

Study of blood donor deferral and blood unit deferral in blood bank

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Abstract

Blood transfusion services are the most important part of modern health care system and maintaining the adequate supply of safe blood is an ever challenging job for blood banks. The most important is the selection of blood donors by donor selection criteria. Blood donor deferral is a very painful and sad experience, but retaining them for future is a very challenging job. Hence we studied the current rate and various reasons and demographic pattern for donor deferral in this blood bank. Study of deferral of blood donor at collection site and donor blood deferral in blood bank will be worthwhile and enlightening. It will help in taking corrective measures and improving strategies for donor motivation.

Keywords: Blood donor, deferral, blood bank

Introduction

Blood transfusion is a vital and lifesaving procedure. Maintaining the adequate supply of safe blood is an ever challenging job for blood banks. Safe and healthy donor recruitment and retention is a very challenging job and it depends upon human factors and socio economic environment of the area of which the blood bank is catering its services. We are emphasizing on safe blood according to National blood policy which in itself is very vocal about donor awareness program for imparting information and education and motivation, recruitment and retention of donors. Considering this and otherwise, it is the duty of blood bank to ensure that blood collection process does not harm the donor. Careful screening of donor through history taking and clinical examination at times results in deferring the donor for safety of donor and safety of recipient ^[1]. Similarly certain blood units are deferred in blood bank to avoid risk of transmission of transfusion transmitted infections ^[2] or some other factors. This is a considerable loss to blood bank and hence needs consideration. Study of deferral of blood donor at collection site and donor blood deferral in blood bank will be worthwhile and enlightening. It will help in taking corrective measures and improving strategies for donor motivation.

Aims and Objectives

To study the blood donor deferral and blood unit deferral in Blood Bank.

Materials and Methods

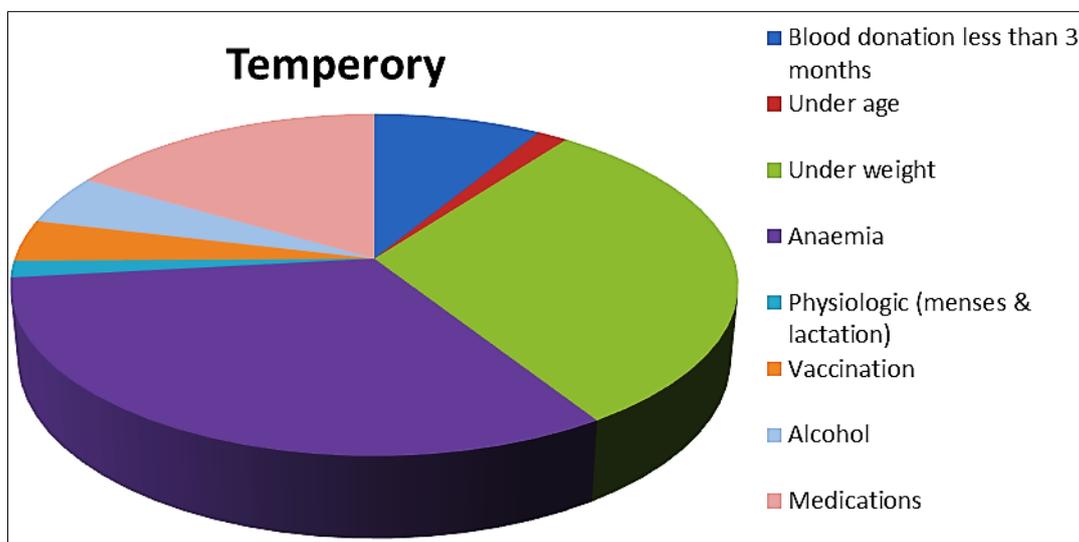
The present study was done in the Department of Pathology, Kanachur Institute of Medical Sciences, Mangalore. This study was done from Jan 2017 to Dec 2017.

The present hospital based study was carried out in the blood bank of a tertiary care hospital. Data was collected from the records maintained by the blood bank. Study participants included all those who have attended and donated blood at outdoor voluntary blood donation camps as well as at our blood bank. It was carried over a period of 1 year.

