Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies

Journal home page:www.jamdsr.com doi:10.21276/jamdsr Index Copernicus value [ICV] =82.06

(e) ISSN Online: 2321-9599; (p) ISSN Print: 2348-6805

Original Research

Assessment of indications of caesarean sections in a known population

Manisha Borkar

Associate Professor, Department of Obs & Gynae, Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh, India

ABSTRACT:

Background: A caesarean section (CS) is a life-saving surgical procedure when certain complications arise during pregnancy and labour. Hence; the present study was conducted for assessing indications of caesarean sections in a known population. **Materials & methods:** A total of 100 cases that ended in cesarean section were enrolled. Complete demographic and clinical details of all the patients was obtained. Blood samples were obtained and baseline hemodynamic profile was evaluated. This information included the primary indication for CS, whether the decision for CS was appropriate according to national guidelines, and who made the decision for CS. All the results were recorded in Microsoft excel sheet and were subjected to statistical analysis using SPSS software. **Results:** Mean age of the patients was 29.2 years. Majority proportion of patients were of rural residence. Dystocia, Fetal distress, Malpresentation, Maternal/fetal compromise and Increased risk of rupture were the indications in 38 percent, 13 percent, 18 percent, 13 percent and 18 percent of the patients respectively. **Conclusion:** Dystocia was the most common indication of C Section.

Key words: Caesarean section

Received: 16 March, 2018 Accepted: 19 April, 2018

Corresponding Author: Manisha Borkar, Associate Professor, Department of Obs & Gynae, Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh, India

This article may be cited as: Borkar M. Assessment of indications of caesarean sections in a known population. J Adv Med Dent Scie Res 2018;6(5):163-165.

INTRODUCTION

A caesarean section (CS) is a life-saving surgical procedure when certain complications arise during pregnancy and labour. However, it is a major surgery and is associated with immediate maternal and perinatal risks and may have implications for future pregnancies as well as long-term effects that are still being investigated.[1, 2] The use of CS has increased dramatically worldwide in the last decades particularly in middle- and high-income countries, despite the lack of evidence supporting substantial maternal and perinatal benefits with CS rates higher than a certain threshold, and some studies showing a link between increasing CS rates and poorer outcomes.[3, 4] The reasons for this increase are multifactorial and not well-understood. Changes in maternal characteristics and professional practice styles, increasing malpractice pressure, as well as economic, organizational, social and cultural factors have all been implicated in this trend. Additional concerns and controversies surrounding CS include inequities in the use of the procedure, not only between countries but also within countries and the costs that unnecessary caesarean sections impose on financially stretched health systems.[5-7] Hence; the present study was conducted for assessing indications of caesarean sections in a known population.

MATERIALS & METHODS

The present study was conducted for assessing indications of caesarean sections in a known population. A total of 100 cases that ended in cesarean section were enrolled. Complete demographic and clinical details of all the patients was obtained. Blood samples were obtained and baseline hemodynamic profile was evaluated. This information included the primary indication for CS, whether the decision for CS was appropriate according to national guidelines, and who made the decision for CS. All the results were recorded in Microsoft excel sheet and were subjected to statistical analysis using SPSS software.

