AN AUDIT ON CESAREAN SECTION IN KASR-EL AINI HOSPITAL

Thesis

Submitted for fulfillment of the M.Sc. Degree in Obstetrics& Gynecology

By

Manar Gaber Kamel Omran

(M.B.B.Ch.)

Resident of Gnacology and Obstetrics in Benisurf General Hospital

Supervisors

Prof. Magdy Mosaad Tamimy

Professor of Obstetrics& Gynecology Cairo University

Dr. Ahmed Nihad Hatem Askalany

Assistant Professor of Obstetrics & Gynecology Cairo University

Dr.Radwa Mohamed Fahmy

Lecturer of Obstatric&Gynecology Cairo University

> Faculty of Medicine Cairo University 2012

Acknowledgement

I am most thankful to the almighty Allah who guided and enabled me to pursue and accomplish this work.

I would like to express my gratitude and great esteemto to Prof. Dr. Magdi Mosaad El-Tammamy Professor of Obstetrics & Gynecology Faculty of Medicine, Cairo University, who suggested the point and plan for this work, for her encouragement, his continuous guidance, sincere encouragement, his kind support and expert advice.

I would like to express my gratefulness and appreciation to Prof. Dr. Ahmed Nihad Hatem Askalany Assistant Professor of Obstetrics & Gynecology Faculty of Medicine, Cairo University , for his continuous encouragement, great patience, objective criticism, careful follow up of this work and honest supervision.

I would like to express my gratefulness and appreciation to

Dr. Radwa Mohamed Fahmy Lecturer of Obstetrics & Gynecology Faculty of Medicine, Cairo University, who kindly and patiently spared no effort in guiding, teaching and helping me, step by step throughout the preparation and development of this work., for her continuous encouragement, great patience, objective criticism, careful follow up of this work and honest supervision

Manar Gaber

Abstract

The aim of our study is to make an audit for 100 females delivered by C. Section at the department of Obstetrics and Gynecology Cairo University Kasr El-Einy Hospital,. so as to improve the quality of care and to drive continuous quality improvement. From our study we concluded that cesarean section was performed for women of different ages commonly between 18 –46 years. Most of the studied group were full term & completed 39 wks at the time of delivery. The most common indication of cesarean section in kasr el-eini hospital was previous cesarean section. Post operative stay was mainly between one to seven days .the residents were the main surgical staff who performed cesarean section & spinal anesthesia was the most common method of anesthesia used.

Key words:

Audit

Cesarean Deliveries

Kasr El-Eini Hospital

List of Contents

	Page
Introduction	1
Aim of the work	24
Review of literature	
Chapter I:	
History Of Cesarean Section	25
Chapter II:	
 Indications For Cesarean Section 	28
Chapter III:	
 Cesarean Section Complications 	43
Chapter IV:	
Cesarean Section Rate	65
Chapter V:	
Technique Of Cesarean Section	78
Subjects and Methods	93
Results	97
Discussion	108
Recommendations	116
Summary and Conclusions	122
References	127
Arabic Summary	

List of Tables

Table	Content	Page
1	Differences between research and clinical audit. Adapted from Madden (1991) and Firth-Cozens - (1993)	8
2	A sample should be selected which reflects the characteristics of the population from which it has been drawn	16
3	Direct Death Rates by Mode of Delivery in the United	44
4	shows published hospital-based caesarean section rate in selected Arab countries	71
5	Shows Hospital-based caesarean section rates by age, education and residence in selected Arab countries	74
6	Number and Rate of Caesarean Deliveries for All Births and for Hospital Births:	75
7	Distribution of studied females as regard to a distribution	97
8	Distribution of studied females as regard to their parity	98
9	Distribution of studied females as regard to gestation age (weeks)	99
10	Distribution of studied females as regard to previous CS	100

11	Distribution of studied females as regard number of previous CS	100
12	Distribution of studied females as regard to indication of CS	101
13	Distribution of studied females as regard time of CS performance	102
14	Distribution of studied females as regard to surgeon performed CS.	103
15	Distribution of studied females as regard to anesthesia.	104
16	distribution of studied females as regard to the duration of hospital stays (days)	105
17	Laboratory investigations and washing in studied cases	106
18	Distribution of studied females as regard to complications	107

List of Figure

Figure		Page
1	Clinical audit cycle	11
2	Implementing change after audit	21
3	Re-auditing	23
4	Percent overall cesarean delivery rate for the	66
	United States from 1989 to 1998	
5	Primary Cesarean Rate and Rate of Vaginal Birth	67
	after Previous Cesarean Delivery (VBAC) in the	
	United States, 1989–2004, and Data for Total	
	Cesarean Rate, 1989–2005.	
6	Hospital-based caesarean section (CS) rates and	69
	confidence intervals in selected Arab countries	
7	Rates of cesarean deliveries by hospital type,	77
	Egypt, 1987.	
8	Distribution of studied females as regard to age	97
	distribution	
9	distribution of studied females as regard to their	98
	parity	
10	distribution of studied females as regard to	99
	gestational age (weeks)	
11	Distribution of studied females as regard time of	102
	CS performance	

12	Distribution of studied females as regard to	103
	surgeon performed CS.	
13	Distribution of studied females as regard to anesthesia	104
14	distribution of studied females as regard to the duration of hospital stays (days)	105
15	Distribution of studied females as regard to complications	107

