



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكرو فيلم



# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرو فيلم



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# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



### يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**

# **Subcutaneous Antibiotic Irrigation to Prevent Wound Infection in Obese Patients Undergoing Cesarean Section**

*A Thesis*

Submitted for partial fulfillment of Master degree  
in Obstetrics & Gynecology

*By*

**Mohammed Abd El-Mohsen Abd El-Fattah**

M.B.B.Ch, Faculty of Medicine – Ain Shams University (2015)  
Resident of Obstetrics & Gynecology,  
Ain Shams University Maternity Hospital.

*Under Supervision of*

**Prof. Dr. Amr Helmy Yehia**

Assistant Professor of Obstetrics and Gynecology  
Faculty of Medicine, Ain Shams University

**Prof. Dr. Mohamed Mahmoud Abdelaleem**

Assistant Professor of Obstetrics and Gynecology  
Faculty of Medicine, Ain Shams University

**Dr. Aliaa Mohamed Ali Maaty**

Lecturer of Obstetrics and Gynecology  
Faculty of Medicine, Ain Shams University

**Faculty of Medicine  
Ain Shams University  
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لسبب انك لا تعلم لنا  
إلا ما علمتنا إنك أنت  
العليم العظيم

صدق الله العظيم

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*✍ **Mohammed Abd El-Mohsen Abd El-Fattah***

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## List of Abbreviations

<i>Abbr.</i>	<i>Full-term</i>
<b>ASHP</b>	: American Society of Health- System Pharmacists
<b>BMI</b>	: Body mass index
<b>CDC</b>	: Centers for Disease Control and Prevention
<b>CDI</b>	: Clostridium difficile infection
<b>CI</b>	: Confidence interval
<b>CS</b>	: Cesarean section
<b>CT</b>	: Computed tomography
<b>CTG</b>	: Cardiotocograph
<b>DDI</b>	: decision to delivery interval
<b>ERCD</b>	: Elective repeat caesarean delivery
<b>GA</b>	: General anesthesia
<b>HCAIs</b>	: Health care associated infections
<b>HELLP</b>	: Hemolysis, elevated liver enzyme levels, and low platelet levels
<b>HIV</b>	: Hepatitis
<b>IDSA</b>	: Infectious Diseases Society of America
<b>LSCS</b>	: Lowe segment cesarean section
<b>MRI</b>	: Magnetic resonance imaging
<b>MRSA</b>	: Methicillin-resistance <i>S. aureus</i>
<b>MSSA</b>	: Methicillin-susceptible <i>S. aureus</i>



<b>RCOG</b>	: Royal College of Obstetricians and Gynecologists
<b>RCTs</b>	: Randomized controlled trials
<b>RDS</b>	: Respirator/distress syndrome
<b>RR</b>	: Risk ratio
<b>SD</b>	: Standard deviation
<b>SHEA</b>	: Society for Healthcare Epidemiology of America
<b>SIS</b>	: Surgical Infection Society
<b>SSI</b>	: Surgical site infection
<b>SPSS</b>	: Statistical package for social sciences
<b>TOLAC</b>	: Trial of labor after caesarean delivery
<b>TTN</b>	: Transient tachypnea of the newborn

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# Introduction

**W**ound complication, even if not accompanied by an infection, is a significant cause of postoperative morbidity following cesarean delivery. In addition to the increased cost of care, there is the inconvenience of therapy, increased postoperative pain and convalescence, as well as difficulty with activities of daily living (**Orth et al., 2016**).

SSIs is divided into incisional SSI and organ/space SSI. Incisional SSI is further divided into superficial and deep incisional SSI. Superficial Incisional Surgical Site Infection involves skin or subcutaneous tissue cellulitis, seroma, hematoma, wound healing disruption, or dehiscence. Deep Incisional Surgical Site Infection involves deep soft tissues such as fascia or muscle within incision. Organ/Space Surgical Site Infection involves any part of the anatomy other than the incision. SSI is associated with a maternal mortality rate of up to 3% (**Zuarez-Easton et al., 2017**).

Obesity is an independent risk factor for post-operative surgical site infection. The risk of post-cesarean surgical site infection has been shown to double for every 5 unit increase in body mass index (BMI) above 30 kg/m, occurring in about 10% of obese women undergoing caesarean section despite prophylactic strategies e.g. antibiotics (**Hyldig et al., 2019**).

Antibiotic prophylaxis has been a cornerstone in SSI prevention, and there is growing interest in the local delivery of antibiotics. Local delivery can potentially lead to a higher concentration of antibiotics within the target site while minimizing the risk of systemic toxicity (**Chang et al., 2013**).

## **Aim of the Work**

**T**he aim of the study is to determine the efficacy & safety of irrigation of subcutaneous tissue by antibiotics for Cesarean Section Incision in reducing the risk of post-cesarean wound complications among obese women compared with placebo.



## Chapter (1)

# Caesarean section

Caesarean section, also known as C-section or caesarean delivery, is the use of surgery to deliver one or more babies. A caesarean section is often necessary when a vaginal delivery would put the baby or mother at risk. A trial of vaginal birth after C-section may be possible. The World Health Organization recommends that Caesarean section be performed only when medically necessary. Some C-sections are performed without a medical reason, upon request by someone, usually the mother (Molina et al., 2015).

### Epidemiology

Global rates of caesarean section are increasing. In the United Kingdom, in 2008, the Caesarean section rate was 24%. In Ireland the rate was 26.1% in 2009. The Canadian rate was 26% in 2005-2006. Australia has a high Caesarean section rate, at 31% in 2007. In the United States the rate of C-section is around 33% (Shah, et al., 2015).

One out of three women who gave birth in the US delivered by CS in 2011. In 2012, close to 23 million C-sections were done globally. At one time the rate of 10% and 15% were thought to be ideal. A higher rate of 19% may result in better outcomes. More than 50 nations have rates greater than 27%. Another 45 countries have rates less than 7.5%. There are efforts to improve access and reduce the use of C-section (Molina et al., 2015).