

Dedications:

I would like to dedicate this research to my mother, who prayed for me all the time so that I complete this research.

To the amazing father who has always been there for me whenever I need him.

Also I dedicate this research to my sisters Souad who spent her life to provide us sufficiency, happiness and love.

To my brothers and sisters that always lend me a great help.

To all patients suffering from renal failure

To who stood beside me and supported me in my whole life and encourage me to continue my studies. And to anyone who helped me to do this Kind of full work.

Alawia

Acknowledgment:

My great thanking is to Allah who has lightened my way
and paved my road vanishing all the barriers that I
faced...

First of all I would like to thank Dr.Munsoor Mohammed
Munsoor for his support and devotion in completing
this research.

I would like to give special thanks for Ust.Maher for his
help provided whenever we needed this help.

To the staff of Hematology department for their constant
reminders, much needed motivation, and endless
assistance that they extended whenever it was needed.

Finally to all who stood beside me and helped me to
finish this research

Thank you all

List of Contents

Content	Page number
Dedication	I
Acknowledgment	II
List of contents	III
List of figures	V
List of abbreviations	VI
Abstract	VII
مستخلص الدراسة	VIII
Chapter one Introduction & Literature Review	
1-Haemostasis	1
1-1 The component of haemostasis	1
1-2 Steps of normal haemostasis	5
1-3 The Kidney	8
1-3.1 Renal disease	8
1-4 Types of renal Disease	8
1-5 Renal dialyses	10
1-6 The effect of Haemodialysis on the coagulation system	11
1-7 Cleaning and disinfecting agents for hemodialysis machines	15
1-8 Objectives	18
1-9 Rationale	19
Chapter two Material and method	
2-1 Study type & design	20
2-2 Study area	20
2-3 Sample size	20
2-4 Data collection	20
2-5 Material	20
2-6 Laboratory methods	21

2-7 Pre testing	22
2-8 DATA analysis	22
2-9 Ethical Consideration	22
Chapter three Results	
3. Results	23
Chapter four Discussion& Conclusions & recommendations	
4-1 Discussion	25
4-2 Conclusions	27
4-3 recommendations	28
References	
references	29
Appendices	
Appendix I	32
Appendix II	33
Appendix III	34

List of Tables

Table (1)	Frequency of different age interval of studied population	23
Table (2)	Frequency of different duration of disease interval of studied population	23
Table (3)	The mean value of PT & APTT pre and post dialysis	23
Table (4)	The mean PT value pre and post dialysis at different age interval	23
Table (5)	The mean APTT value pre and post dialysis at different age interval	23
Table (6)	The mean PT value pre and post dialysis at different duration of disease interval	24
Table (7)	The mean APTT value pre and post dialysis at different duration of disease interval	24

List of Abbreviations

APTT	Activated partial thromboplastin time
CRF	Chronic renal failure
ESRD	End stage renal disease
FDPs	Fibrinogen degradation products
PLG	Plasminogen
PT	Prothrombin time
SK	Streptokinase
tPA	Tissue plasminogen activator
TT	Thrombin time
HD	Haemodialysis
cAMP	Cyclic adenosine monophosphate
VWF	Von willibrand factor
TFPI	Tissue factor pathway inhibitors
FPA	Fibrinopeptide A
PDGF	Platelet derived growth factor alpha
TG-alpha	Transforming growth factor alpha
HMWK	High molecular weight kininogen

Abstract

This study was carried out in Ibnsena hospital center of renal dialysis during the period from May 2013 till August 2013. The aim of this study was to investigate changes in prothrombin time and activated partial thrombin time that occur in renal failure patients before and after haemodialysis (HD) as compared to the control group. Blood samples from 50 chronic renal failure patients on Haemodialysis were collected pre and post haemodialysis. Plasma clotting Time namely prothrombin time and activated partial thrombin time test were performed on each sample.

All the patients showed a normal coagulation profile (Pre dialysis) while post dialysis all of them showed marked prolongation in APTT (total increase) with slightly prolongation in the PT.

The result of the study showed that there was no effect for age, or duration of dialysis on the results.

مستخلص الدراسة

قد اجريت هذه الدراسة بمستشفى بن سينا مركز الغسيل الكلوي خلال الفترة من شهر مايو 2013 الي اغسطس 2013 .
والهدف من هذه الدراسة لفحص التغير في زمن البروثرومبين وزمن الثرومبوبلاستين الجزئي المفعّل الذي يحدث لمريض الفشل الكلوي قبل وبعد الغسيل الكلوي بالمقارنه مع المجموعه الضابطه.
لقد تم سحب عينات الدم من 50 مريض يعانون الفشل الكلوي المزمن قبل وبعد الغسيل الكلوي ، وتم فحص زمن التجلط للبروثرومبين والثرؤمبؤبلاستين الجزئي المفعّل علي كل عينه.
واظهرت البيانات الشخصيه التخثر الطبيعي قبل الغسيل الكلوي بينما بعد الغسيل الكلوي زياده ملحوظه في زمن الثرومبؤبلاستين الجزئي المفعّل (ضعفي العادي) مع زياده طفيفه في زمن البروثرومبين. واظهرت الدراسة ان العمر او مدة بدء غسيل الكلوي لا تؤثر علي النتيجة.