COMPARISON BETWEEN UTERINE EXTERIORIZATION AND INSITU UTERINE REPAIR AT C.S.

Thesis

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Obstetrics and Gynecology

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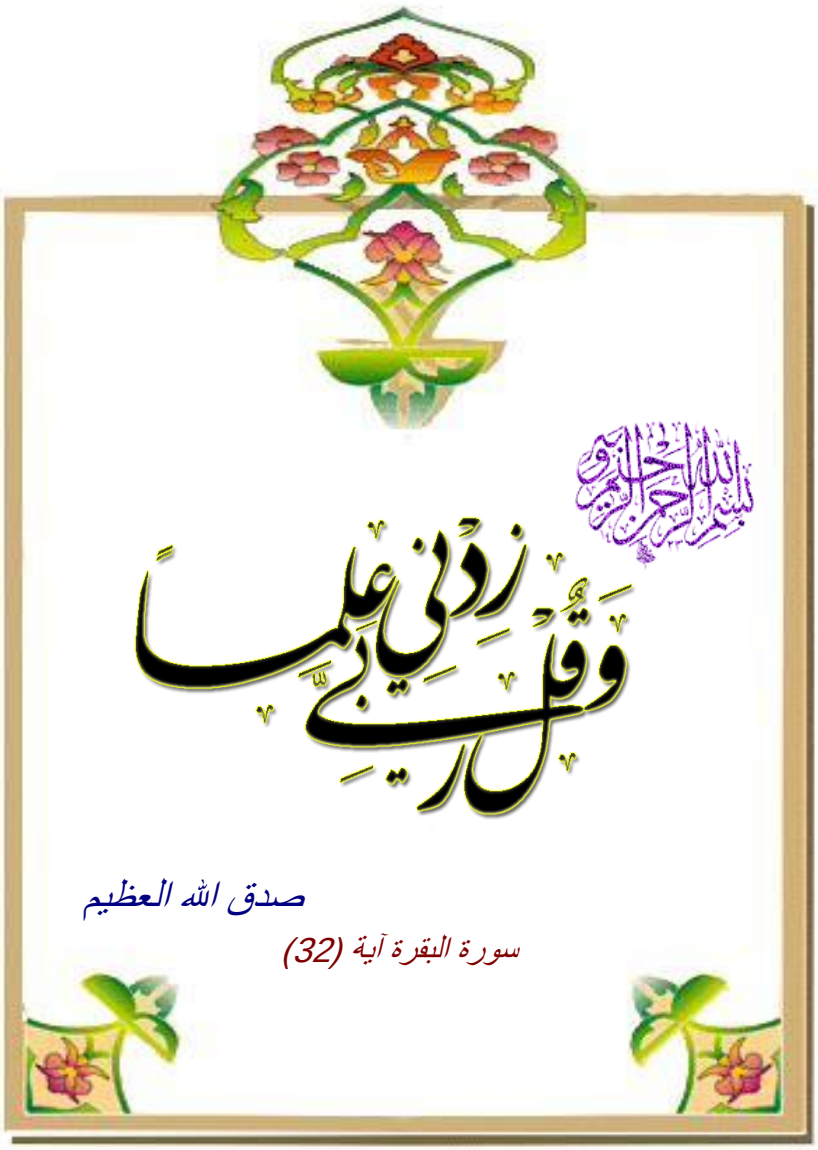

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رسالة توطئة للحصول على درجة الماجستير في أمراض النساء والتوليد

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List of abbreviations

ACOG	American College of Obstetrics and Gynecology
APH	Ante Partum Haemorrhage
aPTT	Activated Partial Thromboplastin Time
CBC	Complete Blood Count
Cm	Centimeter
CS	Cesarean Section
DIC	Disseminated Intravascular Coagulation
EPCA	Epidural Patient-Controlled Analgesia
Fig.	Figure
HBV	Hepatitis B Virus
HIV	Human Immunodeficiency Virus
I.M	Intramuscular
I. U	International Unit
I.V	Intravenous
MRSA	Methicillin Resistant Staph Aureus
MTCT	Mother-To-Child Transmission
NCHS	National Centre for Health Statistics
NICU	Neonatal Intensive Care unit
NSAID	Non-Steroidal Anti-Inflammatory Drugs
NSCSA	National Sentinel Caesarean Section Audit
PCA	Patient-Controlled Analgesia
PT	Prothrombin Time
RCOG	Royal College of Obstetrics and Gynecology

RCT	Randomized Controlled Trial
RDS	Respiratory Distress Syndrome
T_4	Fourth Thoracic vertebra
T 10	Tenth Thoracic vertebra
TTN	Transient Tachypnoea of the Newborn
UK	United Kingdom
WHO	World Health Organization

INTRODUCTION

Many variations in surgical techniques for C.S. delivery have been proposed aimed at reducing surgical time, making the surgery easier and more efficient lowering costs, decreasing the risk of adverse effects and postoperative morbidity ***(Cunningham et al., 2005).***

