بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / سلوي محمود عقل

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: لا يوجد

Evaluation of Maternal Serum Endoglin in preeclampsia and in normotensive pregnant females

Thesis

Submitted for Partial Fulfillment of Master Degree in Obstetrics & Gynecology

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Samar Ali

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List of Abbreviations

Abb.	Full term
ACE	Angiotensin converting enzyme
ACOG	American College of Obstetricians and Gynecologists
ALT	Alanine aminotransferase
ARBs	Angiotensin II receptor blockers
AST	Aspartate aminotransferase
BMI	Body mass index
DBP	Diastolic blood pressure
DIC	Disseminated intravascular coagulation
ECM	Extracellular matrix
ELISA	Enzyme-linked immunosorbent assay
ENG	Endoglin
eNOS	Endothelial nitric oxide synthase
HELLP	Hemolysis, Elevated Liver enzymes and Low Platelets
HHT	Hereditary hemorrhagic telangiectasia
LDH	Lactate dehydrogenase
mAb	Monoclonal antibody
MRAs	Mineralocorticoid receptor antagonists
NICE	National Institute for Clinical Excellence
NMDA	N-methyl d-aspartate
PE	Pre-eclampsia
PlGF	Placental growth factor
RGD	Arginine-Glycine-Aspartic Acid
RR	Relative risk
SBP	Systolic blood pressure
sEng	Soluble Endoglin
sFlt-1	Soluble fms-like tyrosine kinase-1

List of Abbreviations Cont...

Abb.	Full term

TCs..... Trophoblast cells
TGF β..... Transforming growth factor beta
VEGF .....Vascular endothelial growth factor

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Protocol

PROTOCOL OF A THESIS FOR PARTIAL FULFILMENT OF MASTER DEGREE IN OBSTETRICS & GYNECOLOGY

Title of the protocol:

Evaluation Of Maternal Serum Endoglin in preeclampsia and in normotensive pregnant females.

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What is already known on this subject?

And what does this study add?

Preeclampsia is characterized by an imbalance in angiogenic factor, including soluble endoglin, Serum soluble endoglin levels were significantly different in patient with preeclampsia than in healthy pregnancy, Serum endoglin correlated inversely with gestational age. And it seems to be a suitable marker to diagnose preeclampsia, and are associated with increase risk of adverse outcomes. (Alfredo leanos-miranda et al. hyperention 2019 oct)

In this study further investigations will be done to compare serum endoglin in pregnant females with preeclampsia to normotensive ones.

Introduction

Preeclampsia is pregnancy specific syndrome characterized by hypertension and protienuria after 20 weeks affecting 2_8% pregnancy worldwide ***(Steegers, 2010)*** and it is one of the major cause of maternal and fetal morbidity and mortality. It contributes to major proportion of maternal death up to 16% in developed countries ***(Khan et al., 2006)***

It is multisystem disorder occurring during second and third trimester of pregnancy. It is characterized by blood pressure more than or equal to 140/90 mmHg or rise in systolic blood pressure more than 30 mmHg or diastolic blood pressure of more than 15 mmHg after 20 weeks of gestation with proteinuria more than or equal 300 mg/24 hours ***(Lindheim et***

al.,2009). Various risk factors and preventive methods have been tested still there are no definitive preventive methods ***(Duckitt and Harrington, 2005).***

In the abscence of proteinuria, preeclampsia is diagnosed as hypertension in association with thrombocytopenia (platelet count less than 100.000/microliter), impaired liver function (elevated concentration of liver transaminases to twice the normal concentration), renal insufficiency (elevated serum creatinine greater than 1.1mg/dl or doubling of serum creatinine in the absence of other renal disease), pulmonary edema or new onset of cerebral or visual symptoms ***(Roberts et al., 2013).***

Despite recent studies for understanding the pathophysiology of preeclampsia, the disorder remains a challenge with no preventive therapy and the effective treatment limited to delivery to terminate pregnancy and the disorder. A currant model of the pathophysiology of preeclampsia invokes a two stage model decreased placental perfusion usually to abnormal trophoblastic invasion with consequent dilatory remodeling of maternal vessels perfusing the placenta that precedes and results in the clinical manifestations of preeclampsia. Multiple factors have been indicated in the initiation and progression of preeclampsia, including maternal constitutional factors, antiangiogenic factors, and inflammatory activation ***(Roberts and Hubel, 2009)***

Endothelial dysfunction is considered as a central mechanism in the pathogenesis of maternal syndrome of preeclampsia, poor placentation has been proposed as a major factor. An ischaemic placenta secretes soluble factors into maternal vasculture, which have been impilicated in inducing

endothelial dysfunction and the clinical features of preeclampsia.

Estimation of soluble endoglin could be used as a sensitive screening test for high risk women liable to develop preeclampsia prior to onset of its clinical manifestations, and could potentially improve the outcome of pregnancy. ***(International Journal of Women Health, 2012)***

Aim of the work

To compare the increased levels of maternal serum soluble endoglin (sEng) in pregnant females with preeclampsia to normotensive pregnant ones.

Research hypothesis

In pregnant women with preeclampsia, maternal serum soluble endoglin levels may be higher than control group**.**

Research question

Is serum endoglin level elevated in patients with preeclampsia more than normotensive pregnant ones ?

Patients and Methods

Study type

A case control study

Study site

Ain shams university maternity hospital

Study period

Expected study duration is about 8 months.

Outcome Measures

Primary outcome:

Association between elevated serum soluble endoglin level and preeclampsia.

Secondary outcome:

- Correlation between level of serum endoglin in preeclampsia and normotensive pregnant ones.
- Correlation between body weight and preeclampsia.

Study Design and Patients

It is a case control study for association between serum soluble endoglin level in preeclampsia and in normotensive pregnant females.

Population:

The currant study will be conducted at Ain shams University Maternity Hospital. This study will be carried out on 40 pregnant women recruited at Ain shams University Maternity Hospital. They will be divided into preeclamptic group and non preeclamptic group, 20 cases in each group. Forty pregnant women will be recruited in this study according to inclusion and exclusion criteria.

Inclusion criteria:

- Aged from 18_35 years.
- Gestational age after 20 weeks.
- Singleton pregnancy.
- Body mass index <30.

Exclusion criteria:

- Women with preexisting medical conditions like deep venous thrombosis, hyper coagulable state or known thrombophilia, diabetic, chrionic hypertension and pregnant women with cardiovascular, Autoimmune, Renal, Hepatic disease.
- Multiple pregnancy.
- Congenital fetal malformation that excluded by routine ultrasound done on maternity hospital,

Preeclamptic group (case group) based on:

- Blood pressure greater than or equal to 140 mm/Hg systolic or greater than or equal to 90 mmHg diastolic on two occasion at least 4 hours apart after 20 weeks of gestation ***(Roberts et al., 2013).***
- Proteinuria 24 hour protein excretion more than or equal 300 mg.
- In the absence of proteinuria, a new onset hypertension with new onset of the following:
- Thrombocytopenia (platelet count less than 100.000/microliter).
- Renal insufficiency (serum creatinine greater than 1.1mg/dl).
- Impaired liver function (elevated concentration of liver transaminases).
- Pulmonary edema.