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## Evaluation of Donor Deferral - Lessons Learnt.

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### ABSTRACT

Blood donor selection criteria are essential for the safety of donors as well as for the recipients. Blood donors are deferred either temporarily or permanently from donating blood for various causes. Evaluation of these causes reflects the socio-demographic pattern and the common medical ailments in the local community. To evaluate the various causes for pre-donation deferral among voluntary blood donors who attended the Department of Transfusion Medicine, Sree Balaji medical college and hospital, Chennai, India. The study was approved by the Institutional Research and Ethical committee of Sree Balaji medical college and hospital, Chennai. A retrospective review of deferred donor records covering the period 2010-2012 was carried out at the Department of Transfusion Medicine. The collected data were tabulated and analyzed. A total of 6,240 Voluntary blood donors were screened of which 5,760 were found to be eligible donors. 93.55% were males and 6.25% were female donors. A total of 480 donors were deferred due to various reasons. Deferral was higher among males (77.5%) than in females (22.5%). The deferral rate was found to be higher in age group of 18-30 years (52.5%). Most of the donors were deferred for temporary causes (69.16%) than permanent causes (30.83%). The commonest cause of deferral in our study was anemia (25.0%) followed by hypertension (23.33%). Our study observed a higher deferral rate among younger adults. The predominant cause was anemia which was found to be prevalent in both the sexes, more so with females. In males the commonest cause of deferral was found to be hypertension, followed by alcohol intake and practice of tattooing.

**Keywords:** Voluntary donors, deferred donors, Anemia, Tattooing

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## INTRODUCTION

Blood transfusion services has the responsibility to assess the suitability of blood donors to safeguard the health of recipients and donor themselves [1,2]. Donors who do not satisfy the pre-donation selection guidelines are deferred either temporarily or permanently based on the reason behind the deferral [1,2]. Evaluating the causes of donor deferral helps to create awareness regarding preventable causes of donor deferrals, to motivate the deferred donors and help in assisting these voluntary donors in maintaining their health by donor counseling. So, we aimed to evaluate the various causes for pre-donation deferral among voluntary blood donors.

## MATERIALS AND METHODS

The study was approved by our institutional research and ethical committee. A retrospective study of deferred donor forms was conducted during the period 2010-2012 in our Department of Transfusion medicine.

The Data were collected from the deferral registry maintained in our Institutional blood bank; the data were tabulated, categorized and analyzed using SPSS version 15.0. The descriptive statistics were expressed by means of percentage.

## RESULTS

Table 1. shows the overall distribution of blood donors and gender based donor deferral. There were a total of 6240 voluntary donors, of which 5760(92.30%) donors were found to be eligible for blood donation. Majority were males (93.75%). 480 donors were deferred out of which 372(77.5%) were males and 108(22.5%) were females.

Table 2 shows the distribution of deferred donors by different age groups, deferral was found to be higher among 18-30 years of age (52.5%). This is noticed with both the genders.

Fig. 1 & 2 highlight the common causes of donor deferral. Anemia was the most common temporary cause (25%) and Hypertension was the most common cause of permanent deferral (23.33%)

Fig. 3 shows distribution of number of deferred donors based on their occupation. Most of them were students (46.66%).

**Table 1: Distribution of blood donors and deferral by Sex**

Donor category	Male	Female	Total
Total donors selected	5400(93.75%)	360(6.25%)	5760(92.30%)
Total donors deferred	372(77.5%)	108(22.5%)	480(07.69%)
Total	5772	468	6240

**Table 2: Distribution of deferred donors by different Age groups**

Age (years)	Male	Female	Total
18-30	180	72	252(52.5%)
31-40	108	24	132(27.50%)
41-50	60	8	68(14.16%)
51-60	24	4	28(05.83%)
Total	372(77.5%)	108(22.50%)	480

