International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Puramban P et al. Int J Reprod Contracept Obstet Gynecol. 2024 Jan;13(1):125-129
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20234090

Original Research Article

Maternal request caesarean sections: fear tops the list

Poornima Puramban[1], Pallavi Chandra Ravula[2], Nuzhat Aziz[2]*

[1]Department of Department of Obstetrics, Diplomate National Boards, Fernandez Hospital, Hyderabad, Telangana, India
[2]Department of Obstetrics, Fernandez Hospital, Hyderabad, Telangana, India

Received: 20 November 2023
Revised: 08 December 2023
Accepted: 11 December 2023

***Correspondence:**
Dr. Nuzhat Aziz,
E-mail: drnuzhat@fernandez.foundation

ABSTRACT

Background: The increasing demand for caesarean delivery on maternal request (CDMR) is adding to the increasing caesarean rates worldwide. Pregnant women and families choose a CDMR for several reasons that include social, economic, and cultural contexts. This study was done in a south Indian state to explore the common local reasons for CDMR, as a first step to reduce this trend.
Methods: Prospective observational, semi structured interview-based study of women who had chosen CDMR. Women with multifetal pregnancy and with previous caesarean sections were excluded. The primary outcomes were the reasons to choose a caesarean section over vaginal birth. The reasons were collected and divided into three themes: social and cultural, emotional reasons and personal previous experiences.
Results: Ninety-two women gave consent to participate in the study and were interviewed. The most common reason to choose a caesarean in the absence of any medical indication was 'fear' of harm to the mother or baby, trauma, or vaginal examinations by 65 out of 92 women (70.65%). Theme of social influence was quoted as the reason by seven (7.6%) and previous personal experience with birth outcomes was cited by three women (3.2%). The majority chose CDMR in the antenatal period even before they set into labour.
Conclusions: Fear was the most common reason for choosing a CDMR, representing a misconception that caesarean birth is a safer, better alternative for the woman and her family. There is a need for change in discussions around antenatal care options, exploration of fears, and support systems to make a better-informed choice.

Keywords: Caesarean section, CDMR, Maternal request, On demand caesarean

INTRODUCTION

'Cesarean delivery on maternal request' (CDMR) is defined as a primary cesarean section in the absence of any maternal or fetal indications.[1] Over the last few decades, the cesarean section rates have increased all over the world from 12.1% in 2000 to 21.1% in 2015 to 60% in 2020 globally.[2-5] The highest rates are in Korea, China and Brazil ranging between 36% to 50%.[6,7] In India, the state of Telangana (where the study institute is located) had a 100% institutional delivery rate in 2021 and the highest caesarean section rate (60.7%) in India.[8] Every institute, state, country is struggling with rising cesarean section rates and looking for reasons for this increase. A pregnant woman requesting a cesarean section even when she can have a safe vaginal birth often perplexes obstetricians. CDMR is a significant contributor in increasing the cesarean delivery rates.[9,10] In 2015, the WHO concluded that there was no evidence to support that cesarean section benefitted women or infants who did not require the

procedure.[11] The control of these rising cesarean section rates requires an in-depth analysis of every reason and the indication for this major procedure. The reasons for cesarean delivery on maternal request (CDMR) are specific, and differ by social and cultural backgrounds.[12] Indian culture is unique and has very different social, economic, and cultural differences. This study aimed to understand the magnitude and reasons why women chose a CDMR in southern India to develop a framework for efforts to reduce CDMR.

METHODS

An observational descriptive, interview-based study was conducted at Fernandez hospitals, Hyderabad, Telangana, India, for a study duration of 10 months i.e., from February 2019 to November 2019. The study protocol was approved by the institutional review board. The study included women who had CDMR with no medical indication for cesarean section and excluded women with multifetal pregnancy or previous cesarean section. We took a prior informed consent for the interview from eligible women after she had a cesarean section. The principal investigator, who was not involved in case management, conducted face-to-face semi-structured interviews using a semi structured questionnaire that included closed ended and open-ended questions. All interviews were done by the principal investigator after first 24 hours after the surgery, when the woman was comfortable with good pain relief. The interview included questions to find the main reason for CDMR and whether they made the decision for CDMR before or after onset of labour. Primary outcome was to understand the reasons for choosing a CDMR. Maternal and fetal characteristics that were collected from the medical records for these women who had CDMR maternal request cesarean included age, BMI, time of first visit, gestational age at birth, birth weight, APGAR score, stillbirth, or neonatal death. The reasons for opting for CDMR collected from interviews were categorized by the principal investigator into three themes; social norms, emotional experiences and personal experience. The theme 'social norms' included subthemes like social influence from family and friends, cultural influence like 'mahurath' which is choosing an auspicious day/time for birth of the baby. 'Emotional experiences' theme included four sub-themes; fear of vaginal birth (fear of labour pains, fear of vaginal examination), fear of baby injury (due to large baby or fear of meconium aspiration), safety and risk perception. The third theme was 'personal experience' including previous stillbirths or miscarriages or other adverse outcomes. The health care provider's advice was also documented.

