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RESEARCH ARTICLE

EVALUATION OF PRE-DONATION DEFERRAL OF YOUNG VOLUNTARY BLOOD DONORS IN A TERTIARY RURAL TEACHING HOSPITAL

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Abstract

Blood safety is one of the pillars of modern transfusion medicine. It begins with the selection of healthy donors. Blood donor deferrals lead to loss of precious blood units available for transfusion.

AIM: 1. To study the reasons for donor deferral of young blood donors.

2. To plan for the better donor recruitment programme.

MATERIALS AND METHODS: A retrospective analysis of records of the donors deferred from January 2013 to December 2014 was done to find out the rate and causes of pre – donation deferral at Blood Bank unit of KFMS&R.

INCLUSION CRITERIA : All donors between the age group of 18 – 30yrs were included in the study.

RESULTS: (A total of 1796 young donors were registered out of which 105 donors were deferred for various causes. 50 male donors and 55 female donors were deferred. The most common cause of deferral was low hemoglobin followed by a history of recent illness in male donors. Among females, the most common cause was low hemoglobin accounting for 96% of the deferrals.

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INTRODUCTION

Safe blood transfusion services are one of the cornerstones of the modern health care system. It requires an adequate supply of safe blood from a healthy donor. Blood donor suitability criteria depends upon science, informed medical opinion and regulatory rules.¹ The minimum blood donation needed to meet a nation's basic requirement of blood is approximately 1% of the population (10/1000 population), and their requirements are directly proportional to the type of advanced health care system². A large number of blood donors are not able to donate blood for several reasons either temporarily or permanently. Individuals disqualified from donating blood are called as “**Deferred Donors**”.

Blood donor deferral is a very painful and sad experience to the donor leading to loss of self-esteem and confidence. It also leads to negative criticism from their peer group leaving them with a lot of negative feelings about the whole process of blood donation³. The deferred blood donors are less likely to return in future for any blood donation⁴. Knowledge of rate and causes of donor deferral can guide the recruitment strategy^{5,6}.

Few studies done in India have provided different common reasons for deferral of blood donors highlighting the differing demographic profile in various parts of the country⁷. The present study was undertaken to analyze the causes for deferral among young voluntary donors so that temporarily deferred donors with corrective reason can be identified, properly informed and motivated for future blood donation. This study also provides a baseline data that can be used for future planning and devising donor recruitment strategies.

MATERIALS AND METHODS:

The present retrospective study was done in the Blood bank, Department of Pathology, Karpagam Faculty of Medical Sciences and Research from January 2013 to December 2014. All young voluntary donors in the age group of 18-30yrs were included in the study. The donors were evaluated on the basis of a pre- designed self-administered questionnaire followed by a physical examination of donors concerning to weight, height, blood pressure and temperature by a medical officer. Hemoglobin estimation was done by using automated hematology analyzer (Horiba, Micros DX). Deferred donor data was obtained from donor deferral register. Data was analyzed, and causes of deferral were categorized into permanent and temporary.

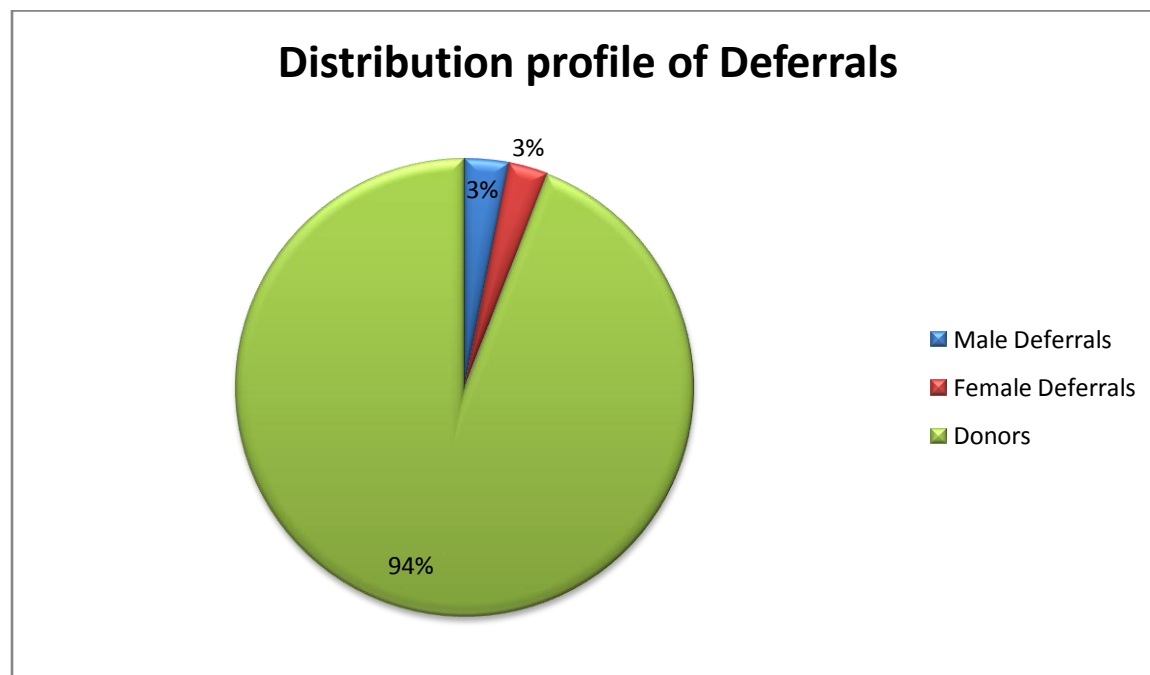
RESULTS:

