

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

إِنَّ اللَّهَ لَا يَخْفَى عَلَيْهِ شَيْءٌ فِي الْأَرْضِ وَلَا فِي السَّمَاءِ (٥) هُوَ الَّذِي
يُصَوِّرُكُمْ فِي الْأَرْحَامِ كَيْفَ يَشَاءُ لَا إِلَهَ إِلَّا هُوَ الْعَزِيزُ الْحَكِيمُ (٦)

صدق الله العظيم

سورة آل عمران الآيات ٥-٦

Dedication

This work is dedicated to my parents ..

To my brothers and sisters..

To my colleagues ..

And to all women which to have a baby...

Acknowledgement

First of all thanks is for Allah ,Praise Allah for bleesing

My work and I would like to thanks :

Dr. Mohieldeen Abaas Abdalla

I would like to thank the Department of Hematology
and Immunohaematology for giving me the opportunity to
conduct this important research.

Special thanks for Dr.Sara Elsadig and a person who aspire me

Dr. Tarig Mohammed Fadel elmwla

And I hope this study will come with benefit for Sudan.

Abstract

This is a descriptive analytical study carried out in Khartoum state during the period of March 2012 to June 2012 ,to evaluate hemostatic mechanism among Sudanese women with recurrent miscarriages. Fifty females with diagnosed miscarriages (three or more) were selected, and thirty healthy women were selected as control group. 4.5 ml of venous blood withdrawn from each women, placed in tri sodium citrate container, then centrifuged to get platelets poor plasma (PPP) to measure prothrombin time (PT), activated thromboplastin time (APTT), thrombin time (TT) and D-dimer. The results were analyzed by SPSS version 11.5 and express as means, The results obtained showed that the means of PT(15.8),APTT (36.1),TT(15.6) and D-dimer(787) respectively. The mean of PT,PTT, TT, and D-dimer of control group was(13.1sec), (31.4 sec), (14.5 sec), and (209 ng/ml) respectively. The results showed significant differences between the mean value of patients and controls in prothrombin time PT (P.value <0.05), activated partial thromboplastin time APTT (P.value <0.05), thrombin time TT (P.value <0.05) and D-dimer (P.value <0.05). The result show insignificant differences between age groups, trimesters of miscarriages of case. The results obtain indicated that measurement of prothrombin time(PT), activated partial thromboplastin time (APTT)and thrombin time (TT) were necessary when evaluating female with recurrent miscarriages there was clinical evidence of hemostatic abnormality.The results of this study confirmed that the D-dimer test could be use as early predictive marker for further miscarriages due to hemostatic abnormalities.

ملخص البحث

هذه دراسة وصفية تحليلية أجريت في ولاية الخرطوم في الفترة من مارس ٢٠١٢ الي يونيو ٢٠١٢ لتقييم الية تخثر الدم لدي النساء السودانيات المصابات باجهاض متكرر، تم اختيار خمسون من النساء مشخصين باجهاض متكرر (ثلاث او اكثر) كما تم أخذ ثلاثون عينة من نساء اصحاء كمجموعة ضبط. تم أخذ ٤.٥ مليلتر من الدم الوريدي من كل مريض وتم وضعه في حاوية تحتوي علي مانع التجلط ثلاثي سترات الصوديوم واستخلص المصل فقير الصفائح الدموية لقياس، زمن البروثرومبين زمن الثرومبوبلاستين الجزئ المنشط ، زمن الثرومبين و الذي دايمر وتم تحليل النتائج بواسطة برنامج الحزم الاحصائية للعلوم الاجتماعية اصدارة ١١.٥ ، تم حساب المتوسط وكانت النتائج كالآتي : متوسط زمن البروثرومبين، الثرومبوبلاستين الجزئ المنشط، الثرومبين و الذي دايمر (١٥.٨ ثانية)،(٣٦.١ ثانية)،(١٥.٦ ثانية)،(٧٨٧ نانوغرام/مل) علي التوالي للمرضي،بينما كان متوسط البروثرومبين و متوسط الثرومبوبلاستين الجزئ المنشط في مجموعة الضبط (١٣.١ ثانية)،(٣١.٤ ثانية) ومتوسط الثرومبين والذي دايمر (١٤.٥ ثانية)،(٢٠٩ نانوغرام/مل) علي التوالي. أظهرت النتائج وجود فروقات ذات دلالات معنوية بين النساء المصابات باجهاض متكرر في متوسط البروثرومبين (القيمة المعنوية اقل من ٠.٠٥) ،متوسط الثرومبوبلاستين المنشط الجزئ (القيمة المعنوية اقل من ٠.٠٥)، متوسط الثرومبين (القيمة المعنوية اقل من ٠.٠٥) ومتوسط الذي_دايمر (القيمة المعنوية اقل من ٠.٠٥) مقارنة بعينات المعادلين الطبيعيين من النساء،

ايضا" لم تظر الدراسة فرق ذو دلالة احصائية بين مجموعتي الاعمار للمرضي وفترة
الاجهاض (الاولي ،الثانية). أشارت المحصلة علي أن قياس زمن البروثرومبين،و زمن
الثرومبوبلاستين المنشط جزئيا" وزمن الثرومبين ضرورية عند تقييم النساء المصابات
باجهاض متكرر عندما لا يوجد دليل سريري يشير الي وجود خلل في عملية التجلط ، كما
أظهرت النتائج ان الدي - دايمر يمكن ان يكون مفيد كعلامة توقع لحدوث اجهاض آخر ناتج
من خلل في عملية التجلط.

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List of abbreviations

No.	Abbreviations	Words of abbreviations
1	ADP	Adenosine diphosphate
2	APAs	Antiphospholipid Antibodies
3	APTT	Activated partial thromboplastin time
4	AT	Anti thrombin
5	AT	Antithrombin
6	ATP	Adenosine triphosphate
7	CD	Cluster differentiation
8	DIC	Disseminated Intravascular coagulation.
9	EDRF	Endothelial derived relaxing factor
10	ELISA	Enzyme linked immunosorbent assay
11	F	Factor
12	FDPs	Fibrin degradation products
13	GP	Glycoprotein
14	HCG	Human chorionic gonadotropin
15	HLA	Human leukocyte antigen
16	HMWK	High molecular weight kininogen
17	INR	International normalization ratio
18	KD	Kilo Dalton
19	NO	Nitric oxide
20	PA	Plasminogen activator
21	PAI	Plasminogen activator inhibitor _1
22	PCOS	Polycystic ovary syndrome
23	PDGF	Platelets derived growth factor
24	PF3	Platelets factor 3

25	PG	Prostaglandin
26	PNP	Platelet neutralization procedure
27	PPROM	Preterm premature rupture of membrane
28	PT	Prothrombin time
29	PTL	Preterm labour
30	RM	Recurrent miscarriage
31	RPL	Recurrent pregnancy loss
32	TAT	Thrombin_anti thrombin
33	TF	Tissue factor
34	TFPI	Tissue factor pathway inhibitor
35	TM	Thrombomodulin
36	tPA	Tissue plasminogen activator
37	TT	Thrombin time
38	TXA2	Thromboxane A2
39	VDRL	Venereal disease research laboratory
40	vWF	Von willebrand factor
41	ZPI	Protein Z –related protease inhibitor