives light to the fact that continued efforts are needed to motivate deferred potential donors to return back to the blood centre after correction of the reason for deferral. Moreover, in our scenario, a donor has to be motivated and made aware of the importance of donation. Rejection or deferral of such potential donors may imbibe in them a demotivated feeling which can lead the potential donor to never step forward for blood donation. So, proper awareness, motivations and correction of the causes (in case of temporary deferral) are the fundamental requirements that can bring back the donor to the blood centre for blood donation.

Conflict Of Inhered: None.

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