Among 1796 donors who arrived for voluntary blood donation, 105 donors (5.84%) were deferred and the remaining were eligible to donate blood. Male donors accounted for 92.1% of eligible donors. 55 male donors and 50 female donors were deferred.

TABLES:

I Profile distribution of blood donor and deferrals in respect to sex:

	Males	Females	Total
No of Donors	1710	86	1796
No of Deferrals	55	50	105
% deferred	3.2%	58.1%	5.84%



II. Distribution of donor deferral with respect to causes:

Causes	Total	%
Temporary	102	97.14%
Permanent	3	2.86%

III. Causes of Donor Deferrals with their respective proportions:

Causes	M	F	Total
Low Hb/Anemia	21	48	69
Underweight	6	1	7
Fever	10	0	10
Tattooing	3	0	3
Low BP	8	1	9
Immunisation(Hepatitis B)	3	0	3
H/O Minor surgery	1	0	1
Asthma	2	0	2
Epilepsy	1	0	1
Total	55	50	105

DISCUSSION:

Blood transfusion services are one of the cornerstones of tertiary health care system, and it starts with safe blood donor selection. WHO and other voluntary organizations recommend that all blood donations must be voluntary and non – remunerated and no constraint must be laid upon the donors to donate. **Deferral rate among voluntary blood donor ranged from 5.6 to 35.6%⁵. Donors in the age group of 18-30yrs constitute the main bulk of voluntary blood donation¹¹.**

Most of the studies conducted previously reported that the majority of deferrals occurred in the age group between 18 to 30 yrs, which constitutes a significant portion of the voluntary donor pool^{9,12}.

In the present study the deferral rate was 5.84% that is less when compared to various other studies conducted^{9,12}. The most common type of deferral is temporary which was due to low hemoglobin followed by a history of recent illness in males. In females, anemia constituted the most common cause of temporary deferral followed by underweight. Our study results are consistent with various other studies conducted^{4,5}. These data provide us valuable input in necessitating the changes in lifestyle and food habits of the young adult population. Deferred donors can be educated to take food rich in iron content, actively managed and can be called up for voluntary blood donation at a later time after curation of the underlying cause.

The second most common cause for temporary deferral was fever that is similar to the study reported by Dr. Krishna et al¹¹. These donors can be medically managed and counseled to come for voluntary blood donation at a later date.

The third most common cause for temporary deferral was hypotension that could be attributed either to discomfort at the sight of blood or the fear of pain caused by needle prick.

The most common causes of permanent deferral in our study were asthma followed by epilepsy which is similar to other studies¹¹.

CONCLUSION:

The present study evaluates the donor deferral rates among the young population [18-30yrs] who constituted the bulk of blood donation. Temporary deferrals accounted for 97% that can be rectified by the implementation of healthy lifestyle and nutritional diet. The deferred donors should be counseled and motivated to come for donation at a later date. It is always advantageous and easier to educate the deferred donors who are already motivated to donate blood so that they would be willing to donate blood in the future rather than waiting for new donors.

In a study by Bahadur et al, 70% of the temporary deferred donors came back after correction of the cause and donated blood which emphasizes the fact that temporary deferral is a transient phenomenon that can be rectified. It also highlights the fact that it is better to motivate the temporary deferrals rather than to look for new donors which require man power, motivation, money and our precious time.

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