

Original article

Cesarean Delivery in Majmaah, Saudi Arabia: prevalence, indications and complications

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Received on 20.01.2020, accepted for publication on 30.04.2020 (Doi : dx.doi.org/10.5455/mjhs.2020.03.006)

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Abstract

Aims:

The aim of this study was to study the prevalence, indications and the different complications of caesarean section in King Khalid Hospital (KKH)

Method:

This was a cross-sectional study done in one-year duration (January 2016- December 2016) at KKH Hospital (Majmaah Saudi Arabia) in the Gynecology &Obstetrics Department. The study population consisted of 394 women who delivered at the hospital during the period of the study.

Result:

Most of patients who underwent cesarean section were in the age group of 26-30 years(33.8%) and the lowest number was in the age group 15-20 (1%), the majority of patients were housewife (80.7%), regarding the parity most of them fall in the range para 2-4 (62.7%). C.S prevalence was 30.1% (394) and

المخلص

الأهداف:

الهدف من هذه الدراسة هو دراسة معدل، ومسببات ومضاعفات الولادة القيصرية في مستشفى الملك خالد بالمجمعة. الطريقة: دراسة وصفية مرجعية أجريت في سنة واحدة (يناير ٢٠١٦ - ديسمبر ٢٠١٦) في قسم أمراض النساء والتوليد بمستشفى الملك خالد بالمجمعة. احتوت الدراسة على بيانات ٤٩٣ امرأة خضعن لعمليات قيصرية خلال فترة الدراسة.

النتائج:

كانت معظم المرضى اللاتي خضعن لعملية قيصرية في الفئة العمرية من ٢٦-٣٠ سنة (٨,٣٣٪) وكان أقل عدد في الفئة العمرية ١٥-٢٠ (١٪)، وبالنسبة للمهنة غالبية المريضات ربات منزل (٧,٠٨٪). فيما يتعلق بعدد مرات الحمل السابق، فمعظمهن لديهن ٢-٤ حملا سابقا (٧,٢٦٪). معدل العمليات القيصرية كان ١,٠٣٪ (٤٩٣) ومعدل الولادة الطبيعي هو ١,٩٦٪ (٨١٩)، بلغت نسبة العمليات الطارئة (١,٩٥٪). نسبة المضاعفات بلغت ٩,١٣٪. بلغ أعلى معدل من المضاعفات التصاق البطن والحوض (٩٦٪)، يليها نزيف أثناء وبعد الولادة (٩,٧٪)، وحدث تهتك المثانة (١,٣٪) وتأخر التأم الجروح (١,٣٪).

vaginal delivery was 69.9.1% (918), performed as an emergency (59.1%) and the rest were done electively (40.9%). almost one third of C-sections had complications 31.9% ,the other two third were free of complications (68.1%), the highest rate of complications was abdomen and pelvic adhesion 88 (69%) followed by intra- and post-partum hemorrhage 10 (7.9%), bladder injury 4 (3.1%) and poor wound healing was 4 (3.1%)

Conclusion :

This study concluded that KKH Majmaah hospital has high prevalence of C.S in comparison to the international figures which need effective strategies to bring this number to normal figures, pelvic adhesion is the most frequent complication which can led to further future complications.

Keywords:

Caesarean section, prevalence, indications, complications, Majmaah, Saudi Arabia

الخلاصة:

خلصت هذه الدراسة إلى أن مستشفى الملك خالد بالمجموعة يحتوي على نسبة عالية من العمليات القيصرية وفقاً للمعدل الطبيعي لمنظمة الصحة العالمية التي تحتاج إلى مزيد من الاستراتيجيات لجعل هذا الرقم مساوياً للرقم الطبيعي. التصاقات بالحوض هو من المضاعفات الأكثر شيوعاً لدى النساء اللاتي خضعن لعمليات قيصرية بالمستشفى.

