(e) ISSN Online: 2321-9599

(p) ISSN Print: 2348-6805

ORIGINAL ARTICLE

Assessment of the surgical complications of cesarean section

[1]Sweety Swaroop, [2]Ankul Mittal

[1]Associate Professor, Department of Obstetrics & Gynaecology, Major S D Singh Medical College & Hospital, Farukkhabad, Uttar Pradesh, India;
[2]Assistant Professor, Department of General Surgery, Major S D Singh Medical College & Hospital, Farukkhabad, Uttar Pradesh, India

ABSTRACT:
Background: The present study was conducted for assessing the surgical complications of cesarean section. **Materials & methods:**A total of 100 patients who were scheduled to undergo cesarean section were enrolled. Complete demographic and clinical details of all the patients was obtained. The following outcome variables were obtained: lacerations of theuterus and vagina defined as all sizes of unintended digital or surgical injury of the uterus andthe vagina in relation to the uterotomy, lacerationsof the bladder and bowels, estimated intraoperative blood loss and blood transfusion, intraoperative hysterectomy and preoperative uterine rupture. Baseline blood samples were obtained and hematological along with biochemical profile of all the patients was evaluated. Anaesthesia was given and cesarean section was performed. Thorough intraoperative monitoring of all the patients was done. Complete assessment of associated surgical complications was done in all the patients. **Results:**Surgical complications were seen in 8 percent of the subjects. Cervical laceration, Corporal laceration, Vaginal laceration, Bladder laceration, Blood transfusion needed and need Hysterectomy was seen in 3 percent, 1 percent, 1 percent, 2 percent, 3 percent and 1 percent of the patients respectively. **Conclusion:**One of the most common obstetrical procedure is a C-section. After carefully giving balanced information regarding the advantages and disadvantages of vaginal and abdominal births, the mode of delivery should be chosen.
Key words: Surgical, Cesarean section

Corresponding author: Ankul Mittal, Assistant Professor, Department of General Surgery, Major S D Singh Medical College & Hospital, Farukkhabad, Uttar Pradesh, India

This article may be cited as: Swaroop S, Mittal A. Assessment of the surgical complications of cesarean section. J Adv Med Dent Scie Res 2015;3(4):209-211.

INTRODUCTION

Caesarean section is one of the most commonly performed operations for women all over the world. Until the middle of the last century caesarean section rates in Europe rarely exceeded 3–5%. Currently around every 3rd baby (31.3% on average) born in German hospitals is delivered by caesarean section.[1- 3] The increase in the numbers of caesarean sections performed has been ascribed to the increased range of indications, increased numbers of preterm deliveries and increased legal disputes. The most important indications for caesarean section include breech presentation, protracted birth including failure to progress in labour, incipient intrauterine hypoxia and previous C-section.[4]

Although the increase in CS rates seems to convey the feeling of safety among patients and professionals, several studies have shown an association between maternal and perinatal morbidity and CS. CS can also generate higher costs than vaginal delivery; it has been estimated that a CS is about 44% more expensive. A systematic review of the effectiveness of strategies for reducing CS has shown that the CS rate can be safely reduced through multifaceted interventions that involve health workers in analysing and modifying their practice, taking into account the clinical practice guidelines (CPGs).[5,] [6]Hence; the present study was conducted for assessing the surgical complications of cesarean section.

MATERIALS & METHODS

The present study was conducted for assessing the surgical complications of cesarean section. A total of 100 patients who were scheduled to undergo cesarean section were enrolled. Complete demographic and clinical details of all the patients was obtained. The following outcome variables were obtained: lacerations of theuterus and vagina defined as all sizes of unintended digital or surgical injury of the uterus andthe vagina in relation to the uterotomy, lacerationsof the bladder and bowels, estimated intraoperative blood loss and blood transfusion, intraoperative hysterectomy and preoperative uterine rupture. Baseline blood samples were obtained and hematological along with biochemical profile of all the patients was evaluated. Anaesthesia was given and cesarean section was performed. Thorough intraoperative monitoring of all the patients was done. Complete assessment of associated surgical complications was done in all the patients. All the results were recorded in Microsoft excel sheet and were subjected to statistical analysis using SPSS software.

