ELECTIVE CESAREAN SECTION AT 37 VERSUS 38 COMPLETED WEEKS IN PREGENANT FEMALES WITH MILD_TO-MODERATE PREECLAMPSIA AND ITS EFFECT ON NEONATAL RESPIRATORY OUTCOME

Thesis

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بسم الله الرحمن الرحيم

﴿وأنزل اللـه عليـك الكتــاب
والحكمة وعَلَّمَكَ مَا لَمْ تَكُن تَعْلَمُ
وكَانَ فَضْلُ اللَّهِ عَلَيْكَ عَظِيماً﴾

صدق الله العظيم

النساء .. آية ١١٣

Dedication

To my father who gave me everything I have

To my mother who is behind all my achievements.

To my husband who made my days to shine.

To my brothers who helped me.

To all my friends, who supported me.

Abstract

Preeclampsia is complex disorder that affect about 5% of pregnant women. Preeclampsia is a pregnancy Specific syndrome which is devided into mild_to_moderate and sever preeclompsia. The Best time for termination of mild_to_moderate preeclampsia by cesarean section without respiratory morbidity to the neonate is our question.

The aim of this study is to determine the most proper timing for termination of pregnancy by elective cesarean section in patients with mild_to_moderate preeclampsia with the least incidence of respiratory morbidity through making a comparison between respiratory outcome of neonate of patient with mild_to_moderate preeclampsia at 37 completed weeks versus 38 completed weeks.

The study was conducted on 100 patients with mild_to_moderate preeclampsia (50 patient on each group) who delivered by elective cesarean section in Kasr El Eini Hospital in a period from October 2013 to April 2014.

Patients were divided into 2 groups:

Group 1 : patients with mild_to_moderate preeclampsia at completed 37 weeks.

Group 2 : patients with mild_to_moderate preeclampsia at completed 38 weeks

All of Mothers were subjected to full detailed history, examination and ultrasound examinations.

According to data collected from these study,we found that although there were no much significant differences between the 2 groups but termination of pregnancy remains better at 38 completed weeks.
Finally larger studies were recommended to determine the most proper time for temmination of pregnancy by elective cesarean section in case of mild_to_moderate preeclampsia.

Key words:
Elective cesarean section, Mild Preeclampsia ,ne onatal respiratory diseases.

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INTRODUCTION AND AIM OF WORK

Preeclampsia is complex disorder that affects about 5% of pregnant women.

Preeclampsia is pregnancy-specific syndrome of hypertension and proteinuria with or without oedema occurring mostly in second half of pregnancy due to reduce organ perfusion secondary to vasospasm and endothial activation **(Cunninghan 2009).**

Proteinuria is described as 300 mg or more of urinary protein per 24 hours or present of (30 mg/dl) in random urinary sample.

The combination of proteinuria plus hypertension markedly increases risk of perinatal morbidity and mortality**(Cunninghan 2009)**.

Physiological changes in last few weeks of pregnancy coupled with onset of spontaneous labor are accompanied by hormonal changes affecting both mother and fetus resulting in preparation of fetus for neonatal transition.

Severe respiratory distress syndrome (RDS) caused by surfactant – deficiency is described not only in preterm infant but also in near term cesarean section especially when carried before onset of labor **(Roth – Kleiner 2003).**

Recently,Elective cesarean delivery is recommended to be done at 39 completed weeks of gestation because of the lower rate of

neonatal respiratory complications compared to those delivered at 38 completed weeksto mothers had no medical problems, However elective cesarean deliveries at 39 completed weeks or more may have maternal and other fetal consequences compered to deliveries at 38 completed weeks(Salim and Shalev,2010).

American collage of Obstetricians and Gynecologist(2009)had recommended that elective deliveries not to be performed before 39 completed weeks in absence of maternal complications to mimimize prematurity related neonatal complications.

Mild_to_Moderate preeclampsia is diagnosed with hypertension less than 160 / 100 with albuminuria less than +2 (F. **Cunninghan 2009, john Bonner volume 25th).**

Timing for termination of pregnancy be elective C.S in patients with mild _to_ moderate Preeclampsia is a topic of study.

