SHORT COMMUNICATION

CESAREAN DELIVERY RATES AND INDICATIONS AT A TEACHING HOSPITAL

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ABSTRACT

A descriptive study was conducted to assess the cesarean delivery rates. Indications and fetomaternal outcome at the Department of Gynecology and Obstetrics, Unit 1V, Sindh Govt. Lyari General Hospital, Karachi, from June 2005 to May 2008. Demographic and obstetrical data of the subjects under going cesarean section was collected. During the study period, 506 cesarean sections were performed at the rate of 22.92%, 22.78% and 22.83% in respective years. Unbooked cases were 47.43 %. Primiparous women were 33.5 %. Majority (80.83 %) were between 21-30 years of age. Elective cesarean sections were 16.2% and emergency section were 83.79%. Main indications of cesarean sections in primiparous women were dystocia (35%), malpresentation (17.6%) and fetal distress (16.4%). In multiparous women, main indications were previous cesarean section (53%), malpresentation (12.7 %) and dystocia (12.5 %). Projected maternal mortality ratio was 197.6/100,000 live births and perinatal mortality rate was 69/1000 live births.

Keywords: Cesarean section, Cesarean section rate, primipara, Maternal mortality ratio, Perinatal mortality rate (PNMR).

INTRODUCTION

A cesarean section rate (CSR) is a summary measure of the rate of CS administered to prevent or treat pregnancy complications in specific, high risk subpopulation (medically justified CS) plus the rate of CS administered to a low risk subpopulation (medically unjustified CS).[1] Over the past 25 years, there has been sustained increase in CSR around the world, with massive public interest and debate on both, the cause and appropriateness of this increase.[1] The CSR has increased in USA from 20.7 % in 1996 to 29.1% in 2004; and in England and Wales from 16% in 1995 to 21.5 % in 2000; the trend is similar in less developed countries. [1-3]

The trend of increasing CSR may indicate a trend towards a more costly medical delivery system.[4] An alarming high morbidity and mortality associated with operative delivery in developing countries such as Pakistan makes it a matter of concern. It is doubtful that the improvement in perinatal outcome is linked to high cesarean deliveries.

Countries with the lowest perinatal mortality rates in the world have CSR less than 10%.[6] Many factors have contributed to this rise. A deeper knowledge of the causes, risk factors and indications for the first CS is required in order to have direct influence on its frequency and consequently in decreasing or modifying repeat CS prevalence.[6]

The objective of this study was to assess current cesarean section rates, indications and fetomaternal outcome at a teaching hospital.

This descriptive study was carried out in the department

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of Gynecology and Obstetrics, Unit 1V, Sindh Govt Lyari General Hospital DUHS from June 2005 to May 2008.All deliveries that took place in the department were retrospectively analyzed through manual medical chart review to record cesarean section rates, indications and fetomaternal outcome. Detailed demographical and obstetrical data, factors influencing CSR like age, parity, booking status were collected on specifically designed performa. Indications of cesarean sections in nulliparous were compared with parous women. Data was analyzed using SPSS 13.0 descriptive statistical package. Comparisons between proportions were carried out using Chi- square test and P-value of <0.05 was considered significant. Indications were classified as emergency for acute maternal or fetal complications and elective when decision of cesarean section was made before onset of labor. Women were labeled unbooked when did not receive any form of antenatal care in our health facility or were referred from other health facilities. Maternal mortality ratio was calculated as the number of maternal deaths per 100,000 live births. Perinatal mortality rate was calculated by number of perinatal deaths per 1000 births. A partogram was maintained during every labor by the registrar. The registrar, senior registrar or consultant, conducted the CS, depending upon the risk factors.

During three-year study period, 2214 cases were delivered. Vaginal deliveries were 1708 (77.1%) and cesarean deliveries were 506, (22.85%). Out of the 506 cases of CS, 202 (22.92%) were conducted in the first year, 172 (22.78%) in the second year and 132 (22.83 %) in the third year of study. The overall CSR remained stable. Emergency CS were 424 (83.8%) and elective CS were 82 (16.2%).Primiparous women were 170 (33.5%) and multiparous were 336 (66.40%). Out of the 240 unbooked cases, 53.6% were primiparous and 46.4% were multiparous.

Majority of primiparous (90.5%) and multiparous (75.9%) both booked and unbooked women, were between 21-30 years of age (Table I). Frequency of emergency CS in multiparous versus primiparous women was 1.7:1. Main indications of CS in primiparous women were dystocia 35%, malpresentation 17.6% and fetal distress 16.4 % .

In multiparous women main indications of CS were previous CS in 53 % , malpresentation in 12.7% and dystocia in 12.5 %. (Having previous one or more cesarean, the most common indication in multiparous women (178 cases, 53%, p <o.oo1) and dystocia in nulliparous women 60 cases 35% p <0.001).The projected maternal mortality ratio was 197.6/100,000 live births.

Complications of cesarean hysterectomies were observed in 2 cases (0.4%), acute renal failure in 1 case (0.20%), intraperitoneal hemorrhage in 1 case (0.2%), bladder injury requiring repair in 1 case (0.20%), wound infection in 25 (4.9%), superficial wound dehiscence in 14 (2.7%), urinary tract infection in 22 (4.3%), breast engorgement in 8 (1.5%), and pyrexia in 11 (2.1%) cases. Blood transfusion was required in 21(4.1%) emergency and 8 (1.5%) elective CS cases. Perinatal deaths were 35 giving a perinatal mortality rate of 69.1/1000 births. Stillbirths were 17 (48.57%) and neonatal deaths were 18 (51.4%).

Numerous factors can influence clinician's decision to perform CS, such as clinician's training, the use and appropriate interpretation of fetal heart rate monitoring, local culture, the availability of hospital support services, health care delivery system and legal factors in some cases.[7]

World Health Organization (WHO) has recommended for the past 20 years that CSR should not be higher than 15 %. The demographic changes since then, particularly the increasing maternal age, suggest that a target rate of 20 % might be more realistic nowadays.[8] The rates we report here are higher (22.85%, 22.78%, and 22.83%) and remained stable in each year of study. CSR of this study are comparable with other studies in Pakistan (21.3 %) at Quetta.[5] Another Gynaecology and Obstetrics department unit of the same hospital found CSR of 22.3%.[9] Maternal and all perinatal deaths were seen in emergency cases except one where there were previous two CS and the baby was anencephalic. Perinatal deaths were due to birth asphyxia, prematurity and congenital defects.

The results of this study indicate that primiparity and previous CS are important contributing factors. It is thus suggested that the rate of CS may safely be reduced by reviewing and auditing indications for CS in primiparous women, proper fetal monitoring, and a trial for vaginal birth, even after a previous cesarean section,

as recommended by others, should be given.[10]

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