

Abstract

Background: Group O donor units with high titre anti-A and anti-B are generally referred to as dangerous group O donors because their plasma has the potential to haemolyse or agglutinate red blood cells of non-Group O recipients. Therefore, prior titration of anti-A and anti-B is required to prevent transfusion reactions.

Objective: The aim of this study was to determine the prevalence of high titre immune anti-A and anti-B in-group O donor blood at Mbale regional blood bank

Method: A total of 382 blood group “O” donors were randomly selected in the months of May 2022 to January 2023. The titres of anti-A and anti-B hemagglutinins (IgG class) were obtained using the tube titration technique. Dangerous donors were those whose titres of anti-A and anti-B were equal or greater than 256. The donors were categorized according to gender and age. The hemagglutinins were characterized according to specific anti-A and anti-B of IgG class antibody. Proportions were used to calculate the prevalence of high titre anti-A and anti-B group O donor units. Data was summarized into mean, standard deviations, percentages and frequencies. This was also summarized in form of pie charts and tables.

Results: The overall prevalence of 27(7.1%) were dangerous group O donors. Frequency between female and male was; 12(3.1 %) and 15(3.6 %) respectively. However, most of the dangerous group O units were among the young donors (18-25 years) with 25(6.5%) and the rest in the age group (36-45 years). Anti-B was the most frequently occurring with 17(62.9%) as compared to anti-A.

Conclusion: There was a proportion of dangerous group O donor blood units among blood group “O” individuals who donated blood. This could compromise the safety and quality of the blood products received by the patients. Recommendation: All blood group O donor blood units should be screened for high titre anti-A and anti-B antibodies if it is to be transfused to non-group O recipient most especially in cases where large volumes of plasma is required like platelet and Whole blood transfusion.