Dedication

To my family

Acknowledgment

My great praise and thanks should be to Allah, the almighty moat gracious and most merciful, who grated me the serenity, means of strength and practice to accomplish this work.

I am indebted to my supervisor Dr: Mubarak Alkarsani for his help and guidance during this study, also my great to him for his patience, assistance and valuable device.

Abstract

This is an analytical case-control study, conducted at national insurance fund (NSIF) health center in Khartoum city during the period from the March to August 2010. The aim of this study was to assess the haemostatic parameters (platelet, PT, INR and APTT) in Sudanese pregnant women in Khartoum who attend (NSIF). One hundred twenty five blood samples (125) were collected from hundred (100) Sudanese pregnant women, and twenty five (25) Sudanese non pregnant (control) .the study was conducted between March 2010 and August 2010 in Khartoum state. The participants were informed about the study and agreed for participation. The study population was divided into three groups according to the month of pregnancy first, second, and third trimester. Five ml of venous blood were taken from each subject, 2.5ml in EDTA containers, and 2.5 ml in tri sodium citrate containers these were tested for the platelet count, PT, and APTT. Fully automated haematological analyzer (Sysmex) was used for platelet count, PT, and APTT were analyzed manually.

Statistical analysis showed significant decreased in platelet count mean during pregnancy (227.3100) compared with control (332.4000) P.value (0.000). Significant difference (p.value 0.025) was noted between the PTT mean of pregnant women (30.7300) and PTT mean of non pregnant women (32.5600). Also a significant decreased in PT mean of pregnancy (14.6900) compared to the control group (15.2800), with (P.value 0.044). There was mild deceased in INR mean during pregnancy (1.1871) compared to control (1.2400) but it was not significant (P.value 0.121).

مستخلص الأطروحة

هذه دراسة تحليلية تعتمد علي المقارنة بين الحالة والمعيار المفترض تم إجراؤها في الفترة ما بين شهر مارس إلي شهر اغسطس 2010 بمركز صحي الصندوق القومي للتامين الاجتماعي لقياس عوامل التجلط وصفائح الدم لدي النساء السودانيات الحوامل بولاية الخرطوم.

أخذت مئة (100)عينة من مئة نسوه حوامل خلال شهور الحمل التسعة ,وخمسة وعشرون (25) اخريات غير حبليات(حاملات) بعد إخطارهن بهذه الدراسة وأهميتها واخذ موافقتهم .

بعد ذالك جمعت المعلومات منهن عن طريق الاستبيان من العمر ,عدد شهور الحمل,عدد مرات الحمل, وما اذا كانت تاخد اي مانع للتجلط, وتم تقسيمهن الي ثلاثة مجموعات حسب عدد شهور الحمل.

تم اخذ خمسة مل من الدم من كل مشارك في الدراسة وقسمت إلي 2.5 مل في حاويات تحتوي علي مانع تجلط (EDTA) و 2.5 مل في حاويات تحتوي علي سترات الصوديوم الثلاثية.

تم استخدام جهاز (Sysmex) لقياس الصفيحات الدموية (platelet) والجهاز يعمل أوتوماتيكيا . وتم تحليل زمن البروثرومبين(PT) وزمن الثرمبوبلاستين الجزئي المنشط(PTT) بالطريقة اليدوية.

وقد اظهرت نتائج التحليل الاحصائي ان متوسط الصفائح الدمويه (227.3100) اظهر انخفاضا كبيرا من المعيار (332.4000) بمستوي معنويه (0.00) وان متوسط زمن البروثرومبين (PT)(14.6900ثانية) اظهرإنخفاضا كبيرا من قيمة المعيار (15.2800ثانية) بمستوي معنوية (0.044). متوسط زمن الثرومبوبلا ستين الجزئي(PTT)(30.7300ثانية)إظهرانخفاضا كبيرة من قيمة المعيار (32.5600ثانية)بمستوي معنوية (0.025).بينما اظهر(INR)انخفاضا(1.1871)ولكن ليس كثيرا من قيمة المعيار(1.2400) بمستوي معنوية(0.121).

List of abbreviation

APC	Activated protein C
APTT	Activated partial thromboblastin time
C4BP	C4Binding Portion
Ca cl	Calcium chloride
EDTA	Ethylene diamine tetra acetic acid
ELISA	enzyme immunoassays
ET	Essential thrombocythaemia
FBC	Full Blood Count
FM	fibrin monomer
FDP	Fibrin degredation product
HMWK	high-molecular-weight kininogen
HIT	Heparin-induced thrombocytopenia
INR	International Normalised Ratio
ISI	International sensitivity index
LMWH	lowmolecular weight heparin
PAP	plasmin-α2-antiplasmin
PAI	plasminogen activator inhibitor
Ph	phospholipid
PPP	Platelet poor plasma
PT	prothrombin
TAT	thrombin-antithrombin III complex
TFPI	tissue factor pathway inhibitor
TAFI	Thrombin activated fibrinolysis inhibitor
tPA	Tissue plasminogen activator
Vwf	Von Willebrand Factor
VTE	venous thromboembolism
UH	unfractionated heparin
uPA	Urokinaseplasminogene activator
WBC	White blood cells

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