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HIGH PREVALENCE OF HAEMOLYTIC ANTIBODIES: A CHALLENGE FOR SAFE BLOOD TRANSFUSION IN AFRICA

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INTRODUCTION

Allogenic blood has never been more in demand than it is today particularly in developing countries.

One of the biggest challenges to blood safety particularly in developing countries is accessing safe and adequate quantities of blood and blood products. One strategy geared towards the optimum utilization of scarce donor units is the use of blood and blood products against ABO blood group barrier.

Haemolysins are immune antibodies that can cause haemoysis during blood transfusion

AIM

The aim of this study was to assess the prevalence of haemolytic antibodies among blood donors in a tertiary Hospital in Calabar, Nigeria

METHOD

Two hundred apparently healthy blood donors (183 males and 17 females), were screened for the presence of haemolysin using the standard tube method. Those that were positive were titrated for haemolytic antibodies using standard technique. Study population included 121 blood group O donors (60.5%), 44 blood group A (22.0%) and 35 blood group B (17.5%) donors..

RESULTS

The result showed that, out of the 200, a total of 37 (18.5%) had haemolysins in their serum. The prevalence of alpha, beta, and alpha plus beta haemolysin, among group O donors were 6.5% for alpha haemolysin, 7.5% for beta haemolysin and 4.5% for alpha plus beta haemolysin and a total of 14.9% prevalence of haemolysin for blood group“O”. While blood group A and B had 25.0% and 22.8% respectively. Haemolytic titre of 4 and above was seen in about 83.4% of the samples that had haemolysin.

Alpha haemolysin (%)	Beta haemolysin (%)	Alpha +Beta haemolysin (%)	Total number of donors positive for haemolysin	Titre >4(%)	Titre < 4 (%)
13(6.5)	15(7.5)	9(4.5)	37(18.5)	83.4	16.6

Table 1 Distribution of alpha and beta haemolysin among blood donors and Titre of haemolysin

CONCLUSIONS

This study has shown that alpha and beta haemolysin exist in significance frequency among blood donors attending University of Calabar Teaching Hospital donor Clinic with a number of these donors having significant titre of 4 and above.

We recommend that all group O, A and B blood donors whose blood is intended for transfusion against ABO blood group barrier be screened routinely for alpha and beta haemolysins and that all blood group O red cell units intended for use as universal donor units must be screened and found negative for high titre alpha and beta haemolysins.

Measures should also be put in place to ensure that blood component therapy become routine practice in our environment.

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REFERENCES

1. Denise, MH and Pehigho, G (2012). Mordern Blood Banking and Transfusion Practices. FA David Company Philadephia; 68: 89-105

2. Okoroiwu, H. U. and Okafor I. M., (2018). Demographic characteristics of blood and blood components transfusion recipients and pattern of blood utilization in a tertiary health institution in southern Nigeria. *BMC Hematology*; 18:16 : 2-6

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