The sample size for this study was calculated based on a 4 to 5% prevalence of CS on request reported in the literature. With 2% precision and alpha of 0.05, the minimum number of interviews that were required was estimated as 32. The study included 92 consecutive pregnant women who provided consent and participated in the interviews.

Statistical analysis

Descriptive analysis was carried out by mean for quantitative variables, frequency and proportion for categorical variables. Statistical analysis was carried out using CoGuide version 2 software.[13]

RESULTS

There were 8,464 deliveries including 3,921 women who had a cesarean section over a 10 month study period from February to November 2019 at the study institute. Women with multifetal pregnancies (n=284) and previous cesarean sections (n=1711) were excluded. Three hundred and forty-five (4.07%) women had CDMR. After exclusion, CDMR accounted for 8.04% of all cesarean sections done in women with singleton pregnancies without history of cesarean section.

Table 1: Characteristics of 92 women.

Characteristic	Value
Mean age (years)	28.91
Nulliparous (n, %)	67 (72.82)
Spontaneous conception (n, %)	71 (77.17)
IVF conception (n, %)	12 (13.04)
Education-graduation and above (n, %)	83 (90.21)
Employed (n, %)	42 (45.65)
Mean gestational age in weeks	38.68
Mean birth weight in grams	3237.71
Perinatal death (n, %)	0

The interviews were conducted for 92 women. The characteristics of these women and birth outcomes are mentioned in Table 1. The main reason for choosing CDMR was categorized into one of the three themes (see Table 2), social influence (7, 7.6%), emotional experience (82, 89.13%) and previous experience (3, 3.2%). The theme social norms included subthemes like social influence i.e. influence from family and friends, cultural influence like muharath which is choosing an auspicious time for birth of the baby in India and maternal choice. Only seven women chose one of the above reasons (7.6%). The most common reason was emotional experience (theme II) by 82 women (89.13%). The emotional experience theme included four sub themes like fear of vaginal deliveries (fear of labour pains, fear of vaginal examination), fear of baby injury which may be due to large baby or fear of meconium aspiration, safety and risk perception, worried about loss of control and avoidance of memory related to previous birth. Amongst these women, sixty five (70.5%) said they opted for caesarean due 'perceived fear' of vaginal birth, vaginal examinations, of trauma to the baby. Safety and risk perception of CS as safer was quoted by ten women as the reason (10.86%). The third theme is personal experience including previous still births or miscarriages, and health care provider's advice was selected as a reason by only three women (3.2%), two due to previous bad obstetric outcomes and

one on healthcare providers suggestion as she had previous pregnancy loss. Twenty nine (31.52%) women had made up their decision before onset of labour. Majority of the women (68, 73.91%) mentioned that it is their own decision to have a cesarean birth, while remaining 23 (21.73%) suggested that got the initial suggestion of cesarean delivery from their family members; mother, mother-in-law and husband. One woman explained that her maternity care provider gave an initial advice for cesarean delivery as the baby's weight is towards higher side. Forty one (44.57%) women decided for cesarean delivery in the antenatal period, 49 (53.26%) made their decision after onset of labour and two (2.17%) women had already made up a decision before pregnancy. Only nineteen women had attended childbirth classes which are offered to all women (20.65%).

Table 2: Main reason for choosing CDMR-themes.

Theme	Number	Percentage
Theme I social influence	7	7.60
Social influence from family and friends	1	1.09
Culture-muharat, auspicious, specific time/date	5	5.43
Choice-own choice, husband's choice	1	1.09
Theme II emotional experience	82	89.13
Fear of vaginal birth, examinations, of labour pains, baby injury	65	70.65
Safety and risk perception - CS safer	10	10.86
Worried about loss of control	6	6.52
Avoidance of previous memory	1	1.09
Theme III personal experience	3	3.2
Previous still births, miscarriages	2	2.18
Health care provider advise	1	1.09

DISCUSSION

The proportion of CDMR in our study (4.07% of all deliveries at the study institute and 8.04% of all caesarean sections) is similar to other studies that have reported a magnitude of 4.4 to 14% for CDMR.[14-16] The choice of these women to have caesarean section, a surgical major procedure which was not needed by medical indications is new for the developing world and has reasons which are very specific to social and cultural backgrounds.

