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## **LIST OF ABBREVIATIONS**

<b>2D</b>	Two-Dimensional Ultrasound
<b>AD</b>	Anno Domini
<b>BC</b>	Before Christ
<b>C-SECTION</b>	Cesarean Section
<b>CS</b>	Cesarean Section
<b>C.P.D</b>	Cephalo-Pelvic Disproportion
<b>CTG</b>	Cardiotography
<b>CCT</b>	Controlled Cord Traction
<b>CMV</b>	Cytomegalo Virus
<b>CM</b>	Centimeter
<b>CO</b>	Company
<b>EFM</b>	Electronic Fetal Monitoring
<b>FHR</b>	Fetal Heart Rate
<b>HELLP</b>	Haemolysis-Elvated Liver Enzymes- Low Platelet Count.
<b>HIV</b>	Human Immunodeficiency Virus
<b>HSV</b>	Herpes Simplex Virus
<b>HPV</b>	Human Pappiloma Virus
<b>HS</b>	Highly Significant
<b>I.T.P</b>	Idiopathic Thrombo-Cytopenic Purpura
<b>IU</b>	International Unite
<b>ML</b>	Millimeter
<b>MG</b>	Milligrane
<b>MCG</b>	Micrograme
<b>NS</b>	Non Significant
<b>NO</b>	Number
<b>RCOG</b>	Royal College Of Obstetricians And Gynaecologists
<b>U\$</b>	United State Dollar
<b>USA</b>	United State Of America
<b>VRAS</b>	Verbal Analogue Score

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*I would like to dedicate this thesis to the soul of **my Mother and my father**; to them I will never find adequate words to express my gratitude. Also to **my Wife** for dealing so patiently, tactfully during this work.*



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# **Comparative Study Between the Joel Cohen vs. Pfannenstiel Incision For Cesarean section**

## ***Thesis***

Submitted for Partial Fulfillment of the Master Degree  
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***By***

**Amr Elsayed Elsapagh**

M.B.B.Ch 2004- Tanta University

(Resident of Obstetrics & Gynecology in Kafr Elzyat General Hospital)

## ***Supervisors***

**Prof Dr. Esam M.Khater Elshekh**

Prof. of Obstetrics & Gynecology

Faculty of Medicine - Ain Shams University

**Prof Dr. Fekria Ahmed Salama**

Prof. of Obstetrics & Gynecology

Faculty of Medicine - Ain Shams University

**Dr. Ahmed Adel Thrwat**

Lecturer in Obstetrics & Gynecology

Faculty of Medicine - Ain Shams University

**Faculty of Medicine  
Ain Shams University**

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# دراسة مقارنة بين شق جول كوهين و شق فانشتيل للولادة القيصرية

رسالة

توطئة للحصول على درجة الماجستير فى أمراض النساء و التوليد

مقدمة من

طبيب/عمرو السيد الصباغ

بكالوريوس الطب والجراحة جامعة طنطا ٢٠٠٤  
طبيب مقيم نساء و توليد بمستشفى كفر الزيات العام

تحت إشراف

أ.د/ عصام خاطر الشيخ

أستاذ النساء و التوليد  
كلية الطب - جامعة عين شمس

أ.د/ فكرية أحمد سلامة

أستاذ النساء و التوليد  
كلية الطب - جامعة عين شمس

د/أحمد عادل ثروت

مدرس النساء و التوليد  
كلية الطب جامعة عين شمس

كلية الطب

جامعة عين شمس

٢٠١٣

# Introduction

Cesarean section is defined as the birth of a fetus through incisions in the abdominal wall (Laparotomy) and the uterine wall (Hysterotomy) (*Cunningham et al., 2000*). It is the most commonly performed major abdominal operation in women in both affluent and low-income countries. Rates vary considerably between and within countries (*Dumont et al., 2001*). Global estimates indicate a cesarean rate of 15% worldwide, ranging from 30.5% in Africa to 29.2% in Latin America and the Caribbean (*Betran et al., 2007*).

The surgical technique for performing cesarean section has changed from time to time—from surgeon to surgeon and these changes were involved both of the uterine and skin incisions. The first successful cesarean delivery on a living woman was thought to have been performed by Jacob Nufer in 1500 AC. who operated on his wife (*Larry et al., 2002*). In 1882, Max Saenger introduced the technique of suturing the uterus. He advocated performing a vertical incision in the uterus that avoided the lower uterine segment. A particular important modification was recommended by Munro Kerr in 1926, who preferred a semilunar transverse lower uterine incision with the curve directed upward rather than a longitudinal uterine incision (*Cunningham et al., 2000*).