RESULTS

A total of 100 subjects were analyzed. Mean age was 33.2 years while mean gestational age was 38.9 weeks. 53 percent of the subjects were of rural residence while the remaining 47 percent of the urban

residence. Overall, surgical complications were seen in 8 percent of the subjects. Cervical laceration, Corporal laceration, Vaginal laceration, Bladder laceration, Blood transfusion needed and need Hysterectomy was seen in 3 percent, 1 percent, 1 percent, 2 percent, 3 percent and 1 percent of the patients respectively.

Table 1: Demographic data

Variable	Number	Percentage
Mean age (years)	33.2	
Rural residence	53	53
Urban residence	47	47
Mean parity	0.8	
Mean gestational age (weeks)	38.9	

Table 2: Surgical complications

Variable	Number	Percentage
Cervical laceration	3	3
Corporal laceration	1	1
Vaginal laceration	1	1
Bladder laceration	2	2
Blood transfusion needed	3	3
Hysterectomy	1	1
Overall incidence	8	8

DISCUSSION

Over the past 20 years, there have been many trends in maternal childbirth choices. There has been a desire for natural childbirth, an increased use of epidural anesthesia for labor, the decision to have a vaginal birth after cesarean (VBAC), the decline of VBACs, and most recently, cesarean surgeries for nonmedically indicated reasons. Currently accepted medical reasons for performing a cesarean surgery are as follows: failure of labor to progress, pelvic abnormalities, problems with the placenta, multiple gestation pregnancy, active herpes simplex, nonreassuring fetal heart rate, malpresentation of the fetus, and any serious medical condition that requires emergency treatment. Cesareans performed for any other reason would be nonmedically indicated and thus could potentially be avoided.[7- 9]

Over the past two decades, a large proportion of the female population has begun to enjoy a more urbanized lifestyle. The majority of the women we see in our daily obstetric practice are in this sedentary patient group. Advanced maternal age, decreased physical activity due to changing lifestyle, chronic health risks, such as obesity, diabetes, and hypertension, fetal macrosomia, extensive use of continuous fetal monitoring, and changes in women's preferences are the factors responsible for the elevated CS rates. Today, women demand more involvement and control in decisions regarding their health, and many who are advised to have induced labor will ask their obstetrician whether this increases the likelihood of CS.[10, 11]

A total of 100 subjects were analyzed. Mean age was 33.2 years while mean gestational age was 38.9 weeks. 53 percent of the subjects were of rural residence while the remaining 47 percent of the urban residence. Overall, surgical complications were seen in 8 percent of the subjects. Cervical laceration, Corporal laceration, Vaginal laceration, Bladder laceration, Blood transfusion needed and need Hysterectomy was seen in 3 percent, 1 percent, 1 percent, 2 percent, 3 percent and 1 percent of the patients respectively.Dimitrov Aet al defined the time for different steps of Caesarean section from the moment the women lay on the operating table to the last stitch on the skin. The preparation for the anesthesia/analgesia is 23 min (range 8-41). The proper time of the operation is 44.3 min. The laparotomy by Pannenstiel incision takes 3 min. The opening time of the uterus is 37 sec (10-190) and the closer on two layers is 17 min (10-35). The extraction of the foetus takes 53 sec (15-180). The exteriorization of the uterus doesn't affect the repair time. Leaving the visceral and parietal peritoneum unsutured can spare 5.5 min. The elective CS takes more time than the emergent one.[12]

van Ham MAet al assessed the intra-operative surgical complications and postoperative maternal morbidity rate of caesarean section. Three caesarean section groups were formed: (1) primary elective, (2) primary acute, without any effort to deliver vaginally, and (3) secondary acute, due to a failed vaginal delivery. The overall maternal intra-operative complication rate was 14.8%. The most common complications were lacerations of the uterine corpus (10.1%) and bloodloss > or = 1000 ml (7.3%). The complication rate of the secondary group (23.4%) was significantly higher ($p < 0.001$) compared to both primary groups (7.4%). The overall maternal postoperative morbidity rate was 35.7%. Fever (24.6%), bloodloss between 1000 and 1500 ml (4%), haematoma (3.5%) and urinary tract infections (3.0%) were the most frequent complications. The primary elective group showed significantly ($p < 0.001$) lower major (2.6%) and