RESULTS

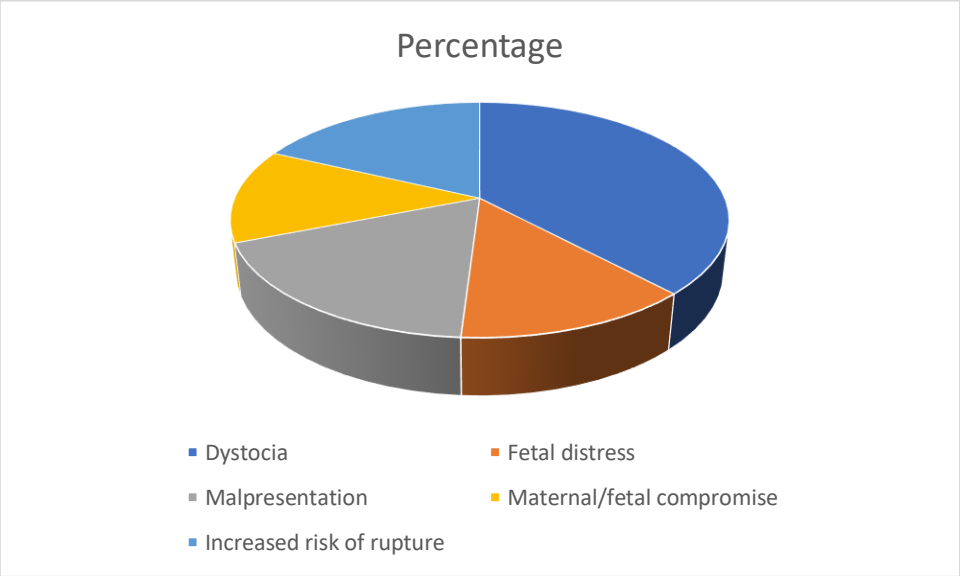
Mean age of the patients was 29.2 years. Majority proportion of patients were of rural residence. Dystocia, Fetal distress, Malpresentation,

Maternal/fetal compromise and Increased risk of rupture were the indications in 38 percent, 13 percent, 18 percent, 13 percent and 18 percent of the patients respectively.

Table 1: Indications of C section

Indications	Number	Percentage
Dystocia	38	38
Fetal distress	13	13
Malpresentation	18	18
Maternal/fetal compromise	13	13
Increased risk of rupture	18	18
Total	100	100

Graph 1: Indications of C section



DISCUSSION

Caesarean section (CS) has greatly improved perinatal outcomes by reducing newborn and maternal mortality, but the increasing frequency of CS has raised concerns, particularly when performed in the absence of clear-cut medical indications. Organisation for Economic Co-operation and Development (OECD) data reveal an average annual increase of 0.66% in member countries, and similar trends are evident elsewhere. A recent analysis of national CS rates found that rates up to 19% were inversely correlated with maternal and neonatal mortality. Many countries have CS rates higher than 19%, even though there is no evidence to suggest that higher rates are associated with further decreases in maternal and neonatal mortality. In Brazil, for example, CS rates are estimated at 46%. Higher CS rates increase the cost of care3 8 and may have negative effects on the health of mothers and newborns.[8-12] Hence; the present study was conducted for assessing indications of caesarean sections in a known population.

Mean age of the patients was 29.2 years. Majority proportion of patients were of rural residence. Dystocia, Fetal distress, Malpresentation, Maternal/fetal compromise and Increased risk of rupture were the indications in 38 percent, 13 percent, 18 percent, 13 percent and 18 percent of the patients respectively. Nelson JP et al identified indications for caesareans and whether the decision to perform caesareans was appropriate in order to improve care, and whether the above interventions had an impact on this process.Two groups of 100 consecutive cases from October 2014 and 100 from February 2015 were retrospectively selected that resulted in caesarean. These case notes were analysed for demographic data, caesarean indication and appropriateness.In 46% of cases the decision for caesarean was considered appropriate. No significant difference ($p>0.05$) was found between the two groups in terms of patient demographics or appropriateness of caesarean (43% in Oct-14 compared to 48% in Feb-15). The most common group of indications for caesarean was dystocia (43.5%) with 28% appropriate; followed by fetal distress (18.5%) with 30% appropriate; previous scar (17%) with 85% appropriate; malpresentation (10.5%) with 48% appropriate; and maternal compromise (10%) with 80% appropriate.[13]