Results

Table 1: Temporary Deferrals

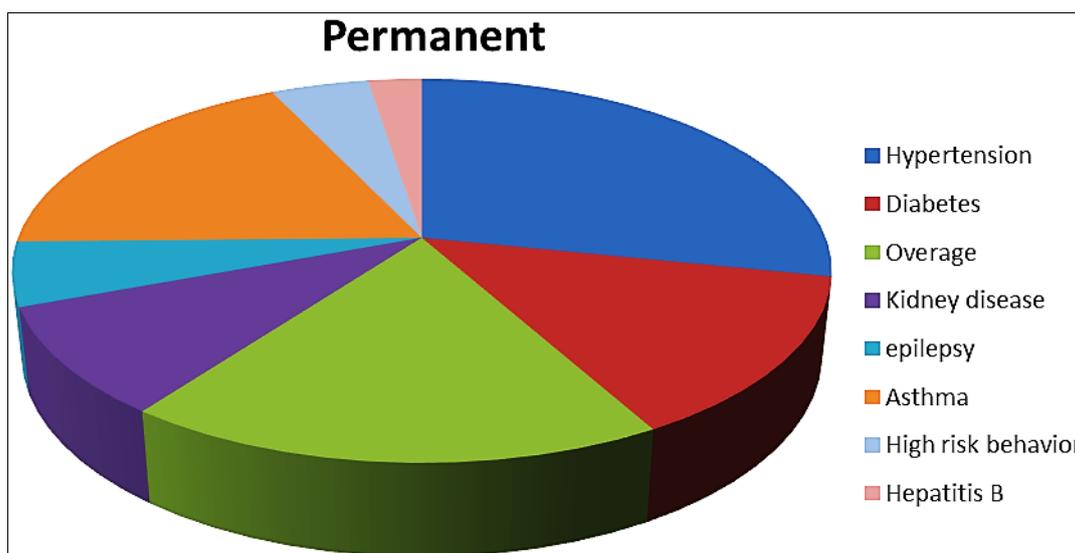
Blood donation less than 3 months	11
Under age	2
Under weight	39
Anaemia	41
Physiologic (menses & lactation)	2
Vaccination	5
Alcohol	6
Medications	21



Graph 1: Temporary Deferrals

Table 2: Permanent Deferrals

Hypertension	68
Diabetes	33
Overage	44
Kidney disease	22
epilepsy	13
Asthma	44
High risk behavior	11
Hepatitis B	06



Graph 2: Permanent Deferrals

Discussion

There are few studies on blood donor deferral mentioned in literature none of which are as comprehensive as this one. In a study maximum number of blood donation camps was in January, April and September organized by social institutions on event of national holidays such as Republic day, celebration of birth anniversary of national leaders and festivals such as Ganesh festival. Maximum deferrals were also observed during similar period while least deferrals were in the month of July when blood unit collection was also minimal. This is could be due to monsoon period which is the prime time for farmers for sowing new crop and new batches of students in teaching institutes. Donor deferral rate in the study was very much similar to various American, European and Asian studies. Zou *et al.* [3] reported a deferral rate of 12.8% in their 6 years study of American Red Cross blood service and Custer *et al.* [4] showed a deferral rate of 13.6%. In a European study conducted by Lawson-Ayayi and Salmi [5], 10.8% of donors were deferred. Arslan [6] reported a donor deferral rate of 14.6% in Turkish donors. Lim *et al.* [7] reported a deferral rate of 14.4% in Singapore (Asia) and Bahadur *et al.* [2] reported 9% in Delhi (India). Rabeya *et al.* [8] found a very low deferral rate in their study (5.6%) which could be due to different donor selection criteria. The leading cause of temporary deferral was anemia followed by underweight followed by medications and under age (8.2%) which was similar to Halperin *et al.* [9] which showed low hemoglobin as the most common cause in 46% of the temporary deferral. The study done by Arslan [6] in Turkish donors showed low hemoglobin as the most common cause of deferral in 20.7% of overall deferral. Anemia can be cured if proper treatment of these donors is undertaken with follow up. The other causes of temporary deferral included low body weight and others which can be easily corrected. Deferral due to medications can be reduced by properly counselling the potential blood donors when the camps are arranged well in advance. A proper track of follow up of temporarily deferred donors regarding their management should be made in the blood bank so that these donors can be recruited back in donors' pool. In our study some donors were deferred for permanent reasons. Custer *et al.* [4] reported a permanent deferral rate of 10.6% and Arslan [6] who reported a rate of 10%. The most common cause of permanent deferral was Hypertension as similar to Bahadur *et al.* [2]. Comparison of temporary and permanent donor deferrals in various studies. Hepatitis B indicating that either the donor had a subclinical disease/acute or chronic viral infection/false positive cases and therefore for the benefit of the blood recipients these donors were permanently deferred. As

Hepatitis B infection is increasing more amongst the local population with only few showing symptomatic disease, 2 donors gave the history of jaundice which were deferred from the donations. Knowledge of routes of transmission of TTI can decrease the seroprevalence of Hepatitis B infection, further this infection can be controlled by vaccination which should be encouraged. Public awareness programs relating to routes of transmission for these infections should be encouraged.

Conclusion

Since donation of blood is social activity it should be imperative in the part of health care team involved in blood banking to take care of such temporarily and permanently deferred donors having such health problems which has caused the deferral.

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