

Sudan University of Science and Technology

College of Graduate Studies

**Frequency of ABO, Rh-D and Kidd Blood
Group System Phenotypes in Nuba
Sudanese Ethnic group**

Kidd ፩ABO, Rh-D የዕስራ የዕስራ የዕስራ የዕስራ የዕስራ የዕስራ

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Dedication

To my mother soul,

To my great man Father.

To my faithful wife Gihan.

To my lovely kids Ahmed and Razan.

To those who made it possible my teachers.

To all whom help me to succeed.

Acknowledgment

I would like to express my special gratitude to D. Mohammed S. M. Ali, Hematologist and head department of haematology, faculty of medical laboratory Sciences, Al Neelain University for his patient guidance, generosity, valuable critism and encouragement throughout the course of the research.

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ملخص الدراسة

هذه دراسة وصفية تحليلية هدفت لدراسة تردد الزمر الوظيفية والنط
الظاهري والوراثي لنظام الدم Kidd والنط الظاهري لنظام الدم ABO و
العامل الريصي (D). أجريت هذه الدراسة على قبيلة النوبة خلال فترة
شهران. بعد أخذ الموافقة تم تجميع 100 عينة في وعاء 2.5 مل يحتوى
على مادة مانعة للتختثر EDTA من أشخاص لا تربطهم صلة قرابة.
تم فحص العينات لمعرفة الزمر الوظيفية لنظام Kidd بواسطة Gel
immunodifusion . ولنظام الدم ABO العامل الريصي تم استخدام طريقة
الشريحة المباشرة. وقد أوضحت الدراسة أن فصيلة O تمثل الأغلبية بنسبة
54% تليها A بنسبة 29% و 14% تمثل B و أقل ترددًا هي AB بنسبة 3%.

في نظام الدم Kidd وجد أن الزمرة الوظيفية Jk^a هي الأكثر شيوعاً بنسبة 59%
و Jk^b بنسبة 89%.

تمت مقارنة النتائج المتحصلة في هذه الدراسة مع نتائج بعض
الدراسات العالمية في نفس الأنظمة فوجد أن هناك تشابه في بعض الزمر
فلم توجد دراسة Kidd أبداً في نظام ABO & Rh and الوظيفية لنظام الدم
سابقة في القبائل السودانية وقد أوصينا بوضع هذه الانتجينات في
الاعتبار في بنوك الدم لتجنب اخطار نقل الدم.

Abstract

Objectives: The objective of the study is to measure the frequencies of ABO, Rh-D & Kidd phenotypes among the Nuba ethnic group. A descriptive cross sectional study was conducted during the period from 1st April to 30th June2007.

Method: A total of 100 unrelated persons from this tribe were investigated by direct agglutination technique for ABO & Rh-D & grouping and gel immunodiffusion technique for Jk^a and Jk^b antigens phenotyping.

Results: The study revealed that the highest frequent blood group phenotype in the study population in the is ABO system, group O (54%) followed by group A (29%), group B (14%) and lastly AB (3%). On the other hand, Jk^a antigens found in 89% of individuals of the study population while Jk^b was 59% was detected on this ethnic group.

Conclusion: Kidd blood group system antigens (Jk^a and Jk^b) phenotyping is essential in blood transfusion purposes. Therefore, it is recommended to perform for all Nuba tribe donors & recipients.

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