

Dedication

***To my mother who has taken care of
me since wasn't exist***

***To my father who devoted his
life for us to be what we are***

***To my brother and sister who stood
beside me at every step***

To every one close to me

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الخلاصة

هذه دراسة وصفية ، تحليلية أجريت فى قبيلة الحلفاوين هدفت لتحديد نسب تردد الأليل والشكل الظاهري لانتيجينات ال ABO والعامل الريصى فى هذه القبيلة . لقد استغرقت الدراسة ثلاثه اشهر. هدفت الدراسة لتكوين قاعدة معلومات لهذه القبيلة ومقارنتها مع القبائل السودانية المختلفة . أخذت الموافقة من الأشخاص الذين سحب منهم الدم وقد تمت احاطتهم بأهداف البحث. تم تجميع مائة عينة من افراد القبيلة بحيث لا توجد بينهم صلة قرابة فى وعاء سعة 2.5 مل يحتوى على مادة مانعة لتجلط الدم. تم فحص جميع العينات لمعرفة الزمر الوظيفية لانتيجينات ال ABO بطريقة الشريحة و للعامل الريصى 30 عينة باستخدام طريقة حديثة تسمى جل (مانعة النفاذية) وسبعين عينة تم فحصها بطريقة الشريحة ومن ثم تم تحديد الزمر الوظيفيه والشكل الظاهري لكل عينة . لقد تم تحليل البيانات بواسطة برنامج تحليل الحزم الاحصائية وتم تحديد التشابه بين القبائل باستخدام قانون جاكرد للتشابه . المعلومات الظاهرية التى حصلت هى نسبة كل اليل.

اظهرت الدراسة ان الزمرة الوظيفية O هي الاكثر تردداً (45%) تليها B (21%) A (13%) , واخيراً AB (3%) .

تبين ان الزمر الوظيفية c,e و D هي الاكثر تردداً وقد كانت نسبها (98%) , (91%) و (78%) على التوالي . بينما نجد ان نسبة C كانت متوسطة التردد (57%) و كانت E هي الاقل تردد (8%) .

اوضحت الدراسة وجود تشابه بين هذه القبيلة بعض القبائل ووجود اختلاف مع قبائل اخري.

كما اظهرت الدراسة عدم وجود علاقه في توريث فصائل الدم الرئسيه (A,B,O) والعامل الريصى.

Abstract

This community-based, prospective and analytical study was aimed to determine the frequencies of ABO & Rhesus blood group antigens and phenotypes among Halfaween tribe. The study also aimed to establishing ABO& Rhesus blood group baseline data for this tribe and compare it with other Sudanese tribes.

This study was conducted in different parts of Khartoum state during the period of three months, following informed consent, a total of one hundred venous blood samples were collected from unrelated individuals into 2.5 mls EDTA containers. The red blood cells (RBCs) were tested for ABO antigens by the slide agglutination techniques & common Rhesus antigens by the Particle gel immune-diffusion .Seventy (70) specimens were tested by the slide agglutination techniques. The alleles and frequencies were determined.

The antigen O was the most common antigen among the study group (45%), followed by B (21%), A (13%), and the least common antigen was AB (3%).

The \bar{e} , \bar{c} and the D genes were the commonest alleles detected with frequencies of 98%, 91% and 87% respectively. The C allele and the E genes were the least frequent with 57% and 8.0% frequencies respectively.

Similarities between ALhalfaween and some Sudanese populations and differences with others were noticed.

The study revealed that there was no relation between the frequency of common Rhesus antigens and that of ABO blood group antigens.

List of abbreviations

- .Ab: Antibody**
- .Ag: Antigen**
- .AIHA: Autoimmune hemolytic anemia**
- .cDNA: Complementary Deoxyribonucleic acid**
- .CHO: Carbohydrates**
- .CML: Chronic myeloid leukemia**
- DNA: Deoxyribonucleic acid**
- .HDN: Hemolytic Disease of The Newborn**
- .ID: Immunodiffusion**
- .IgA: Immunoglobulin A**
- .IgD: Immunoglobulin D**
- .IgE: Immunoglobulin E**
- .IgG: Immunoglobulin G**
- .IgM: Immunoglobulin M**
- .ISBT: International Society of Blood Transfusion**
- .Le: Lewis**
- .Lu: Lutheran**
- .LW: Landsteiner and Wiener**
- .mRNA: Messenger ribonucleic acid**
- .PCR: Polymerase Chain Reaction**
- .RBC: Red blood corpuscle**
- Rh Ag: Rhesus associated**
- .Rh: Rhesus blood group system**
- .RNA: Ribonucleic acid**
- .UK: United Kingdom**

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