Cesarean Section in Althawra Teaching Hospital

FAIZA M. YOUNIS, M.Sc. and MOHAMAD M. FAHMY, M.D.

The Department of Gynecology and Obstetrics, Faculty of Medicine, El-Menofia University and Omar Al-Mokhtar University.

Abstract

Rising rates of cesarean section have stimulated much debate in the international medical literature. Despite its growing acceptance as an alternative to vaginal birth, cesarean section is not a safe surgery.

Objectives: To obtain an estimate of cesarean section rate and examine the indications and different complications.

Methods: A retrospective study during 24 months (January 2005 to December 2006), from maternal records at Althawra teaching hospital, Albeida, Libya.

Results: During the study period 1388 cesarean sections were performed out of a total 9605 deliveries, with an incidence of 14.45%. Indications for cesarean section were variable, the commonest were repeated cesareans. Different maternal complications were recorded including one maternal death due to uncontrolled intraoperative bleeding.

Conclusion: The tendency to large families, changes in obstetric practice and increase safety of cesarean section were the major influences in the rate of cesarean section by increasing the rate of primary cesarean section, which create a large group of women at risk of repeat cesarean section.

Key Words: Cesarean section rates – Indications – Complications.

Introduction

CAESAREAN section (cs) is mainly performed to save the lives of mother and child to ensure a healthy outcome when normal vaginal delivery is not possible, or there are concomitant hazards for mother or fetus. The steadily increasing global rate of cesarean deliveries has become one of the most debated topics in maternity care. Over the past two decades the goal of achieving a reduction in cesarean delivery rate has been evident in developed countries [1] and is beginning to emerge in developing countries.

A recent study from Latin American and Asian countries reported high rates of caesarean delivery, with Brazil and Chile reporting overall rates of 36% and 40%, respectively [2]. There are number of reports of cs in the Arabic countries; in Jordan cs rates at Queen Alia Military hospital rose from 4.8% to 8.5% between 1991 and 1997, with an average rate of 7.7% over the period [3]. In Saudi Arabia the annual health reports cs rate started at 3.9%, increased to 6% in 1983, leveling off at about 6.5% until 1991, then gradually increasing to 11.5% in 1999. In Oman cs rate reached 10.2% in the year 2002 similar to that of Jordan [4]. In Islamic republic of Iran, the cs rate in 3 teaching hospital increased from 35.4% to 42.3% between 1999-2003, explained by increase in the rate of elective cs [5].

In sub-Saharan Africa, cs rates of <5% were reported. In Niger, it is as low as <1%, the exceptions are in Kenya and Ghana with rates of up to 22% [6]. There is a great disparity between country rates. Extremely low cs rates, such as <1% may indicate substandard maternity care, negligence or unavailability of physician.

The world health organization (WHO) has proposed a rate of 15% as the higher acceptable cs rate based on the rates for countries with the lowest perinatal mortality [7].

The growing rate of cs in our hospital is a cause of concern in the last few years, the purpose of this study is to review the cases of caesarean section.

Material and Methods

A retrospective study of maternal records was made in the department of obstetrics and gynecology at Al-Thawra teaching hospital (it is a referral hospital for the city of Albeida, it serves a population of approximately 198, 185 citizens in the green mountain area in the east of Libya). For 24 months period (from January 2005 to December 2006), the annual number of all deliveries, the annual number of cesarean deliveries, the age, parity,
indications of cs and details of intraoperative, postoperative morbidity and mortality were recorded.

**Results**

A total number of 9605 deliveries were recorded in this hospital, of which 1388 were delivered by cs with a rate of 14.5% (Table 1).

During the period of study the decision for cs was given by specialist and was done by specialist or by senior house officer supervised specialist. All the cs were lower segment cs except one was classical section with bilateral tubal ligation (previous 3 cs with severe adhesions near the lower uterine segment). All cases received postoperative prophylactic antibiotic and minimum hospital stay were 48 hours unless there are complications.

Of the 1388 patient records, 837 (61.3%) were undergoing the procedure for the first time, 295 (21%) had one previous cs, 256 (18.4%) had repeated cs the highest was 5 cesarean sections.

The age range was 19-49 years. 74% of cs were performed on women of age 20-35 years and 24% of them were >36 years. 68% of the cases were multigravida (parity 1-14), while 32% were primigravida (Table 2).

