

# Dedication

:To my

Beloved and blessed parents who -  
.did everything for me

Lovely Grand father and Grand -  
.mother

.Dear brother and sisters -

.Dear members of my family -

Dear friends and colleagues -  
-

.Dear brothers in **alla-**

Wonderful Prof. **Babiker Ahmed-**  
**.Mohammed**

# Acknowledgment

Primary my praise and thanks should be to Allah, the almighty most gracious and most merciful, who granted me the serenity, means of strength and practice to accomplish this work.

I am deeply indebted to my supervisor Prof: **Babiker Ahmed Mohammed** for his valuable help and guidance during this study I am also great to his patience assistance and invaluable device.

My appreciation is extend to all academic staff, technologists and other members of the department of haematology Sudan University of science and technology.

## **Abstract**

This study is a descriptive analytical study, was conducted to determine the incidence and co-infection of Hepatitis (B&C) viruses, human immune deficiency virus, and syphilis transmitted through the blood, among blood donors attending Khartoum teaching hospital throughout the period between May 2010 – August 2010

Two hundred blood donors at different age groups were informed about the study, only males were available as donors fit for blood donation expected outcome and agreement of participation was obtained, then the questionnaire was used to collect the information about blood donor's age, sex, blood groups and others. Most of blood donors came from Omdurman, most of them were workers in their occupation and had O+ve group.

As well 5 ml of blood were taken from the blood donors of which were taken in plain container, in the blood bank of Khartoum teaching hospital using ELISA technique and were diagnosed to determine the incidence and co-infection of Hepatitis (B&C) viruses, human immune deficiency virus, and syphilis.

Statistical package of social science (SPSS) computer program was used for data entry and analysis in this study the result show that more than 12.5 of blood donors was infected with various and bacterial infection. The result obtained showed that: among the blood donors the percentage of hepatitis B virus was 7.0%, the percentage of hepatitis C virus was 0.5%, the percentage of syphilis was 5.0%, the percentage of co-infection (HBsAg and Syphilis) was 2.0% . The lowest frequency was shown in HIV (0%).

هذه دراسته، وصفية تحليلية، تم إجراؤها لتحديد نسبة حدوث ومصابة فيروسات الكبد الوبائي (ب)، (ج)، الإيدز، الزهري، والتي تنتقل عن طريق الدم بين المتبرعين بالدم بمستشفى الخرطوم التعليمي في الفترة بين مايو 2010م - أغسطس 2010م .

تم اختار 200 متبرعاً بالدم في اعمار مختلفة من الذكور فقط لائقين لعملية التبرع، عن دراسته وأعراضها، وبعد ذلك تم اخذ موافقتهم .

بعد ذلك جمعت المعلومات من المتبرعين بواسطة الاستبيان عن الجنس، العمر، فصيلة الدم والسكن والمهنة. الغالبية العظمى للمتبرعين تمركزت في مدينة امدرمان وكانوا عمال والفصيلة السائدة بينهم هي ال (O+ve).

ايضا اخذت من كل المتبرعين 5 ملليلتر من الدم في انبوبة اختبار لا تحتوي علي مانع التجلط وذلك في بنك الدم بمستشفى الخرطوم التعليمي وباستخدام ال ELISA تم تشخيص وتحديد نسبة حدوث ومصابة الامراض المعدية: الكبد الوبائي (ب، ج)، الإيدز، الزهري.

وباستخدام نظام الحزم الاحصائية للعلوم الاجتماعية (SPSS) والذي ساعد في رصد وتحليل البيانات، قد اظهرت النتائج المتحصل عليها ان اكثر من 12.5% من المتبرعين بالدم مصابين بالامراض الفيروسية والبكتيرية، وكانت النسبة المئوية للامراض كما يلي:

نسبة حدوث فيروس التهاب الكبد الوبائي (ب) هي 7.0% و فيروس التهاب الكبد الوبائي (ج) هي 0.5%، الزهري هي 5.0%، والمصابة الفيروسية كانت بين فيروس التهاب الكبد الوبائي (ب) والزهري هي 2.0%، فيروس نقص المناعة المكتسبة يمثل اقل نسبة من بين الامراض المذكورة عن طريق الدم هي 0%.

