

**بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ**

**قال الله تعالى**

**قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ {  
أَنْتَ الْعَلِيمُ الْحَكِيمُ**

**صدق الله العظيم**

**سورة البقرة الآية 32**

## **Dedication**

### **Dedicated To**

My Parents

My Brother

My Sisters

And to everyone who helped me to complete this research.

With Infinite Love.....

Samahir

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I am grateful my supervisor: **Dr. Mohieldein Abbas Abdalla**, Head of the Department of hematology.

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## **Abstract**

This is a descriptive analytical study carried out in Khartoum state in the period of May 2012, to evaluate hemostatic mechanism among Sudanese multigravida pregnant women in third trimester. Fifty multigravida pregnant women in third trimester were selected, and twenty five healthy females non pregnant were selected as control group. Five and half ml of venous blood was drawn from each patient and placed in tri sodium citrate container, then centrifuged to get platelets poor plasma (PPP) and that is to assess prothrombin time (PT), activated partial thromboplastin time (APTT), Fibrinogen level and D.dimer. The results were analyzed by SPSS version 11.5 and express as mean values the results obtained from cases that the means of PT (14.1sec), APTT (37.5 sec), Fibrinogen (571mg/dl) and D.dimer (1167ng/ml) respectively. The mean of PT, APTT, Fibrinogen and D.dimer in control group were (12.8sec), (31.3 sec), (205mg/dl) and (291ng/dl) respectively. The results showed significant increase between the mean of cases and controls in prothrombin time PT (P value <0.05), activated partial thromboplastin time APTT (P value <0.05), Fibrinogen (P value <0.05) and D.dimer (P value <0.05). The result show insignificant differences between age groups, month of the third trimesters and number of pregnancies. The results obtained indicated that measurement of prothrombin time (PT), Activated partial thromboplastin time (APTT), Fibrinogen and D.dimer were necessary when evaluating multigravida pregnant women, whom there was clinical evidence of hemostatic abnormality.

## ملخص الدراسة

هذه دراسة وصفية تحليلية أجريت في ولاية الخرطوم في الفترة من مارس 2012 الي ونيو 2012 لتقويم اختبارات التجلط لدي النساء الحوامل السودانيات ذات الولادات المتعددة, تم اختيار خمسون من النساء الحوامل متعددات الولادات (خمس او اكثر) كما تم أخذ خمس وعشرون عينة من نساء اصحاء (غير حوامل) كمجموعة ضابطة

تم أخذ 4,5 مليلتر من الدم الوريدي من كل مريض وتم وضعه في حاوية تحتوي علي مانع تجلط ثلاثي سترات الصوديوم واستخلص المصل فقيرو الصفائح الدموية لقياس زمن البروثرومبين , زمن الثرومبوبلاستين الجزئ المنشط , مستوى الفيبرونجين و دي دايمر وتم تحليل النتائج بواسطة برنامج الحزم الاحصائية للعلوم الاجتماعية اصدار 11,5 , تم حساب المتوسط وكانت النتائج كالآتي : متوسط زمن البروثرومبين (14,1 ثانية), متوسط زمن الثرومبوبلاستين الجزئ المنشط (37,5 ثانية ) , متوسط مستوى الفيبرونجين (573 ملجرام / ديس لتر) ومتوسط دي دايمر (1167 نانو قرام / مل ) وه ذا بالنسبة للحوامل متعددي الولادات, بينما كان متوسط زمن البروثرومبين و متوسط زمن الثرومبوبلاستين الجزئ المنشط في مجموعة الضبط (12,8 ثانية) , (31,3 ثانية) ومتوسط الفيبرونجين والدي دايمر (205 ملجرام / ديس لتر) , (291 نانو قرام / مل) علي التوالي , أظهرت النتائج وجود فروقات ذات دلالات معنوية بين النساء الحوامل متعددي الولادات في متوسط زمن البروثرومبين (القيمة المعنوية أقل من 0,05 ) , متوسط زمن الثرومبوبلاستين المنشط الجزئ (القيمة المعنوية أقل من 0,05 ) , متوسط الفيبرونجين (القيمة المعنوية أقل من 0,05 ) ومتوسط الدي - دايمر (القيمة المعنوية أقل من 0,05 ) مقارنة بعينات المعادليين الطبيعيين من النساء غير الحوامل, ايضاً" لم تظار الدراسة فروقات احصائية بين مجموعات الاعمار . (النساء الحوامل (القيمة المعنوية اكبر من 0,05

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### List of Abbreviations

No.	Abbreviations	Words of abbreviations
1	APC	Anti plasminogen complex
2	APTT	Activated partial thromboplastin time
3	AT	Anti thrombin
4	C4Bbp	C4b-binding protein
5	DIC	Disseminated intravascular coagulation.
6	DVTs	Deep venous thrombosis
7	ELT	Euglobulin lysis time
8	ET	Essential thrombocythaemia
9	FBC	Full blood counting
10	FDPs	Fibrin degradation products
11	G1P1	Gravida1 para1
12	HELLP	Hemolysis elevated liver enzyme low platelet
13	HMWK	High molecular weight kininogen

1 4	HRG	Histadine-rich glycoprotein
1 5	INR	International normalization ratio
1 6	ITP	Idiopathic thrombocytopenic purpura
1 7	IVIG	Intravenous immunoglobulin
18	PAI	Plasminogen activator inhibitor
1 9	PAP	Plasmin $\alpha$ 2 anti plasmin
2 0	PET	Pre-eclampsia toxemia
2 1	PF3	Platelet factor 3
2 2	Ph	Phospholipid
23	PPROM	Preterm premature rupture of membrane
2 4	PS	Protein S
2 5	PT	Prothrombin time
26	PTL	Preterm labor
27	RM	Recurrent miscarriage
2 8	RPL	Recurrent pregnancy loss

29	TAFI	Tissue activated factor inhibitor
30	TAT	Thrombin-anti thrombin III complex
31	TCT	Thrombin clotting time
32	TEM	Thrombo elastometry
33	TF	Tissue factor
34	TFPI	Tissue factor pathway inhibitor
35	tpA	Tissue plasminogen activator
36	TTP	Thrombotic thrombocytopenic purpura
37	TXA2	Thromboxane A2
38	UH	Unfractionated heparin
39	upA	Urokinase plasminogen activator
40	VTE	Venous thromboembolism
41	Vwf	Von willebrand factor
42	$\alpha$ 1-AT	Alpha1 – anti thrombin

4 3	$\alpha$ 2-AP	Alpha2 – anti plasmin
4 4	$\alpha$ 2-MG	Alpha2 - macroglobulin