Majority did not attend the childbirth classes (n=73, 79.34%), reflecting that the decisions were already made not to try for vaginal birth. Childbirth classes are not mandatory to attend and are specifically aimed to promote natural birthing, remove anxiety about labour and birth and give an opportunity to allay fears, if any. All women are offered and explained the benefits of attending the childbirth classes. Facilitating the attendance or making it mandatory appears to be one option to try and see the effect on the rising requests for caesareans. Childbirth education has been proven to be very effective in reducing the caesarean section rates for maternal request in some settings.[17,18]

Seven women cited IVF conception as a reason for requesting elective caesarean section, which reflected a concept that CS is safer for baby when compared to vaginal birth. Our study showed that 43 (46.08%) women had a pre-labour elective caesarean section, which implies a decision made even before onset of labour. The remaining 49 women made a decision after onset of labour. Induced labours seemed to be a major determinant for this request (n=40, 43.47%), and is an area that must be explored further. The induction process can be painful and longer and many women felt a loss of control over the process of birth. The focus of counselling must include preparing the women for childbirth and most importantly avoiding inductions when possible. Only ten of these women (6.6%) had induction of labour for social, cultural reasons, specific, date and time of birth and went on to request CDMR.

The interview findings were interesting as social reasons (good time, date, specific requests) were not the major reason. The decision of caesarean delivery was often shaped by pressure from their partners, family, and friends. The social influence was sometimes linked with the negative experience of their own mothers and sisters with vaginal birth. Few of the responses given by the mothers were tabulated in Table 3.

The most important finding of this study was that fear was chosen as the most common reason for CDMR which is similar to many studies.[19-22] This suggests a need to focus on this aspect very early in antenatal care pathways. A mandatory module to discuss, identify and clarify the benefits of vaginal birth and risks of caesarean section may help these young women to explore and make better choices with support. The counselling provided by healthcare providers can also be a factor which makes the woman choose caesarean section. Fear of hurting the baby was chosen in the context of meconium staining of amniotic fluid and large for gestational age baby. Fear of

vaginal examinations has been associated with history of sexual trauma, and women with such fear may need professional help. Through all the interviews, the common thread that seemed to be running was the concept that vaginal birth is less safe for the baby and fear of harm for the baby during the birthing process. Choosing a caesarean section was regarded as a better or safer choice. The findings have a major role to play in antenatal care and help to focus conversations on perceived safety risks, their fears and to help pregnant women with support groups. Promotion of vaginal birth as a safe, better alternative should have a major emphasis in antenatal care.

Table 3: Responses of few of the mothers interviewed in the study.

Responses of few of the mothers interviewed
Initially I thought of going for vaginal delivery and waited for spontaneous labour but as I got pains on Monday, and as I may deliver on Tuesday, which was not auspicious, I chose for caesarean delivery on the same day in muhurath
As there was yamagandum (bad time) after 1pm, my mother-in-law advised to go with caesarean section as my baby has to be fine for lifetime so I chose caesarean in muhurath
Doctor said that my baby's weight is more, and baby may have fractures during delivery and I may have deep tears, so went for caesarean section
I wished for vaginal delivery since beginning, when I was in labour and doctor did vaginal examination, it was so horrible and unpleasant than I ever imagined.
After eight years of marital life, I was conceived by IVF, can't take any risk and I felt caesarean delivery is safe for my baby
My baby had growth restriction, as baby's weight is towards lesser side, I was in doubt that my baby may not take the stress of vaginal delivery, I thought caesarean delivery was safer than vaginal delivery.
In first pregnancy I had instrumental delivery, I got a big tear due to that it took several days to heal. I suffered a lot due to pain and felt low even mentally for few days. I decided for caesarean delivery this time.

The limitations of this study were the limited number of questions to explore various aspects of the decision making by pregnant women in greater depth. We chose a minimum number of questions to avoid inducing a feeling of guilt regarding their choice in these women.

