



Blood Donor Deferral Pattern in a Low Income Blood Banking Service

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INTRODUCTION

Blood transfusion has formed an integral component of essential health care delivery system worldwide of which blood donors play central role. Shortage of blood and blood products for transfusion is a challenge in developing countries because less than this percentage is willing to donate blood voluntarily and amongst these few, some are still deferred temporarily or permanently on account of Transfusion Transmissible Infections (TTIs) and low haemoglobin level. This information will be an important tool for blood transfusion safety

AIM

The aim of this study was to determine the pattern of blood donation deferral in a low income setting

METHOD

This was a retrospective study that was conducted at the blood bank of University of Ilorin Teaching Hospital, Ilorin, Nigeria. Donor demographics and reasons for temporary (low haemoglobin concentration) and permanent deferral (positivity to HIV, Hepatitis B and C) were extracted from prospective blood donor register over a five year study period (2015-2019). Data was analyzed using SPSS 21.0

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RESULTS

A total of 12,359 (11,743 males and 616 females) prospective blood donors were attended to in the study period, with mean age 30.64±8.1 years and male to female ratio of 19.1:1. The mean age of male donors was 30.73±8.05 years while that of females donors was 29.06±8.9 years, p >0.005. Majority of the donors were family replacement blood donors (97.6%) with voluntary blood donors constituting 2.4%. A total of 1,895 donors were deferred bringing our deferral rate to 15.3%. Blood donation deferral due to HBsAg positivity was the commonest (7.6%), followed by low Haemoglobin Concentration (4.5%), Anti-HCV positivity (2.4%) and HIV positivity (0.8%). There is a statistically significant difference between type of donor and low haemoglobin concentration and types of donors and sex (p=.000 respectively). More family replacement donors were deferred based on positive viral markers (11.8% Vs 3.4%) and deferral based on low haemoglobin was more amongst voluntary blood donors (19.9% Vs 4.2%)

Table 1: Reason for donor deferral based on sex

PARAMETERS	LOW HAEMOGLOBIN	HBSAg POSITIVE	ANTI-HCV POSITIVE	HIV POSITIVE
SEX:				
MALE	434/11306 (3.8%)	909/11002(7.3%)	285/11002(2.3%)	92/11002(0.8%)
FEMALE	120/1053(21.7%)	36/432(8.3%)	10/432(2.3%)	6/432(1.4%)
P VALUE	0.000	0.578	0.893	0.454

Table 2: Reason for donor deferral based on donor type

PARAMETERS	LOW HAEMOGLOBIN	HBSAg POSITIVE	ANTI-HCV POSITIVE	HIV POSITIVE
BLOOD DONOR TYPES:				
Family replacement Donors	497/12072 (4.2%)	938/11348(7.3%)	297/11348(2.4%)	98/11384(0.8%)
Voluntary Donor	57/287 (19.9%)	7/241 (0.3%)	0/241 (0%)	1/241 (0.1%)
P VALUE	0.000	0.003	0.012	0.467

CONCLUSIONS

The deferral rate in this study period was found to be 15.3%. Positivity to HBsAg was the commonest reason for permanent blood donation deferral and low haemoglobin was the main reason for temporary deferral among the prospective blood donors. The blood donor deferral pattern identified in this study will provide vital areas to focus on in the formulation of blood transfusion policy in this environment.

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