

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

فَتَنَسَّمَ ضَاحِكًا مِنْ قَوْلِهَا وَقَالَ رَبِّ أَوْزِعْنِي أَنْ
أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَى وَالِدَيَّ وَأَنْ
أَعْمَلَ صَالِحًا تَرْضَاهُ وَأَدْخِلْنِي بِرَحْمَتِكَ فِي عِبَادِكَ
الصَّالِحِينَ

صدق الله العظيم

سورة النمل الآية 19

Dedication

To my parents who enlighten my way with their passion, golden wisdom and blessings.

To my teachers who always offer an unlimited support and help.

To my sisters and brothers who give the courage, strength and power to go forward in my career.

To my lovely friends in past, present and future.

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*Who spent hard effort in education, vital assistance and
insightful directions...*

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great help, support and advice.*

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success of this study and make it possible and visible.*

Thanks for all.

Ayah..

هذه دراسة وصفية تحليلية مقطعية هدفت لدراسة تردد الزمر الوظيفية و النمط الظاهري و ال وراثي لنظامي الدم ABO,A-subgroup و Rhesus, و اجريت هذه الدراسة في قبيلة الحسانية السودانية في مدينة كوستي في ولاية النيل الابيض خلال فترة ثلاثة اشهر من شهر يناير وحتى مارس 2010 , بعد اخذ الموافقة , تم تجميع 100 عينة دم في وعاء سعة 2.5 مل يحتوي على مادة مانعة للتخثر EDTA من اشخاص لا تربطهم صلة قرابة.

تم فحص العينات لمعرفة الزمر الوظيفية لنظام ال ABO و A-subgroup بواسطة طريقة الشريحة المباشرة و لنظام الدم ال Rhesus فقد تم استخدام طريقة الانبوبة المباشرة , اما بالنسبة للعينات سالبة العامل الرايصي (D) فقد تم فحصها بواسطة D^u method.

اوضحت نتائج الدراسة لنظام ال ABO ان الزمرة الوظيفية A هي الأكثر شيوعا بنسبة (42%) , تليها O بنسبة (33%) , ثم B بنسبة (19%) , بينما الزمرة الوظيفية AB هي الاقل ترددا بنسبة (6%).

بالنسبة لل A-subgroup فقد اظهرت الدراسة ان الزمرة الوظيفية A_1 هي الأكثر شيوعا بنسبة (41%) , تليها A_1B بنسبة (5%) , بينما كان كلا من الزمرة الوظيفية A_2B و A_2 نسبيا متساوية (1%) هي الاقل ترددا.

و في نظام ال Rhesus ل فقد بينت الدراسة ان الزمر الوظيفية e , c هي الأكثر شيوعا بنسبة (100%) , (100%) , تليها الزمرة الوظيفية D بنسبة (97%) , ثم ال C بنسبة (79%) , بينما كانت الزمرة الوظيفية E هي الاقل ترددا بنسبة (46%).

تمت مقارنة النتائج المتحصلة لهذه الدراسة مع نتائج بعض القبائل السودانية في نفس الانظمة , فوجد ان هناك تشابه في بعض الزمر الوظيفية مع قبائل الحلاوين و العركيين و الشايقية و الجعلية و الشكرية , بينما هناك اختلاف مع المسييرية و النوبة و الدناقلة و المحس و الهوسا . و عليه نخلص الى ان التشابه بين القبائل السودانية التي تقطن في منطقة جغرافية واحدة ناتج عن التداخل و التزاوج بين هذه القبائل , و ان الاختلاف الذي وجد في بعض القبائل يمكن ان يكون بسبب الترحال و عدم التقيّد بمنطقة جغرافية محدودة.

Abstract

This is a descriptive, prospective and analytical study that aimed to determine the frequencies of ABO, A-subgroup and Rhesus blood group antigens and phenotypes among Al-Hassania Sudanese ethnic group in Kosti city in White Nile state.

This study was conducted during the period of three months (January-March 2010), following informed consent, A total of 100 venous blood samples were collected in 2.5 ml EDTA blood container from unrelated individuals. The samples were tested for ABO blood group antigens and A-subgroup by direct slide method, while for the Rhesus blood group antigens the samples were tested by tube method. D^u technique was performed for each Rh (D) negative sample.

The results obtained from this study showed that in ABO blood group system the A antigen was the commonest antigen with the frequency of (42%), followed by O antigen (33%), B antigen (19%) and the least common was AB antigen (6%).

In A-subgroup A1 antigen had the highest frequency (41%), followed by A1B (5%), while both A2 and A2B were the rarest with same frequency (1%).

In Rhesus blood group antigens the e and c antigens were the commonest antigens detected with the same frequency for both (100%), followed by D antigen (97%), C (79%) and E antigen which was the least frequent with a frequency of (46%).

The results of this study were compared with the results of other Sudanese ethnic groups in the same systems and were found that there were similarity in some ABO blood group antigens, subgroup and Rhesus antigens with the Halaween, Arakieen, Al-Shaigia, Gaaleen and AL-Shokria Sudanese ethnic groups, and there were differences with the

Meseria, Al-Noba, Al-Danagla, Al-Mahas and Al-Hwsa Sudanese ethnic groups.

We conclude that the similarity between Sudanese tribes that living in one area resulting from interaction and intermarriage between them, while that there were differences between the tribes that living in different geographical area.

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List of Abbreviations

Ab	: Antibody.
Ag	: Antigen.
EDTA	: Ethylene-Diamine-Tetra-Acetic acid.
HDN	: Hemolytic Disease of Newborn.
IgA	: Immunoglobulin A.
IgG	: Immunoglobulin G.
IAT	: Indirect anti-globulin test.
IgM	: Immunoglobulin M.
ISBT	: International Society of Blood Transfusion.
LISS	: Low Ionic Strength Solution.
LW	: Landsteiner and Wiener.
RBCs	: Red Blood Cells.
Rh	: Rhesus Blood Group System.

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