Cesarean Section Rates At Al-Batool Maternity Teaching Hospital

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Abstract

Objectives: To report the Cesarean section rate in Al-Batool Maternity Teaching Hospital and to identify how many of them were done for maternal and fetal condition.

Design: A statistical cross sectional study.

Setting: The study was conducted at Al-Batool Maternity Teaching Hospital (13000 deliveries per year).

Participants: The patients group consists of 4556 patients admitted for delivery (vaginal and abdominal) during a period of four months commencing from January 2003.

Main outcome measures: calculation of all live births, calculation of cesarean section rate, percentage of the primary cesarean sections and the repeat cesarean sections and listing the indications of the operation according to maternal and fetal condition with their percentage.

Results: Total births during the period of this study were 4556 births, 3732 vaginal deliveries and 824 cesarean sections. Cesarean section rate was found to be 17.94% of total live births, the most frequent indication for cesarean section was malpresentation (24.3%). Primary cesarean sections contribute to 75% of cases.

Conclusions: A primary cesarean section is one of the most important causes of high cesarean section rate. Decreasing the incidence of primary operations will help in reducing cesarean section rate.

Key words: Primary Cesarean section, repeated cesarean, medical conditions.

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Introduction

Cesarean delivery is defined as the birth of a fetus through incisions in the abdominal wall (laparotomy) and uterine wall (hysterotomy). [1] Cesarean sections increase the health risks for mothers and infants as well as the costs of health care when they are compared with vaginal birth. [2] The most common indications for cesarean section are repeat cesarean deliveries and those performed for labor dystocia. The cesarean section rates in United States, Brazil and Chile were 26.1%, 27% and 40% respectively. [3, 4] Some researchers have expressed concerns that cesarean sections are being over utilized and are being performed in the absence of clinical indications. The aim of this study was to report the overall and the primary cesarean section rates and the frequency of each indication at Al- Batool Maternity Teaching Hospital.

Methods

The present is a descriptive study was conducted prospectively at Al-Batool Maternity Teaching Hospital in Mosul, north Iraq (a government public hospital). During the first 4 months of the year 2003, there were 4556 deliveries of which 824 had cesarean sections. Data were obtained from the daily morning report presentations confirmed by the delivery logbook and patients' files of those who underwent cesarean section. The information abstracted comprised the number of deliveries (vaginal and abdominal), mode of delivery, stated indication for each cesarean section, and fetal presentation. The term 'malpresentation' includes breech, transverse lie, and face and brow presentation. Dystocia includes failure to progress, cephalopelvic disproportion and failed forceps delivery and vacuum extraction. Fetal monitoring was applied in high-risk pregnancies. Fetal distress or non-reassuring fetal condition was defined as the presence of repeated late deceleration, persistent fetal bradycardia or tachycardia. Obstetric hemorrhage; include cases of placenta previa and abruptio placentae. The group 'others' include cord prolapse, and malformations and other conditions. Statistical analyses were performed with the use of percentage.

RESULTS

The overall incidence of cesarean section in this study was 17.94%. The primary cesarean births constituted the largest portion of all cesarean births (n=618, 75% of all cesarean births). One quarter (25%) i.e. 196 patients (160 repeat cesarean sections and 36 patients were repeated cesareans associated with placenta previa) of all cesareans were repeat cesareans. Table I show the cesarean section rates examined by maternal and fetal condition.

Table I: The cesarean section rates examined by the maternal and fetal condition (n=824).

Indication (no.) (%)	Group	number	%
Malpresentation (n=200) (24.3%)	**Breech**	**156**	**78%**
	Transverse lie in labor	**36**	**18%**
	Face	**4**	**2%**
	Brow	**4**	**2%**
Dystocia (n=176) (21.4%)	**Failure to progress of 1st stage**	**112**	**63.7%**
	Failure to progress of 2nd stage	**28**	**16%**
	Failure of vacuum	**16**	**9%**
	Cephalopelvic disproportion	**20**	**11.4%**
Previous CS* scar (n=160) (19.4%)	**Previous one scar with other indication**	**36**	**22.5%**
	Previous 2 scars	**48**	**30%**
	Previous 3 scars	**48**	**30%**
	Previous 4 scars	**16**	**10%**
	Previous 5 scars	**12**	**7.5%**
Fetal distress during labor (n=100) (12.1%)		**100**	**100%**
Obstetric hemorrhage (n=88) (10.7%)	**Placenta previa****	**48**	**54.5%**
	Abruptio placentae	**40**	**45.6%**
Hypertension (n=36) (4.4%)	**PE*****	**32**	**88.9%**
	Eclampsia	**4**	**11.1%**
Others (n=64) (7.8%)	**Old primi with infertility**	**24**	**37.5%**
	BOH ****	**20**	**31.3%**
	IUGR*****	**12**	**18.8%**
	Hydrocephalus	**4**	**6.3%**
	Cord accidents	**4**	**6.3%**

