بسم الله الرحمن الرحيم

قال تعالي (إِنَّ اللَّهَ لا يَسْتَحْيِي أَنْ يَضْرِبَ مَثَلاً مَا بَعُوضَةً فَمَا فَوْقَهَا فَأَمَّا الَّذِينَ آمَنُوا فَيَعْلَمُونَ أَنَّهُ الْحَقُّ مِنْ رَبِّهِمْ وَأَمَّا الَّذِينَ كَفَرُوا فَيَقُولُونَ مَاذَا أَرَادَ اللَّهُ بِهَذَا مَثَلاً يُضِلُّ بِهِ كَثِيراً وَيَهْدِي بِهِ كَثِيراً وَمَا يُضِلُّ بِهِ إِلاَّ الْفَاسِقِينَ)

صدق الله العظيم

البقرة–آية رقم (٢٦)

Dedication

I dedicate my work to…

My love, mother

…..my life light ….

The stoical my dear father …….

Who learned me the insistence and persistence

My dears, brothers and sisters ……

Whom they were support me to achieve this work in this way.

All those people whom they were help me

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Abbreviations

AET	Amino ethylisothiouronium
AHG	Anti-human globulin
CGD	Chronic granulomatous disease
CMV	Cytomegalovirus
DAT	Direct anti-globulin test
FC	Fragmented crystallization
FDA	Food and drug administration
Gal	Galactose
Gal NAc	Galactose N-acetyl- D galactose amine
GPA	Glycophorin A
GVHD	Graft versus host disease
HDN	Hemolytic disease of the newborn
HLA	Human leukocyte antigen
HTRs	Hemolytic transfusion reactions
IAT	Indirect anti-globulin test
KDa	Kilo Dalton
LISS	Low ionic strength solution
NS	Normal saline
PEG	Poly ethylene glycol
RBCs	Red blood cells
SCD	Sickle cell disease
SSA	Sulpho salicylic acid
TRAALI	Transfusion associated acute lung injury

Abstract

Blood transfusion is an integral part in management of diseases, and allogeneic blood transfusion is a form of temporary transplantation. A recipient often mounts an immune response to the donor antigens resulting in various clinical consequences including delayed hemolytic transfusion reactions. The delayed reaction is often seen in individuals who have received repeated transfusion of compatible ABO blood group and incompatible for other blood group antigens, this study was carried out in Khartoum state during the period from May-2013 to June-2013to test allo-immunization against red blood cells among Sudanese multi-transfused patients.

The aim of this study was to determine the frequency and type of allo-antibodies in multi transfused patients; all of them were attending Jaafer Ibn Aouf pediatrics hospital during this period.

Hundred samples were collected. ABO and Rh (D) blood groups were done. Antibodies screening and identification also were carried out by using tube technique method.

The results showed red blood cells alloantibodies were detected in 12 cases (12%). The identified antibodies were anti-Kell was 4(33.3%), anti-E was 3(25%), anti-C^w was 2(16.7%), and anti-s was 2 (16.7%) and anti-le^a was 1 (8.3%). Also the result revealed there was insignificant relationship between allo-immunization and sex, age and disease with p value (0.52, 0.10, 0.90) respectively.

An insignificant relationship was found between allo-immunization and number of blood transfusion, ABO and Rh blood group system with p value (0.96, 0.29) respectively. But the number of blood transfusion is an important factor for increased allo-immunization in patients who receive multiple transfusions.

This study concluded that the frequency of red blood cells alloantibodies of anti –Kell was the most common. The relationship of alloantibodies to many factors such as sex, age, ABO and Rh (D) blood group, disease and number of transfused was insignificant.

ملخص الدراسة

عملية نقل الدم هي جزء لايتجزأفي علاج بعض الأمراض, ونقل الدم بين النوع هي شكل من أشكال الزراعه المؤقته. المستقبل غالبا ما يحدث استجابه مناعيه الي مستضدات المتبرع مما يؤدي الي عواقب سريريه مختلفة بما في ذلك تفاعلات نقل الدم الانحلالي المتأخر. التفاعل المتأخر غالبا ما يرى في الأفراد الذين أستقبلوا نقل دم بتكرار متجانس لمستضدات فصيله الدم ABO وغير متجانس لمستضدات الفصائل الأخرى.

أجريت هذه الدراسة في ولاية الخرطوم في الفتره ما بين مايو ٢٠١٣ وحتى ونيو ٢٠١٣ لرصد ظهور أجسام مضادة مكتسبة ضد المستدات الموجودة على كريات الدم الحمراء في المرضى السودانيين متعددي نقل الدم.

هدفت هذه الدراسة الي تحديد تكرار ونوع تكوين الأجسام المضادة المكتسبة في مرضى متعددي نقل الدم حضروا الي مستشفى جعفربن عوف للاطفال في هذه الفترة.

جمعت مائه عينة، وتم عمل فصيلة الدم لها وأيضا تم مسح الأجسام المضادة و الكشف التعريفي للأجسام المضادة بطريقة تقنية انبوبة الأختبار.

أظهرت النتائج وجود الأجسام المضادة في ١٢ حالة (١٢%). الأجسام المضادة التي تم التعرف عليها كانت مضاد Kell كان ٤(٣٣.٣%)، مضا د E كان ٣ (٢٥%) ، مضاد C^w كان ٢(١٦.٧%)، مضاد s كان ٢(١٦.٧%) ومضاد le^a كان ١(٨.٣%).

كما أظهرت النتائج عدم وجود علاقة بين الأ جسام المضادة مع النوع ، العمر والمرض. أيضا عدم وجود علاقة بين الأجسام المضادة مع عدد مرات نقل الدم وفصيله الدم . لكن عدد مرات نقل الدم عامل مهم جدا في ذيادة التمنيع بالمستضدات للمرضى الذين أستقبلوا دم عدة مرات.

خلصت الدراسة بأن تردد الأجسام المضاده المكتسبه للمستضدات الموجوده علي كريات ا لدم الحمراء كان مضاد Kell الأكثر أنتشارا، وعلاقة الأجسام المضاده المكتسبه مع عدة عوامل(النوع ، العمر،فصيلة الدم ،المرض وعدد مرات نقل الدم) كانت ليست ذات أهميه دلاليه .