CONCLUSION

Fear was the main reason for CDMR in our series. These women and their families seem to have a misconception that vaginal birth is harmful to baby. The study gives important information to introduce changes in antenatal care and follow up the impact on reduction of caesarean section rates.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. ACOG Committee Opinion No. 761: Cesarean Delivery on Maternal Request. Obstet Gynecol. 2019;133(1):e73-e77.
2. Betrán AP, Ye J, Moller AB, Zhang J, Gülmezoglu AM, Torloni MR. The increasing trend in caesarean section rates: global, regional and national estimates: 1990-2014. PLoS One. 2016;11(2):e0148343.
3. Harrison MS, Pasha O, Saleem S, Ali S, Chomba E, Carlo WA, Garces AL, Goldenberg RL, et al. A prospective study of maternal, fetal and neonatal outcomes in the setting of cesarean section in low- and middle-income countries. Acta Obstet Gynecol Scand. 2017;96(4):410-20.
4. Wells JC, Wibaek R, Poullas M. Global epidemiology of use of and disparities in caesarean sections. Lancet. 2019;394(10192):24-5.
5. Li HT, Hellerstein S, Zhou YB, Liu JM, Blustein J. Trends in cesarean delivery rates in China, 2008-2018. JAMA. 2020;323(1):89-91.
6. Hellerstein S, Feldman S, Duan T. China's 50% caesarean delivery rate: is it too high? BJOG. 2015;122(2):160-4.
7. Ramires de Jesus G, Ramires de Jesus N, Peixoto-Filho FM, Lobato G. Caesarean rates in Brazil: what is involved? BJOG. 2015;122(5):606-9.
8. Roy N, Mishra PK, Mishra VK, Chattu VK, Varandani S, Batham SK. Changing scenario of C section delivery in India: Understanding the maternal health concern and its associated predictors. J Family Med Prim Care 2021;10:4182-8.
9. National Institutes of Health state-of-the-science conference statement: Cesarean delivery on maternal request March 27-29, 2006. Obstet Gynecol. 2006;107(6):1386-97.
10. Ecker J. Elective cesarean delivery on maternal request. JAMA. 2013;309(18):1930-6.
11. Betran AP, Torloni MR, Zhang JJ, Gülmezoglu AM; WHO Working Group on Caesarean Section. WHO statement on caesarean section rates. BJOG. 2016;123(5):667-70.

12. Betran AP, Torloni MR, Zhang J, Ye J, Mikolajczyk R, Gülmezoglu AM, et al. What is the optimal rate of caesarean section at population level? A systematic review of ecologic studies. Reprod Health. 2015;12(1):57.
13. BDSS Corp. Released 2020. coGuide Statistics software, Version 2.0, India: BDSS corp. - https://reapv2.coguide.in/
14. Betrán AP, Temmerman M, Kingdon C, Mohiddin A, Opiyo N, Downe S et al. Interventions to reduce unnecessary caesarean sections in healthy women and babies. Lancet. 2018;392(10155):1358-68.
15. Lumbiganon P, Laopaiboon M, Gülmezoglu AM, Souza JP, Taneepanichskul S, Villar J et al; World Health Organization Global Survey on Maternal and Perinatal Health Research Group. Method of delivery and pregnancy outcomes in Asia: the WHO global survey on maternal and perinatal health 2007-08. Lancet. 2010;375(9713):490-9.
16. Panda S, Jha V, Singh AS. Review of cesarean section on maternal request in a tertiary care institute; scenario in developing country. Kathmandu Univ Med J (KUMJ). 2013;11(44):349-54.
17. Robson SJ, Tan WS, Adeyemi A, Dear KB. Estimating the rate of cesarean section by maternal request: anonymous survey of obstetricians in Australia. Birth. 2009;36(3):208-12.
18. Pinar G, Avsar F, Aslantekin F. Evaluation of the impact of childbirth education classes in turkey on adaptation to pregnancy process, concerns about birth, rate of vaginal birth, and adaptation to maternity: a case-control study. Clin Nurs Res. 2018;27(3):315-342.
19. Afshar Y, Wang ET, Mei J, Esakoff TF, Pisarska MD, Gregory KD. Childbirth education class and birth plans are associated with a vaginal delivery. Birth. 2017;44(1):29-34.
20. O'Connell MA, Leahy-Warren P, Khashan AS, Kenny LC, O'Neill SM. Worldwide prevalence of tocophobia in pregnant women: systematic review and meta-analysis. Acta Obstet Gynecol Scand. 2017;96(8):907-920.
21. Gosselin P, Chabot K, Béland M, Goulet-Gervais L, Morin AJ. Fear of childbirth among nulliparous women: Relations with pain during delivery, post-traumatic stress symptoms, and postpartum depressive symptoms. Encephale. 2016;42(2):191-6.
22. Saisto T, Halmesmäki E. Fear of childbirth: a neglected dilemma. Acta Obstet Gynecol Scand. 2003;82(3):201-8.

Cite this article as: Puramban P, Ravula PC, Aziz N. Maternal request caesarean sections: fear tops the list. Int J Reprod Contracept Obstet Gynecol 2024;13:125-9.