Figure 1: Commonest causes of Temporary deferral

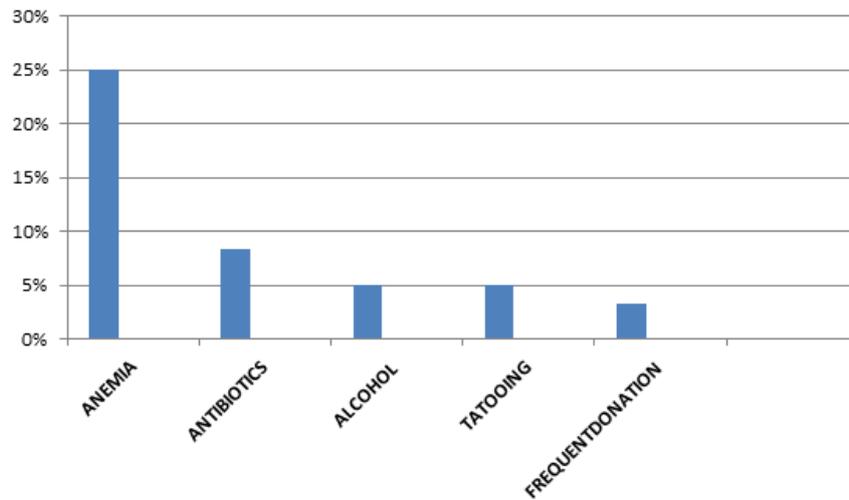


Figure 2: Commonest causes of Permanent deferral

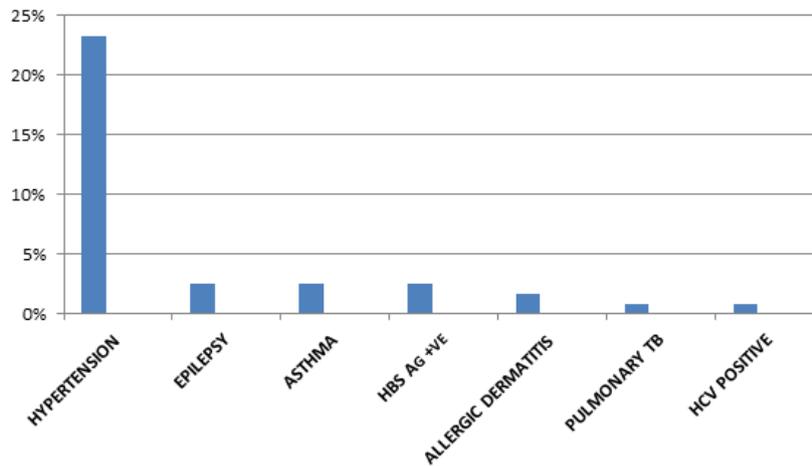
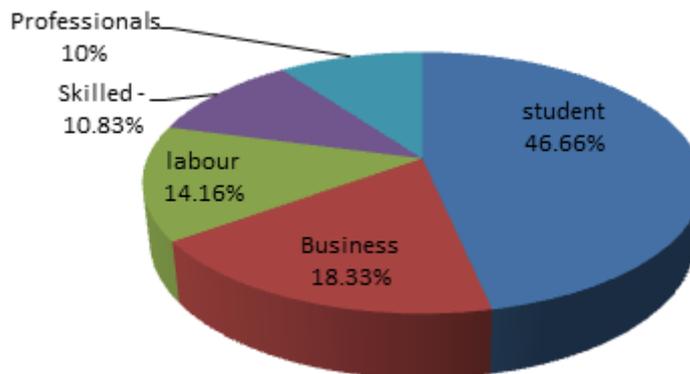


Figure 3: Donor Deferral based on occupation:



**DISCUSSION**

Our study noticed a higher deferral rate with males when compared to females (Table1). This could be due to the fact that more number of males volunteers for blood donation [3,4]. The rate of deferral was found to be higher among the younger age group donors (18-30 years) in both sexes (Table 2). The commonest cause

for deferral (Fig 1) was anemia (25%) [4-6]. we found that even males were deferred because of anemia (11% of total deferral) which signifies the wide spread prevalence of anemia in our community. This further necessitates the importance of creating awareness about balanced nutrition in the society. Among males, hypertension (Fig 2) was found to be the common cause of deferral; this is consistent with other studies [4,5]. The Practice of tattooing is common in recent trends especially among younger age group. This high risk behavior is getting reflected indirectly in our study in the form of a deferral. This issue needs to be addressed to increase awareness regarding tattoo associated infections.

About 46% of deferred donors were students (Fig 3); this can be explained by the fact that student groups are well motivated than rest of the segment of our society which is getting reflected in the percentage of deferral. This is consistent with other studies [7]. Most of them were deferred due to anemia.

### CONCLUSION

Our study showed that most of the donors deferred were young males and females, particularly students, the commonest cause being anemia. This indicates the need for creating awareness and counseling regarding a well-balanced diet in this group of population so that more donors can be recruited. Awareness about dietary supplements may be necessary for regular donors in order to prevent nutritional anemia. Practice of tattooing is one of the important causes of temporary deferral which needs special mention because of its potential risk of transmitting infections.

Hypertension stood as the most common cause of permanent deferral and this reflects the prevalence of the disease in our community.

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