Table (3) shows the different indications for cs, the commonest indications were repeat cesarean 21%, previous one cesarean 18.4%, fetal distress 11.3% and breech presentation were 9.4%.

Table (4) shows the different maternal complications were recorded during the period of study (Table 4) 11.5% of the cases received blood transfusion (half of them were placenta previa and placental abruptio and 25% of the cases were repeated cs).

Uterine laceration was seen in 16 cases 1.2% (12 of them were emergency cs). Postoperative wound infection occurred in 15 cases 1.1% (10 of them were repeated cs). Emergency peripartum hysterectomy (cesarean hysterectomy) was performed on 7 cases (0.5%) 5 out of the 7 cases were repeated cs (three of them were repeat cs with placenta accreta), 3 out of the 7 hysterectomies were due to atomic postpartum hemorrhage. bladder injury was recorded in one case (previous 3 cs in labour). There was one maternal death due to uncontrolled intraoperative hemorrhage.

**Discussion**

Cesarean section is one of the most important operations in obstetrics as of its lifesaving value to both mother and fetus. Since 1940s the operation has been repeatedly modified to improve its safety, which had made the birth by cs a practical alteration to vaginal delivery.
There is a global increase in the rate of cs in the last two decades and evidence suggests that cs rates is high and increasing in some developing countries [8]. The cs rate in the developing countries in 2002 was reported at 14%, with some Latin Americans and Asian countries reporting rates between 30-40% [9]. The high rate of cs becomes a threat in the developing world where there is a tendency to large family compared to industrialized countries. Although the results of this study revealed caesarean delivery rate of 14.5% is within WHO recommendations, it shows 3-folds increases in caesarean deliveries in the previous few years in this hospital [10], but still lower than many European and Latin American countries. Jurdi R and Khawaja M in the study of cs rates in 18 Arab countries reported that 4 countries (Yemen, Mauritania, Sudan and Algeria) had cs rates below 5%, while only 3 countries (Lebanon, Qatar and Bahrain) had rates above 15% and 11 countries (Palestine, Oman, Morocco, Libya, Tunisia, Saudi Arabia, UAE, Egypt, Jordan, Kuwait and Syria) had cs rates ranging between 5-15% [1].

The main indications of cs in this study were repeat cesarean, fetal distress and breech presentation. These are acceptable reason to perform cs according to international data [12]. Repeat cs represent the most frequent indication to perform another cesarean, about one third of cesareans are repeat cs [13]. The prevalence of women with multiple previous cesarean is high in developing countries [14] and in developed countries the main reason for increase in the rate of cs is repeat cs accounting for 35% [4]. In our study repeated cs represents 39% of the cases which is in accordance with other studies [4].

The safest method of delivery for breech presentations was via cs [15]. The RCOG has recommended planned cs for term breech delivery, but suggested the incidence be reduced by external cephalic version [16]. The frequency of Saudi breech deliveries was 2.8%, with 82% being delivered by cs [17]. In Jordan 80% of obstetrician prefer cs for breech [18]. In the present study the frequency of breech deliveries was 3.2%, with 60% delivered by cs. This study revealed increases in the frequency of cs for breech compared to the 1998 reports in this hospital, the reasons for this increase were increase safety of cs, lack of experience in doing external cephalic version, besides the common practice of cs for breech reduces the physician experience in vaginal breech delivery.

Despite the improvement in technical skills and preventive measures of various complications, cs still associated with higher maternal mortality and morbidity than vaginal delivery [1].

This study revealed that Intraoperative uterine lacerations occurs in 1.2% of the cases, 75% of them were emergency cs, the hurry in doing cs in the emergency situation could be a risk factor in intraoperative lacerations. Bergholt T. et al., reported an incidence of 5.2% and stated that high fetal birth weight and low station of the presenting part were risk factors for intraoperative uterine laceration [19]. Van Ham et al., reported that emergency cs was a risk factor compared to elective cs [20].

Any blood loss greater than 1500ml or a fall in hematocrit greater than 10% American college of obstetrics and gynaecology) requires blood transfusion [21].