****Cesarean section , **36 had previous scar , ***Pre-eclampsia***

*****Bad obstetric history , ******Intrauterine growth restriction***

Discussion

The problem of increasing family size still exists in many developing countries, where early marriage and attempts to achieve a higher number of children at a younger age are habitual. Repeated cesarean section compromises the future obstetric ability of the women and it is unaccepted in our locality. Although cesarean deliveries can be a valuable intervention to mothers and infants, every effort should be done to decrease the cesarean section rate because unnecessary cesarean deliveries are costly and potentially life threatening. [5].

In our study the cesarean section rate at Al-Batool Maternity Teaching Hospital was approximately 18%. This rate is reasonable if we compare it with other hospital in the world during nearly the same period of conducting this study, for e.g. the rate in a study done in Australia was 35%. [6] About 75% of the cesarean section done in this study was primary cesareans. In a study done in Taiwan the rates ranged between 27.3% and 28.7% for primary cesarean delivery. [7] So our work should be aimed towards decreasing this type of cesarean in order to decrease the future repeated cesareans. We can see from the indication list that there were areas through which we can work to decrease the incidence of primary cesarean section.

Malpresentations constituted about 25% of the causes in our study compared to 19.6 in Taiwan. [7] Ninety six (96%) of the malpresentations were due to breech and transverse lie; successful external cephalic version during the antenatal period will save a lot of these operations. According to a study done by Tan et.al. ECV trial is cost-effective when compared to a scheduled cesarean for breech presentation provided the probability of successful ECV is > 32%. [8]

Regarding the cases of dystocia which constituted 21.4% of causes; also 11.4% of cases are elective cesareans without a trial of labor.

In this study cases of repeat cesareans constituted (19.4%) of the indications (excluding those associated with placenta previa). In comparison the repeat cesarean section constituted 43.3% of the indications. [7] About 1/4 (22.5%) of these cases had one cesarean section. Al-Batool Maternity Teaching Hospital offers

VBAC for most of these cases with a success rate of 61.3%. [9] This help keeping the rate in the reasonable level. One of the important causes to repeat a primary cesarean section is the increased concern about the fetal safety of labor in women with a prior cesarean birth. [10] Physicians are cautious and recommend a repeat cesarean to these patients. Several reports stated that VBAC may be riskier than anticipated. [11]

The incidence of placenta previa in our hospital is very much higher than other centers, for example an incidence of 2.8 per 1000 live births was recorded in the United States. [12] While in our hospital more than 5% of the indications to do cesarean section were due to placenta previa. This strong indication to do this operation definitely increases the rate. The cases of fetal distress, accidental hemorrhage, and hypertension can be prevented some what by adequate antenatal care. Cases of infertility and bad obstetric history can be carefully selected for a trial of labor or even induction of labor. Several investigators have documented the feasibility of achieving significant reductions in institutional cesarean rates without increased perinatal morbidity or mortality. [13-17] The cesarean section rate in Al-Batool hospital which serves a high risks obstetric patients was lower than other hospitals. [6 &7] Many hospitals did unnecessary cesareans. [18] Grandmultiparity and pregnancy over the age of 35 years are common in our society as shown in a study conducted at the same hospital about the same period. [19] Some studies reported a significant increase in cesarean section rate with both increased maternal age and parity. [20]

Conclusion: Although the cesarean section rate in our hospital was reasonable (because this hospital served high risk patients and those with low risk are usually delivered at their homes by traditional birth attendants), we can further decrease this rate by adequate antenatal care and careful selection of patients for induction of labor.

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