The blood loss at time of cesarean section is approximately ranging between 600and 1000 milliliters, the amount of blood loss is influenced by a number of factors including the uterine size, presence of leiomyomata uteri, obesity, location of the uterine incision, the time of repair of the uterus, the location of the placenta, presence of infection, intra-operative complications and the efficiency of the medical provider ***(Magannet al., 2005).***

Different techniques have been described to reduce morbidity during caesarean section. After the baby has been born by caesarean section and the placenta has been extracted, temporary removal of the uterus from the abdominal cavity (exteriorization of the uterus) to facilitate repair of the uterine incision has been postulated as a valuable technique ***(Jacobs-Jokhan et al., 2009).***

Intra-abdominal adhesions arise after more than 50% of all abdominal operations and are an important source of post-operative complications. They attach normally separated organs to each other and can cause failure of exteriorization of the uterus in sub-sequent cesarean section and most importantly increase the complication rates in subsequent surgery ***(Bruggmann et al., 2009).***

The technique of uterine exteriorization at caesarean section though popular among obstetricians, its safety remains controversial. While the advocates believe that exteriorization of the uterus facilitates repair of

uterine incision by not only improving access, but also reduces blood loss by compression of uterine blood vessels ***(Ezechi et al., 2005).***

Although some obstetricians remain convinced of the surgical merits of the technique of uterine exteriorization and continue to use it,the patient's comfort remains a disputed matter. Exteriorization of the uterus has been associated with adverse outcomes, including nausea, vomiting, increases the first- and second-night postoperative pain, hemodynamic changes and air embolism ***(Nafisi, 2007).***

Exteriorization of the uterus for repair is associated also with an increased incidence of tachycardia during cesarean delivery under spinal anesthesia. Uterine repair should be done in situ where possible ***(Siddiqui et al., 2007).***

Many studies suggest that uterine exteriorization is associated with a reduction in rates of infection and postoperative morbidity, in addition to decreasing the occurrence of perioperative bleeding and reduction in postoperative hematocrit ***(Ezechi et al., 2005).***

AIM OF THE WORK

The aim of the work is to compare between uterine exteriorization and insitu uterine repair at caesarean section according to post-operative bleeding, post-operative pain and uterine involution within the first 24 hours.

CESAREAN SECTION AT A GLANCE

Introduction:

Cesarean delivery is one of the most frequently performed surgical procedures worldwide. Many variations in surgical techniques for cesarean delivery have been proposed, aimed at reducing surgical time, making the surgery easier and more efficient, lowering costs, decreasing the risk of adverse effects and postoperative morbidity, as well as length of hospital stay. The details of the surgical technique and its variation are important and were evaluated in randomized controlled trials ***(Jacobs and Hofmeyr et al., 2004).***

One of the more contentious issues regarding cesarean technique is the manner by which uterine repair is conducted after delivery of the infant(s) and placenta. Two techniques are well described: the uterus can either be repaired in situ within the peritoneal cavity (intra-abdominal repair) or temporarily exteriorized onto the mother's abdomen to allow uterine repair (extra-abdominal repair ***(Hofmeyr et al., 2008).***

❖ Indications of Cesarean Delivery and its Relation to the site of Repair of the Uterine Incision:

Many indications exist for performing a cesarean delivery. In those women who are having a scheduled procedure (i.e., an elective or indicated repeat, for malpresentation or placental abnormalities), the decision has already been made that the alternate of medical therapy, i.e., a vaginal delivery, is least optimal. For other patients admitted to labor and delivery, the anticipation is for a vaginal delivery. Every patient admitted in this circumstance is admitted with the thought of a successful vaginal delivery. However, if the patient's situation should change, a

cesarean delivery is performed because it is believed that outcome may be better for the fetus, the mother, or both (***Glantz et al., 2002).***

A cesarean delivery is performed for maternal indications, foetal indications, or both. The leading indications for cesarean delivery are previous cesarean delivery, breech presentation, dystocia, and foetal distress. These indications are responsible for 85% of all cesarean deliveries ***(Notzon et al., 1994).***

Indications:

1. **Emergency Caesarean section:**

- **Fetal distress**: During the course of labor or even before the onset of labour, if a baby at or near full term, is found to have a slow or irregular heart rate, it signals distress for the baby. The baby may also send SOS signals by passing meconium, which becomes evident when the amniotic fluid leaks out. This could happen due to separation of the placenta and bleeding, or many other problematic situations affecting the mother. Likewise, if the umbilical cord slips out during labor the blood supply to the baby could be hampered. If the baby is not delivered immediately at this point of time, it could baby die even before being born. This is an emergency situation and the baby has to be delivered immediately (***James et al., 2001).***
- **Maternal distress**: If the mother is subjected to life-threatening eventuality during or before labor, like excess bleeding or surge of blood pressure, an emergency caesarean has to be done to save the mother's life.
- **Mechanical impedance to the progress of labor**: The mother's birth passage being too narrow, or the baby being oversized for the mother's birth canal or failure of the contractions to progress as they should all