

الآية

يقول الله تعالى في كتابه الكريم:

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

أَمِنْ هُوَ قَانَتْ أَنَاءَ اللَّيْلِ سَاجِدًا وَقَائِمًا يَحْذَرُ الْآخِرَةَ وَيَرْجُو رَحْمَةَ رَبِّهِ ۖ قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ ۚ إِنَّمَا يَنْذَكُرُ أُولُو الْأَلْبَابِ

صدق الله العظيم
سورة الزمر
الآية (9)

Dedication

Dedicated to our mothers and fathers ...

With warmth and faith

Dedicated to our brothers ...

With love and respect

Dedicated to our friends...

Whom we cherish their friendship

Dedicated to our special people ...

Who mean so much to us

Dedicated to all our teacher ...

In whom we believe so much

Alaa

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Abstract

Blood transfusion is the process of receiving blood products into patient's circulation intravenously, in transfusion of blood cells the cells must survive and function after transfusion to have a therapeutic effect. The transfusion of RBCs may cause post transfusion reactions in body as in a hemolytic transfusion reaction. This is an observational, descriptive, cross-sectional study. Aimed to determine the frequency and specificity of alloantibodies against RBCs antigens among 203 multi-transfused cancer patients in Khartoum state during the period from February up to April 2014. Age range was 10-100 years old, treated or on follow-up in Radiation and Isotope Center-Khartoum (RICK).

Demographic data was obtained from questionnaire such as; age, gender, diagnosis, number of blood transfused and if there any previous hemolytic transfusion reaction.

2.5 ml of venous blood was collected in EDTA, originally collected for routine clinical purposes. ABO, Rh D, screening test and antibody identification test was performed. ABO and Rh did by used commercial antisera were combined with red cells from the patient and in tested for antibody screening and antibody identification using commercially prepared cells, and specific an antibody identification panel was utilized and results were obtained by indirect method of anti-human globulin testing (IDT).

The results showed that distribution of antibodies among study population were (44%), (14%), (7%), (7%), (5%), (5%), (5%), (5%), (3%), (3%), (2%) for anti-Kell, anti-Le^b, anti-Kidd, anti-e, anti-s, anti-c, anti-Fy^a, anti-N, anti-C^w, anti-E and anti-V respectively, and there were insignificant relationships between gender, age, ABO and Rh (D) blood group system, type of cancer, and number of blood transfused and alloimmunization antibodies.

This study concluded that anti-Kell was the common antibody in Sudanese Cancer Patients with multi-blood transfusion, that is mean Kell antigen less frequent.

ملخص الدراسة

نقل الدم هو تلقي مكونات الدم داخل الدورة الدموية للمرضى عن طريق الوريد، ويجب الحفاظ على حيوية الخلايا ووظيفتها بعد نقل الدم حتى يكون لها تأثير علاجي. قد يسبب نقل كرات الدم الحمراء في تفاعلات داخل الجسم كما في تفاعل نقل الدم الانحلالي.

هذه دراسة وصفية لملاحظة المقطع المستعرض، تهدف هذه دراسة إلى تحديد تردد وخصوصية الأجسام المضادة المخالفة ضد مولدات المضادات في كريات الدم الحمراء وسط 203 من متعددي نقل الدم السودانيين المصابين بالسرطان في ولاية الخرطوم خلال الفترة من فبراير حتى أبريل 2014م. تتراوح أعمارهم بين 10 إلى 100 سنة، يتعالجون أو يتابعون العلاج في المركز القومي للعلاج بالأشعة والطب النووي، كذلك تم الحصول على بعض المعلومات بواسطة الاستبيان مثل: العمر، النوع، التشخيص، عدد المرات التي نقل فيها الدم للمريض وهل تعرض لرد فعل نقل الدم الإنحلالي في السابق.

جمعت عينات من الدم الوريدي 2.5 مل في مانع التجلط EDTA، كانت قد جمعت أصلاً لأغراض سريرية روتينية، وتم فحص فصائل الدم ABO والعامل الريصي Rh D بواسطة أمصال لأجسام مضادة محضرة تجارياً وذلك عن طريق إضافتها لخلايا الدم الحمراء المأخوذة من المريض، كما تم إجراء اختبار للكشف عن الأجسام المضادة الموجودة في دم المريض وتحديد استخدامها باستخدام مجموعه معينه من الخلايا الحمراء المحضرة تجارياً وتم الحصول على النتائج بواسطة الطريقة غير المباشرة لإختبار مضاد جلوبيولين الإنسان (IDT).

أظهرت النتائج أنتوزيع الأجسام المضادة بين مرضى السرطان 44%، 14%، 7%، 7%، 5%، 5%، 3%، 3% و 1% للجسم المضاد-Kell، الجسم المضاد-Le^b، الجسم المضاد-Kidd، الجسم المضاد-e، الجسم المضاد-s، الجسم المضاد-c، الجسم المضاد-Fy^a، الجسم المضاد-N، الجسم المضاد-C^w، الجسم المضاد-E و للجسم المضاد-V على التوالي. وكانت هناك علاقات غير ذات أهمية بين الجنس، العمر، فصائل الدم ABO، العامل الريصي Rh (D)، نوع السرطان، عدد مرات الدم المنقول والأجسام المضادة الناتجة عن التمنيع المخالف.

خلصت هذه الدراسة إلى أن الجسم المضاد-Kell أكثر شيوعاً وتردد بين السودانيين المصابين بالسرطان متعددي نقل الدم وهذا يعني أن مولد المضادات-Kell أقل تردداً.

Abbreviations

AHG	Anti-Human Globulin
ATP	Adenosine Triphosphate
BC	Before Christ
BMT	Bone Marrow Transplant
CMV	Cytomegalovirus
CPD	Citrate Phosphate Dextrose
CRF	Chronic Renal Failure
DAT	Direct Antiglobulin Test
DARC	Duffy-Antigen Chemokine Receptor
DIC	Disseminated Intravascular Coagulation
2,3-DPG	2,3- Diphosphoglycerate
ATDE	EthyleneDiamine TetraAcetic Acid
FFP	Fresh Frozen Plasma
FUT	Fucosyltransferase
Fy	Duffy Blood Group System
GP	Glycophorin
GVHD	Graft Versus Host Disease
HDN	Hemolytic Disease of Newborn
HIV	Human Immune-deficiency Virus
HLA	Human Leukocyte Antigen
HPA-1a	Human Platelet Antigen -1a
HTLV	Human T-lymphotropic Virus
HTR	Hemolytic Transfusion Reaction
IAT	Indirect Antiglobulin Test
IgG	Immunoglobulin G
IgM	Immunoglobulin M
Le	Lewis Blood Group System
LISS	low Ionic Strength Substance
Lu	Lutheran Blood Group System
SN	lamroN Saline
PBSCT	Peripheral Blood Stem Cell Transplant
PEG	Poly Ethylene Glycol

RBCs	Red Blood Cells
Rh	Rhesus Blood Group
RICK	Radiation and Isotope Center-Khartoum
RNA	Ribonucleic Acid
SCD	Sickle cell Disease
SPSS	Statistical Package for Social Science
ASS	Sulfosalicylic Acid
TRALI	Transfusion-Associated Acute Lung Injury
USA	United States of America

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