Begum T et al conducted a retrospective study in icddr,b Health and Demographic Surveillance System (HDSS) area of Matlab to look into the indications and determinants of C-sections. All resident women in HDSS service area who gave birth in 2013 with a known birth outcome, were included in the study. Women who underwent C-section were identified

from birth and pregnancy files of HDSS and their indication for C-section were collected reviewing health facility records where the procedure took place, supplemented by face-to-face interview of mothers where data were missing. Indications of C-section were presented as frequency distribution and further divided into different groups following 3 distinct classification systems. Socio-demographic predictors were explored following statistical method of binary logistic regression.During 2013, facility delivery rate was 84% and population based C-section rate was 35% of all deliveries in icddr,b service area. Of all C-sections, only 1.4% was conducted for Absolute Maternal Indications (AMIs). Major indications of C-sections included: repeat C-section (24%), foetal distress (21%), prolonged labour (16%), oligohydramnios (14%) and post-maturity (13%). More than 80% C-sections were performed in for-profit private facilities. Probability of C-section delivery increased with improved socio-economic status, higher education, lower birth order, higher age, and with more number of Antenatal Care use and presence of bad obstetric history. Eight maternal deaths occurred, of which five were delivered by C-section.C-section rate in this area was much higher than national average as well as global recommendations.[14]

CONCLUSION

Dystocia was the most common indication of C Section.

REFERENCES

1. Lin HC, Xirasagar S. Institutional factors in cesarean delivery rates: policy and research implications. Obstet Gynecol. 2004;103(1):128–36.
2. Linton A, Peterson MR, Williams TV. Effects of maternal characteristics on cesarean delivery rates among U.S. Department of Defense healthcare beneficiaries, 1996–2002. Birth. 2004;31(1):3–11.
3. Zwecker P, Azoulay L, Abenhaim HA. Effect of fear of litigation on obstetric care: a nationwide analysis on obstetric practice. Am J Perinatol. 2011;28(4):277–84.
4. Mi J, Liu F. Rate of caesarean section is alarming in China. Lancet. 2014;383(9927):1463–4.
5. Gibbons L, Belizan JM, Lauer JA, Betran AP, Merialdi M, Althabe F. Inequities in the use of cesarean section deliveries in the world. Am J Obstet Gynecol. 2012;206(4):331 e1-19.
6. Huang X, Lei J, Tan H, Walker M, Zhou J, Wen SW. Cesarean delivery for first pregnancy and neonatal morbidity and mortality in second pregnancy. Eur J Obstet Gynecol Reprod Biol. 2011;158(2):204–8.
7. Marshall NE, Fu R, Guise JM. Impact of multiple cesarean deliveries on maternal morbidity: a systematic review. Am J Obstet Gynecol. 2011;205(3):262 e1-8.
8. Nelson JP. Can the presence of an additional senior doctor reduce the caesarean rate at a regional referral hospital in western Uganda? Poster session presented at: The 18th Annual British Maternal and Fetal Medicine Society Conference. Birmingham. 2016 Apr;:21–22.
9. Hoxha I, Busato A, Luta X. Medical practice variations in reproductive, obstetric, and gynaecological care. In: Johnson A, Stukel T, eds. Medical practice variations. Health services research series. New York, NY: Springer, 2015:141–60.
10. Molina G, Weiser TG, Lipsitz SR et al.. Relationship between cesarean delivery rate and maternal and neonatal mortality. JAMA 2015;314:2263–70.
11. D'Alton ME, Hehir MP. Cesarean delivery rates: revisiting a 3-decades-old dogma. JAMA 2015;314:2238–40.
12. Gibbons L, Belizán JM, Lauer JA et al.. The global numbers and costs of additionally needed and unnecessary caesarean sections performed per year: overuse as a barrier to universal coverage. World Health Report 2010;30:1–31.
13. Nelson JP. Indications and appropriateness of caesarean sections performed in a tertiary referral centre in Uganda: a retrospective descriptive study. Pan Afr Med J. 2017;26:64. Published 2017 Feb 3. doi:10.11604/pamj.2017.26.64.9555
14. Begum T, Rahman A, Nababan H, et al. Indications and determinants of caesarean section delivery: Evidence from a population-based study in Matlab, Bangladesh. PLoS One. 2017;12(11):e0188074.