The reported rates of blood transfusion during cs were 5.6% in Nigeria [22] and 29% in Indonesia [23], while the frequency were less in developed countries 1.1% in Italy [24] and 1% in Denmark [19]. In the present study the frequency of blood transfusions was within the range of the developing countries, (11.5%) but higher than that in developed countries and the indications for cs such as placenta previa, repeated cs beside preoperative anemia and multiparity all were risk factors for blood loss which necessitate blood transfusion.

Emergency peripartum hysterectomy (EPH), is the most dramatic operation in the modern obstetrics. Usually performed when all the conservative measures have failed to achieve homeostasis to control bleeding. The operation is considered one of the major complications in modern obstetrics and carries a high maternal mortality and morbidity.

During the period of study there were 8 EPH out of 9605 deliveries for a rate of 0.84 per 1000 deliveries. 87% of them were cesarean hysterectomy. Habek D. reported that out of 21659 deliveries 17 cases had EPH (0.87 EPH per 1000 deliveries) and the rate of cesarean hysterectomy was 70.59% [26]. In our study the indications for EPH were atomic post partum hemorrhage, morbidly adherent placenta, rupture uterus and 5 out of the 7 cesarean hysterectomy had previous cesarean section. Multiparity and repeated cs were risk factors for EPH in this study.

Sebthoane M and Moodley J. reported that the main indications for EPH were rupture uterus, uterine atony, sepsis and morbidly adherent placenta.
In the past the most common indications for EPH were uterine atony and uterine rupture, while in recent years, abnormal placentation has become the most common indication due to increase number of pregnant women with previous delivery by cesarean sec [25]. Castaneda et al., reported that peripartum hysterectomy is an operation that is always performed as an emergency and is associated with significant blood loss [28]. Accordingly patient with previous cs and placenta previa should be managed by senior staff, blood products must be arranged and diagnosis of placenta previa accreta by colour doppler ultrasound may affect the peripartum management [29,30].

Infection is the most common cause of morbidity after cesarean section, the reported incidence of wound infection were; 0.3% in turkey [31], 4.5% in Saudi Arabia [32] and 11.6% in Brazil [33].

In this study the reported rate of postoperative wound infection (1.1 %) was within the range of the reported rates. More than 50% of the cases were repeated cs and had hospital stay more than 72 hours; as extensive adhesions, extensive tissue manipulation and longer operation time are possible causative factors. Habib reported that a significant association between wound infection and length of hospital stay and concluded that to reduce the incidence of wound infection after cs a protocol for prophylactic antibiotics is needed, with a strategy to reduce nosocomial infection [32].

Although cs has a mortality rate <1%, in many developing countries maternal mortality is 10-20 times greater with cs than with vaginal births [4]. During the study period there was one maternal death out of 1388 cs due to uncontrolled intraoperative bleeding. Legnin et al., reported the overall maternal mortality ratio in Libya was 17.5/100.00 live birth, out of 14 maternal deaths 6 of them from cs [34]. In Sudan, maternal deaths following cs were 4 out of 1168 cesareans and the main causes of post-cesarean mortality were infection, incorrect intubation and eclampsia [4].

**Conclusion:**

It appears from our result, that tendency to large families, changes in obstetric practice and increase safety of cs were the major influence in the rate of cs by increasing the rate of primary cs, which create a large group of women at risk of repeating cs.

**Recommendations:**

In obstetrics, as in other areas of medicine, an indication for intervention should only be established after weighing of the benefits and risks of the treatment. It is important to use appropriately documented data and to compare them with international data when monitoring local obstetric practice. Cesarean birth rates must be monitored routinely to call attention to rapidly changing practices.

Vaginal birth after cesarean section (VBAC) is a solution to reduce repeat cs, careful individualization of every case, meticulous clinical examination and use of intensive intrapartum fetomaternal surveillance could probably reduce the rate of cs.

Breech presentation is not an absolute indication for cs, attempting external cephalic version at 36 weeks using cardiotocographic monitoring to reduce the need for cs and evaluating each case thoroughly for possibility of vaginal birth could help in balancing the ratio between cs and vaginal delivery. Because the risk of complications with repeat cs, women should be counseled about the risks, avoiding large families, besides women with placenta previa with previous cs scar should be managed by senior members of staff, enough blood products must be available and prenatal diagnosis of placenta previa accreta by transabdominal colour doppler ultrasound may have an impact on management.

**References**