minor (23.7%) complication rates compared to the emergency groups (major 5.2%, minor 34%).Emergency caesarean sections carried the greatest risks regarding maternal complications compared to elective procedures.[13]Valgeirsdottir Het al determined the rate of complications which accompany cesarean sections at Landspitali University Hospital (LSH).During this period 761 women delivered by cesarean section at LSH. The overall complication rate was 35,5%. The most common complications were; blood loss > or =1000 ml (16.5%), post operative fever (12.2%), extension from the uterine incision (7.2%) and need for blood transfusion (4.3%). Blood transfusion was most common in women undergoing cesarean section after attempted instrumental vaginal delivery (20%). Fever and extension from the uterine incision were most common in women undergoing cesarean section after full cervical dilation without attempt of instrumental delivery (19,4%). These complications were least likely to occur if the patient underwent an elective cesarean section.Complications following cesarean section are common, especially if labor is advanced.[14]

CONCLUSION

One of the most common obstetrical procedure is a C-section. After carefully giving balanced information regarding the advantages and disadvantages of vaginal and abdominal births, the mode of delivery should be chosen.

REFERENCES

1. Hildingsson I, Radestad I, Rubertsson C. Waldenstrom U. Few women wish to be delivered by caesarean section. BJOG 2002;109(6):618-23.
2. Hannah ME, Hannah WJ, Hodnett ED, Chalmers B, Kung R, Willan A, et al. Term Breech Trial 3-Month Follow-up Collaborative Group. Outcomes at 3 months after planned cesarean vs planned vaginal delivery for breech presentation at term: the international randomized Term Breech Trial. JAMA 2002;287(14):1822-31.
3. Matthews TG, Crowley P, Chong A, McKenna P, McGarvey C, O'Regan M. Rising caesarean section rates: A cause for concern? BJOG 2003;110(4):346-9.
4. McMahon MJ, Luther ER, Bowes WA, Olshan AF. Comparison of a trial of labor with an elective second cesarean section. N Engl J Med 1996;335(10):689-95.
5. Allen VM, O'Connell CM, Baskett TF. Cumulative economic implications of initial method of delivery. Obstet Gynecol. 2006;108(3 Pt 1):549–555.
6. Chaillet N, Dumont A. Evidence-based strategies for reducing cesarean section rates: a meta-analysis. Birth. 2007;34(1):53–64.
7. Soydan H. Evidence-based medicine and knowledge dissemination, translation, and utilization: challenges of getting evidence-based treatments to patient care and service delivery. J Evid Based Med. 2009;2(3):143–149.
8. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. Lancet. 2003;362(9391):1225–1230.
9. Fenwick J., Staff L., Gamble J., Creedy D. K., Bayes S. (2010). Why do women request caesarean section in a normal, healthy first pregnancy? Midwifery, 26, 394–400
10. Goodall K. E., McVittie C., Magill M. (2009). Birth choice following primary caesarean section: Mothers' perceptions of the influence of health professionals on decision-making. Journal of Reproductive & Infant Psychology, 27, 4–14
11. Gossman G. L., Joesch J. M., Tanfer K. (2006). Trends in maternal request cesarean delivery from 1991 to 2004. Obstetrics and Gynecology, 108, 1506–1516
12. Dimitrov A, Stamenov G, Krŭsteva K. The overall and step-by-step duration of cesarean section. Akush Ginekol (Sofiia). 1999;38(3):7-10
13. van Ham MA, van Dongen PW, Mulder J. Maternal consequences of caesarean section. A retrospective study of intra-operative and postoperative maternal complications of caesarean section during a 10-year period. Eur J ObstetGynecolReprod Biol. 1997;74(1):1-6. doi:10.1016/s0301-2115(97)02725-5
14. Valgeirsdottir H, Hardardottir H, Bjarnadottir RI. Fylgikvillar vid keisaraskurdi [Complications of cesarean deliveries]. Laeknabladid. 2010;96(1):37-42.