الكلمات المفتاحية:

عملية قيصرية، معدل، مسببات، مضاعفات، المجموعة، العربية السعودية

Introduction

Caesarean section is a major obstetric surgical operation that result in greater reduction in maternal and fetal mortality since it has been discovered for the first time; the average rate has been stated by World Health Organization to be between (10 to 15)% , however the rate can reach up to 22.5% in UK and Canada [1-5]. Recently, there is increase in the normal rate in many countries, for instance in certain countries more than 50%of their deliveries are conducted by Caesarean section and the following information gives an

idea about where the highest frequency of Caesarean section in the world , the Dominican Republic , Brazil and Egypt their rate range between 55% to 58% [6-8] and the reason behind this increase maybe due to performing C.S without medical indications.

Although C-section has managed many obstetric problems, it has many complications, which increases maternal mortality and morbidity such as hemorrhage, infection, trauma to bowel or bladder as well as thromboembolic diseases, more over ,the increase in the rate of C-section has a negative impact on hospital resources

[9-12] . Caesarean section is a name that describes surgery to the lower abdomen to deliver one or more fetus [13-15]. Sometimes vaginal rout of delivery can endanger the life of the mother, the baby or both [16-18]. Spinal or general anesthesia can be used for C-section, the choice depends on the indication of the surgery and the medical condition of the mother and the baby [19-21]. The skin of the lower abdomen is cleaned with antiseptic solution then opened with 15 cm incision; the uterus is identified and opened with separate incision followed by delivery of the baby and placenta [22-27]. Finally, both incisions were closed with sutures [28-30]. Cesarean section is done for many reasons such as multiple pregnancy, high blood pressure, obstructed labor, breech presentation and issues related to the placenta and umbilical cord [31-34]. Breast feeding is initiated as soon as possible as the baby needs early nutrition and the process of breastfeeding help uterus to contract, the mother needs about two to three days in the hospital before return to home. Cesarean section reduces maternal and fetal mortality and morbidity but also it has many maternal complications. (35). It remains the major cause of maternal death in developing countries and respiratory problem in the fetus. There are many guidelines recommend doing C-section after 39 weeks gestation and prevent per-

forming it without medical reasons. [36-37] Twenty-three million C. sections were done all over the world during the years 2012. Research found that the highest rates was 27% in 45 countries and the lowest as 7.5% in more than 50 counters. [38] (WHO) has recommend that the normal rate of the C-section is 10% to 15%. The rate in North America in continuous increasing from 17.5% of deliveries in 1995 to 23.7% in 2003. Furthermore, caesarean delivery has a negative impact on maternal and neonatal health with many complications as well as financial burden. [39] vaginal delivery recommended by the Society of Obstetricians and Gynecologists of Canada (SOGC), to be the safest mood of delivery for both the mother and newborn. [40] Guidelines for clinical practice has a positive impact on dropping the high rate of C-section that seen in many countries., [41] these guidelines include educating the women and her family about the mood of delivery that helps her to take decision. There are many practices can lead to reduction of caesarean rate such as induction of labor at term, applying operative vaginal birth and vaginal birth after previous caesarean birth [42-45].

Methods

This study is a cross-sectional study, con-

ducted in King Khalid Hospital in Majmaah, it is a referral hospital providing health services to 130000 population, in addition to patients from many district hospitals. The hospital has a capacity of 225 beds distributed in different departments. The obstetrics and gynecology department consist of outpatient obstetrics and gynecology clinics, inpatients and two theaters. The study population consisted of all records of patients who were delivered in King Khalid Hospital Majmaah in the period from 1st January 2016 to 31 December 2016, and they were 394 record. The data were collected by filling a pre-tested checklist from the hospital records. Data analysis was performed by SPSS and presented in tables and graphs. The study obtained ethical approval from Majmaah University ethics committee. Permission taken from hospital authority.

Results

Table (1) summarized General and socio-demographic features of the patients of this study. Patients who underwent cesarean section were in the age group of 26-30 years (33.8%) and the lowest number was in the age group 15-20(1%), most of the patients were housewives (81.3%). Regarding parity, most of the patients were para 2-4 (63.1%) and the least were primi-

gravae (12.7%).