## LIST OF ABBREVIATIONS

Abbreviation	Item
AIDS	acquired immunodeficiency syndrome
ALT	<a href="#">alanine transaminase</a>
ALT	<a href="#">aspartate transaminase</a>
b-DNA	branched DNA
DLBCL	Burkitt's-like lymphoma, diffuse large B-cell lymphoma
CDC	<a href="#">Centers for Disease Control</a>
CNS	<a href="#">central nervous system</a>
CSF	<a href="#">cerebrospinal fluid</a>
CAC	computer assisted crossmatch
cccDNA	covalently closed circular DNA
CMV	Cytomegalovirus
CTLs	<a href="#">cytotoxic T lymphocytes</a>
<a href="#">DNA</a>	Deoxy ribo nucleic acid
DAT	direct antiglobulin test
STD	<a href="#">sexual transmitted</a> Disease
DIC	<a href="#">disseminated intravascular coagulation</a>
ELISA	Enzyme-linked immunosorbent assay
EBV	<a href="#">Epstein-Barr virus</a>
FGC	<a href="#">female genital cutting</a>
<a href="#">FTA-ABS</a>	Fluorescent Treponemal Antibody Absorption
FFP	<a href="#">fresh frozen plasma</a>
GRID	<a href="#">Gay-related immune deficiency</a>
HDFN	<a href="#">Hemolytic disease of the fetus and newborn. n</a>
<a href="#">HBsAg</a>	hepatitis B surface antigen
HBV	<a href="#">hepatitis B virus</a>
HCV	Hepatitis C virus
HBeAg	hepatitis Envelope antigen
HHV-8	human herpesvirus-8
HIV	<a href="#">human immunodeficiency virus</a>
<a href="#">HIV</a>	.Human immunodeficiency virus
HLA	Human leukocyte antigen
HPV	human <a href="#">papillomavirus</a>
HTLV	<a href="#">Human T-lymphotropic virus</a>
<a href="#">IgG</a>	Immuno globulin gamma
<a href="#">IgM</a>	Immuno globulin moue
IATT	Inter-Agency Task Team
ISBT	<a href="#">International Society of Blood Transfusion</a>
KS	Kaposi's sarcoma
KSHV	<a href="#">Kaposi's sarcoma-associated herpesvirus</a>

MPGN	<a href="#">membranoproliferative glomerulonephritis</a>
MGN	<a href="#">Membranous glomerulonephritis</a>
MTCT	Mother-to-child transmission
MAC	Mycobacterium Avium complex
NIH	<a href="#">National Institutes of Health</a>
NANBH	non-A, non-B hepatitis
NAT	Nucleic Acid Testing
OD	optical density
PCP	Pneumocystis carinii pneumonia
<a href="#">PCR</a>	Polymerase chain reaction
PEP	post exposure prophylaxis
RPR	<a href="#">Rapid Plasma Reagin</a>
RBCs	<a href="#">red blood cells</a>
RT	<a href="#">Reverse transcriptase</a>
Rh	Rhesus
<a href="#">RNA</a>	Ribo nucleic acid
STI	<a href="#">sexually transmitted infections</a>
SPSS	Statistical package of social science
TMA	transcription mediated amplification
TACO	Transfusion Associated Circulatory Overload
TRALI	<a href="#">Transfusion-associated acute lung injury</a>
<a href="#">GVHD</a>	<a href="#">Transfusion-associated graft-vs-host disease</a>
<a href="#">TPHA</a>	Treponema pallidum hemagglutination assay
TB	<a href="#">Tuberculosis</a>
<a href="#">VDRL</a>	Venereal Disease Research Laboratory
VHA	Veterans Health Administration
WBCs	<a href="#">white blood cells</a>

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