AIM OF THE WORK

The aim of this study is to determine the most proper and safe time for termination of pregnancy in patients with mild_to_moderate pre-eclampsia by elective cesarean section either at completed 37 or completed 38 weeks with the least incidence of neonatal respiratory complications.

PREECLAMPSIA

Introduction

Hypertensive disorders are one of the most common medical complications of pregnancy, affecting both maternal and fetal health **(Soloman & Seely, 2006).** It remains one of the deadly triad, along hemorrhage and infection. About 15% to 20% of maternal deaths in developing as well as developed nations **(Brown et al, 2006).**

Classification:

Table (1): Classifications of hypertensive disorders complicating pregnancy by working group of National High Blood Pressure Educations Program (NHBPEP) 2000

Gestational hypertension:
• Blood pressure >140/90mmHg for first time during pregnancy, no proteinuria. • Blood pressure return to normal <I2 weeks post- partum. • Final diagnosis made only post- partum. • May have other signs of preeclampsia, for example epigastric discomfort, or thrornbocytopenia.
Preeclampsia:
Minimum criteria: • Blood pressure >140/90 mm Hg after 20 weeks gestation. • Proteinuria >300 mg/ 24 h, or >I+ dipstick.
Increased certainly of preeclampsia: • Blood pressure > 160/110 mmHg. • Proteinuria 2.0 gm /24 h , or > 2 + dipstick. • Serum creatinine >1.2 mg/dl, unless previously known to be elevated. • Platelets <100.000/mm^3. • Microangiopathic hemolysis (increased LDH). • Elevated ALT or AST. • Persistent headache or other cerebral or visual disturbance. • Persistent epigastric pain
Eclampsia:
Seizures that can't be attributed to other causes in woman with preeclarnpsia.
Superimposed preeclampsia (on chronic hypertensions):
New onset proteinuria >300mg/ 24hs in hypertensive woman, but no proteinuria before 20 weeks gestation. A sudden increase in proteinuria or blood pressure, or platelet count <100.000m^3 in woman with hypertension and protienuria before 20 weeks gestations.
Chronic hypertension:
Blood pressure >140/90mmHg before pregnancy or diagnosed before 20 weeks gestation not attributable to gestational trophoblaslic disease. Hypertension first diagnosed after 20 weeks gestation and persist after 12 weeks postpartum.

(Gifford et al, 2000)

Definitions

Gestational hypertension:

Defined as systolic blood pressure of at least > 140mmHg and diastolic blood pressure of at least > 90mmHg on at least two occasion at least 6 hours apart. After the 20th week of gestation in women known to be normotensive before pregnancy. Blood pressure return to normal < 12 weeks postpartum **(Sibai, 2003).**

Preeclampsia:

Preeclampsia is a pregnancy specific syndrome defined by hypertension and proteinuria that also may be associated with other signs and symptoms, such as edema, visual disturbances, headache and epigastric pain. Laboratory abnormalities may include hemolysis, elevated liver enzymes, and low platelet count (HELLP syndrome**) (ACOG, 2002).**

Eclampsia:

Eclampsia is defined as the presence of new onset grand-mal seizures in a woman with preeclampsia **(ACOG, 2002).**

Superimposed preeclanwsia:

It includes new onset proteinuria in a women with hypertension before 20 weeks of gestation or a sudden increase in proteinuria if already present in early pregnancy, or sudden increase in hypertension, or the development of HELLP syndrome **(ACOG, 2002).**

Chronic hypertension:

It is defined as systolic pressure >I40 mmHg, diastolic pressure 90 mmHg, or both that antedates pregnancy, or present before the 20th week of pregnancy and persists longer than 12 weeks postpartum **(ACOG, 2002).**

Incidence:

Hypertensive disorders complicate 12 to 22 percent of pregnancies. Preeclampsia occurs in approximately 3 to 14 percent of all pregnancies world wide and about 5to 8 percent in the United States **(ACOG, 2002),** the disease is mild in 75 percent of cases and severe in 25 percent **(Sibai, 2004),** Ten percent of preeclampsia occurs in pregnancies less than 34 weeks of gestation. Frequency and severity of the disease are substantially higher in women with previous preeclampsia **(Hnat et al, 2002).**