In 1954, Joel Cohen has made a straight transverse skin incision slightly higher than the Pfannenstiel (5- 6) cm

## **Introduction**

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from the upper border of the symphysis pubis (*Stark et al., 1994*). This new technique showed definite advantages over the Traditional Pfannenstiel (Being faster to perform, less blood loss, less post-operative pain, earlier ambulation, shorter hospital stay). All these advantages were attributed to the minimal tissue manipulation. Moreover, it proved to significantly decrease the incidence of post-operative infection. Another aspect, is being economic, saving more of the staff's time, utilizing less anaesthesia and needing least instruments (*Moreira et al., 2002*).

### Historical Background

The Roman Lex Regia (royal law), later the Lex Cesarea (imperial law) of Numa Pompilius (715–673 BC), required the child of a mother dead in childbirth be cut from her womb (*Pieter and Dongen, 2009*).

This seems to have begun as a religious requirement that mothers not be buried pregnant (*Högberg et al., 1987*), and to have evolved into a way of saving the fetus, with Roman practice requiring a living mother be in her 10th month of pregnancy before the procedure was resorted to, reflecting the knowledge that she could not survive the delivery (*Claude Moore Sciences Health, 2012*).

Speculation that the Roman dictator Julius Cesar was born by the method now known as C-section is apparently false (*Christopher, 2003*), although Cesarean sections were performed in Roman times, no classical source records a mother surviving such a delivery (*Pieter and Dongen, 2009*). The term has also been explained as deriving from the verb *cedere*, to cut, with children delivered this way referred to as *cesones* (*Pieter and Dongen, 2009*).

Notably, the Oxford English Dictionary does not credit a derivation from "*cedere*", and defines Cesarean birth as "the delivery of a child by cutting through the walls of the abdomen when delivery cannot take place in the natural

## **Review of literature**

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way, as was done in the case of Julius Cesar". Bindusara (born 320BC, ruled 298–272BC), the second emperor of India, is said to be the first child born by surgery (*Srinivasachariar, 1974*), his mother accidentally consumed poison and died when she was close to delivering him. Chanakya, his father teacher and advisor, made up his mind that the baby should survive. He cut open the belly of the queen and took out the baby, thus saving the baby's life (*Lurie and Samuel, 2005*).

The first recorded incidence of a woman surviving a cesarean section was in the 1580s, in Siegershausen-Switzerland. Jakob Nufer, a pig gelder, is supposed to have performed the operation on his wife after a prolonged labor (*Conner and Clifford, 2005*).

## **Incidence Of Cesarean Section**

Cesarean section is the most commonly performed major abdominal operation in women in both affluent and low income countries. Rates vary considerably between and within countries (*Dumont, 2001*). Global estimates indicate a CS rate of 15% worldwide, ranging from 3.5% in Africa to 29.2% in Latin America and the Caribbean (*Betran, 2007*).

From the number of CS performed in 137 countries, accounting for approximately 95% of global births estimated in 54 countries had CS rates below 10%, whereas 69 showed rates

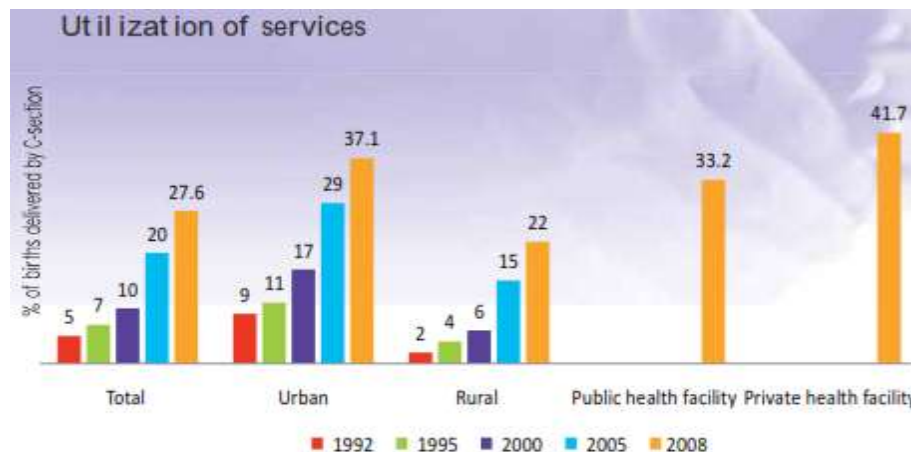
## Review of literature

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above 15%, and 14 countries had rates between 10 and 15%. In 2008, 3.18 million additional CS were needed and 6.20 million unnecessary sections were performed. The cost of the global “excess” CS was estimated approximately U\$ 2.32 billion, while the cost of the global “needed” CS was approximately U\$ 432 million (*Gibbons et al., 2010*).

In the United States the Cesarean rate has risen 48% since 1996, reaching a level of 31.8% in 2007 (*Gibbons et al., 2010*).

In Egypt, the latest data in 2008 indicated that 28% of births were delivered by C-section (Figure 1) (*World Health Organization, 2008*).



**Figure(1)** the C-section rate in Egypt 2008) (*World Health Organization, 2008*).