List of Abbreviations

ACOG American College of Obstetricians and Gynecologists

ART Assisted Reproductive Technology

CDC Center for Disease Control and prevention

CPD Cephalopelvic disproportion

Cs Cesarean section

EDHS Egypt demographic and health survey

FGR Fetal Growth Restriction

FTND Full Term Normal Delivery

HIV Human Immune Deficiency Virus

HCV Hepatitis C Virus

HSV Herpes Simplex Virus

NCCWCH National Collaborating Centre for Women's and Children's

Health

NICE National Institute for Clinical Excellence

NHC National Health Service

PDSB Professional Development and Standard Board

PROM Premature Rupture of Membrane

RACS Royal Australasian College of Surgeons

RCOG Royal College of Obstetricians and Gynecologists

RCT Randomized controlled trial

RDS Respiratory distress syndrome

SGA Small for gestational age

SSI Surgical Site Infection

TTN Transient Tachypnea Syndrom

UAE United Arab Emirates

UK United Kingdom

USA United States of America

TMCT Mother-to child transmission

VBAC Vaginal birth after cesarean delivery

WHO World Health Organization

INTRODUCTION

Audit is defined as

"A quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change.

Clinical audit is an integral part of clinical governance and can be carried out by any practitioner involved in the treatment of patients. It is not restricted to the work of doctors. Clinical audit is principally the measurement of practice against agreed standards and implementing change to ensure that all patients receive care to the same standard (NICE, 2002)

History of clinical audit

Clinicians have always striven to provide a quality service to patients and continuously improve their practice. However, it wasn't until the 1970s that Royal Colleges started carrying out systematic audits on clinical practice. Medical audit was introduced in the 1989 White Paper 'Working for Patients' which stated that systematic peer review of medical care should be part of the routine clinical practice of all doctors. It became clear in the 1990s that audit needed a multi-disciplinary approach to succeed, and clinical audit soon included all healthcare professionals. The clinical effectiveness agenda was introduced in 1996 and it highlighted the importance of evidenced based standards as a basis of all audit topics (RACS, 1996).

Clinical governance was finally introduced in the 1997 White Paper 'The New NHS', this paper placed clinical audit at the heart of quality improvement.

In February 2001, the Royal Australasian College of Surgeons (RACS) Professional Development and Standards Board (PDSB) elected to establish a Surgical Audit Task Force, to develop models of best practice for surgical audit (RACS, 2001).

In 2006 the task force became a committee, reflecting the need for continued monitoring and review of standards for surgical audit and peer review. The committee aims to provide resources and tools to improve and support audit activities conducted by individual Fellows, specialty groups, hospitals and the wider Fellowship (RASC, 2006).

This Surgical Audit and Peer Review Guide is another step forward in the process to upholding the College's vision to set and maintain the highest standards of surgical care. It is for the guidance of individual surgeons and hospital surgical units. This standard should encourage administrations to provide adequate resources for these important activities.

This guide has been developed following extensive consultation with Fellows, including a series of workshops held at the RACS Annual Scientific Congress. Specialty Societies have also had the opportunity to comment on and provide constructive suggestions for the guide (RASC,2008)

Importance of clinical audit

1-As surgical audit is a critical review of a personal, team or hospital's clinical work, it may be regarded as a cornerstone of professional development. Only by looking objectively at our own practice of surgery will we be able to compare our current proficiency and discover how to improve on this for the sake of our patients. Audit can help identify the difference between what surgeons' think they are doing and what they actually do (Chief Medical Officer accessed 2008).

2- Local clinical interests:

Historically, many audit projects have been undertaken as result of local clinical interests. This may reflect interest in a particular procedure by an individual or a group, or may reflect concern about specific outcomes for a particular operation (**Drannove Det al 2003**).

3- Clinical incident reporting:

The major "disciplines" that ensure high quality care and patient safety are clinical risk management and audit. Most health care organizations should have sophisticated systems in place to report and learn from adverse incidents and near misses. Reporting is usually voluntary and investigated according to a "fair and just culture" but it is unlikely that all incidents that occur reported. If an adverse incident is recorded, this identifies that it has occurred, but gives no indication of how often it has happened previously, and

only limited indication of the likelihood of recurrence. A mature organization should have clear links between risk reporting and audit, and choose topics for the latter based on data from the former (NHS 2008)

4- Comply with regional or national initiatives:

Increasingly, audits have been driven by organizations that exist outside a hospital. These may include audit led by professional societies, regulatory bodies, or regional& national quality improvement initiatives (**Hanan et, al 1994**)

5-Inform patients about surgical results:

Across the world, health care is becoming more patient focused. The modern health care consumer will sometimes look to choose their health care provider on the basis of that hospital or surgeon's outcomes and, even if patients are not choosing between different hospitals, recent,. data from the United kingdom suggests that patients are interested in outcomes of surgery by their doctors (Chief Medical Officer accessed, 2008) Patients' views should inform decisions about what to audit, and they may be interested in many areas which will be dependent on the planned operation but may include data on mortality, success rates, length of stay, and the incidence of postoperative infection and other complications.

6-Drive continuous quality improvement:

It has been shown quite clearly from cardiac surgery that structured data collection, analysis, and feedback to clinicians