بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Comparison between AFI and DVP in predicting adverse neonatal respiratory outcomes in women with prolonged pregnancy undergoing induction of labour

Thesis
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا

سُبْحَانَكَ لَا عِلْمَ لَنَا

إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ

الْعَلِيمُ الْحَكِيمُ

صَدَقَ اللَّهُ الْعَظِيمُ

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Hamada Farag Abu Zaid

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List of Abbreviations

Abb.	Full term
AC	Abdominal circumference
ACOG	American College of Obstetricians and Gynecologists
AFI	Amniotic fluid index
AFV	Amniotic fluid volume
BPD	Biparietal diameter
CS	Cesarean section
DVP	Deepest vertical pocket
EDD	Estimated date of delivery
EFW	Estimated fetal weight
FL	Femur length
GI	Gastrointestinal
HC	Head circumference
IQR	Interquartile range
IRB	Institutional review board
LMP	Last menstrual period
MVP	Mitral valve prolapse
NICU	Neonatal intensive care unit
NIHF	Nonimmune hydrops fetalis
PGE2	Prostaglandin E2
PPROM	Preterm premature rupture of membranes
SD	Standard deviation
SDP	Single deepest vertical pocket
TE	Tracheoesophageal
UPJ	Ureteropelvic junction
US	Ultrasound

INTRODUCTION

Terms of post term and prolonged pregnancy are poorly defined. Prolonged pregnancy is considered as menstrual age ranged from 41 to 41 6/7 weeks of gestation, while a pregnancy beyond 42 0/7 weeks is defined postterm *(ACOG Practice Bulleti, 2004)* Frequently, postterm pregnancy is associated with oligohydramnios. It is probably related to a decrease in placental function and/or in fetal renal perfusion with reduction of urine production *(Magann et al., 2011).* Post term pregnancy is associated with an increased risk of fetal and neonatal mortality and morbidity *(Olesen et al., 2003)* as well as an increased maternal morbidity *(Caughey et al., 2007).*

In this period of pregnancy, amniotic fluid volume is considered an important predicting factor of fetal wellbeing. In fact, oligohydramnios is usually associated with an increased risk of fetal heart rate tracing abnormalities, meconium-stained amniotic fluid and caesarean sections for fetal distress *(Sherer, 2002)*. At present, there is no consent about the efficacy in predicting adverse perinatal outcome with the ultrasonographic methods currently used to determine amniotic fluid volume *(Nabhan and Abdelmoula, 2009).*

The limitations of direct invasive measurement of amniotic fluid volume led to the use of ultrasound for amniotic fluid volume estimation, most often carried out by assessment of the amniotic fluid index (AFI) or the single deepest vertical

pocket (SDP) technique. However there is no clear consensus on the best method to assess amniotic fluid adequacy *(Sherer, 2002)*.Both techniques are similarly poor predictors, with AFI overestimating and SDP underestimating actual low amniotic fluid volumes *(Magann et al., 2003)*. A Cochrane review concluded that the use of AFI increases the rate of diagnosis of oligohydramnios and the rate of induction of labor without improving peripartum outcome *(Nabhan and Abdelmoula, 2008)*.

AIM OF THE WORK

The aim of this study is the comparison between MVP and AFI in predicting neonatal respiratory outcomes in induction of labour in prolonged pregnancies.

Chapter 1

INDUCTION OF LABOR

Background

For expecting mothers, the onset of labor is a highly-anticipated process; however, close to 25% of women will have their labor induced. In fact, the rate of induction of labor doubled between 1990 and 2006 and has continued to trend upwards *(ACOG, 2009)*. Regardless of whether labor is induced or spontaneously occurs, the goal is vaginal birth.

Indications

Induction is indicated when the benefits to either mother or fetus outweigh those of pregnancy continuation. The more common indications include membrane rupture without labor, gestational hypertension, oligohydramnios, nonreassuring fetal status, postterm pregnancy, and various maternal medical conditions such as chronic hypertension and diabetes *(ACOG, 2013).*

Induction is indicated when the risk of continuing the pregnancy, for the mother or the fetus, exceeds the risk associated with induced labour and delivery. The indication must be convincing, compelling, consented to, and documented. The reason for and method of induction should be discussed between the care provider and the woman in order to