Table 1. Sociodemographic characteristics of women conducted Cesarean Section in KHH

Characteristics	Number (%)
Age	
15-20	4 (1.0%)
21-25	35 (8.9%)
26-30	133 (33.8%)
31-35	112 (28.4%)
35 or more	110 (28.0 %)
Occupation	
Housewife	318 (81.3%)
Employee	31 (7.9 %)
Other	45 (1.8 %)
Total	394(100%)
Parity	
1	50 (12.7%)
2-4	247 (63.1%)
5 or more	97(24.2%)

The total number of deliveries in King Khalid Hospital in the period from January 2015 to December 2015 was 1312 patients (with an overall CS rate of 30.1% (394) and rate of vaginal delivery was 69.9.1% (918). Most of C-sections were performed as an emergency (59.1%) and the rest were done electively (40.9%). Almost one third of C-sections had complications (31.9%), the other two thirds were free of complications (68.1%), as shown in table 2.

Table (2) Type of Caesarean section and its complications in King Khaled Hospital, Majmaah

Characteristics	Number (%)
Type of Caesarean section	
Emergency	228 (57.9%)
Elective	166 (42.1%)
Total	394(100)
Complications	
Not Complicated	268 (68.1%)
Complicated	126 (31.9%)
Total	394(100)

Table 3 shows the rate of complications. The highest rate was abdomen and pelvic adhesion 88 (69%) followed by intra- and post-partum hemorrhage (7.9%), bladder injury (3.1%), poor wound healing (3.1%), post-operative endometritis (4.7%) and the least rate was anesthetic complication which constitute (0.7%).

Table (3) Types of complications of cesarean section in women delivered in KKH

Characteristics	Number (%)
Pelvic adhesion	88 (69.4)
Hemorrhage	10 (7.9%)
Endometritis	6 (4.7%)
Poor healing	4 (3.4%)
Bladder injury	4 (3.4%)
Wound infection	4 (3.4%)
ICU admission	4 (3.1%)
Re-opening	3 (2.3%)
Death	2 (1.7%)
Anesthesia	1 (0.7%)
Total	126(100)

Most of the patients were operated because of multiple previous scars (45.7%) fol-

lowed by one previous scar (15.5%), fetal distress (7.4%), breech (5.1%) preeclampsia (2.5%), Multiple pregnancy (1.8%) and failed to progress (3.2%) as shown in table 4.

Table 4. Indications of cesarean section in women delivered in KKH

Characteristics	Number (%)
Multiple scar	181 (47.2%)
Fetal Distress	29 (7.2%)
FTP	14 (3.2%)
Preeclampsia	10 (2.5%)
Multiple pregnancy	7 (1.2%)
Other	72 (18.1%)
Total	394(100)

Discussion

The prevalence of cesarean section during one-year was 30.1%, which far more from the normal rate of cesarean section according to WHO rate and much less in comparison to study done in Qassim Saudi Arabia by Alsheeha MA^[47] which was 55.4%. However, study done in Japan by Eri Maeda shows rate of 18.5% which is close to international figure^[48]. The most common indication of cesarean section was multiple previous C-section scars (two or more) with 47.5% followed by (one previous scar) with 15.5%. In this study, the multiple previous C-section scars was represented more than 60% of total number of cesarean section which considered the most frequent reason, in my opinion the

decision of primary C. section must be supervised because this is an important factor that lead to increase in overall rate, if we could managed to reduce primary C.S then this will reduces the overall rate of C-section . In this study, the overall rate of complication was 31.9%. The commonest complication was pelvic adhesion from previous surgery (69.4%) which necessitate the need for high skilled physicians to minimize the complications during the surgery. The hemorrhage (intra and post-partum) and wound infection were represented 7.9% and 3.1%, respectively. This result supports Tetsuya K et al study who stated in their study that those complications were represented only 2 to 7% ⁽⁴⁶⁾. In this study, bladder injury complication that resulted due to the high rate of pelvic adhesion represented 3.1% of the cases. The study Concluded that there is high caesarean section rate in King Khaled Hospital, Majmaah, Saudi Arabia. Multiple scar is the most common indication of cesarean section in women delivered in the hospital. Pelvic adhesion is the most frequent complication.

Conflict of Interest

No potential conflict of interest in this article.

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