RESEARCH PAPER | MEDICAL SCIENCE | Volume : 4 | Issue : 11 | November 2014 | ISSN - 2249-555X

Correlates of Cesarean Delivery on Maternal Request in an Urban Community

KEYWORDS

Dr Dinesh Walia	Dr. Mandeep Singh Rahi	Dr. Mishika Malik
Statistician-cum-Assistant Professor Department of CommunityMedicine Government Medical College and Hospital Sector-32 Chandigarh	Government Medical College and Hospital Sector-32 Chandigarh	Government Medical College and Hospital Sector-32 Chandigarh

ABSTRACT *This paper discusses the current level of prevalence and correlates of cesarean delivery on maternal request (CDMR) among females visiting gynecology and obstetrics OPD from June 2011 to September 2011 involving 273 females of age >18 years, of urban area of Chandigarh city. A pretested Performa was used to collect socio-demographic info and various other factors correlating with the demand of C-section. This study showed that 48% women were aware about CDMR and 15.4% of total respondents felt that CDMR is a better option than normal vaginal delivery and most of them were younger than 25 years of age, belonged to an urban background and were well educated or had a previous caesarean section. Also, only 6.9% women were aware about its adverse affects*

Introduction: Promoting the idea of good reproductive health has been an upcoming topic in the field of health promotion. However the concept of cesarean delivery on maternal request has still not been studied much. A C-section is usually performed when a vaginal delivery would put baby's or mother's life or health at risk, but in recent times it has been also performed upon request by mother (CDMR- Cesarean Delivery on Maternal Request) or her family for childbirth that could otherwise have been natural. Cesarean delivery on maternal request (CDMR) is defined as a cesarean delivery for a singleton pregnancy on maternal request at term in the absence of medical or obstetrical indications (American College of Obstetricians and Gynecologists, 2007)

The rising trend Cesarean rate in the developed as well as developing countries, and the increasing preference for it by medical professionals and the women herself points towards growing indulgence of medical procedure in women's health. According to World Health Organization (WHO) guidelines, modified in 1994, the Cesarean section birth rate in any population group should not be more than 15% (World Health Organization, 1985). However currently the Cesarean birth rates in many developed and developing countries far exceeds the tolerable limits specified by the WHO and indicate an unnecessary use of this intervention. China has witnessed a massive increase of C-section rate from 22% in 1994 to 56% in 2006 with corresponding increase in CDMR rates from 0.8% in 1994 to 20% in 2006 (Zhang et al 2008).

The increasing trend of CS rates may indicate a trend towards a more costly medical delivery systems and lowered threshold of abnormality detection among the health care providers (S N Mukherjee, 2006). In a developing country an increase in the CS rate has major implications on the limited health care resources. Furthermore, current available data from developed countries reveals that morbidity and mortality for both mother and baby arising from CS are higher when compared with vaginal delivery (Snyman L, 2002).

The objective of this study is to find the prevalence of females opting for cesarean delivery on demand, study the awareness regarding cesarean delivery on demand and adverse consequences of it among women and to study the pattern of cesarean delivery on demand and to explore reasons why such females demanded for cesarean delivery. This study also aims to frame the possible link between increasing caesarean delivery and the determinants for its increasing trend, considering both institutional aspects as well as socioeconomic causes. This will help us to determine to what extent Cesarean delivery on maternal request (CDMR) is responsible for the increasing Cesarean delivery rates. Also it will help women to have a brief overview about the side effects and other psychological and physiological consequences of Cesarean delivery, which will enable them to decide upon the better option for their delivery.

Methodology:
This epidemiological study based on cross-sectional study design, was conducted in the Gynecology & Obstetrics outpatient department (OPD) of a tertiary care hospital. The study spanned over 60 days (8 weeks) with first 4 weeks dedicated to data collection through an interview, next 2 weeks data analysis and last 2 weeks for making of report.

A total of 273 subjects selected according to the following inclusion criteria:

1. Pregnant women coming for antenatal checkup.

2. Lactating mothers and women who have delivered a baby in last 5 years

After explaining the purpose and utility of the survey, an informed consent was taken from the subjects and a pretested semi structured instrument was used for collecting the data.

After interviewing 273 selected study subjects, the end point of data collection was achieved. This was followed by analysis of data with the help of IBM SPSS ver. 19.0

Results and Discussion:
TABLE 1 The socio-demographic profile of respondents

Volume : 4 | Issue : 11 | November 2014 | ISSN - 2249-555X

and its correlation with awareness and desire of CDMR. (n=273)

S. No.	VARIABLE	AWARENESS OF CDMR	DEMAND OF C-section		
		NO	YES	NO	YES
A.	BACKGROUND				
	Rural (n=90)	66 (73.3)*	24 (26.7)	78 (86.7)	12 (13.3)
	Urban (n=183)				
	76 (41.5)	107 (58.5)	153 (83.6)	30 (16.4)	
	P value >0.05				
B.	AGE (in years)				
	Above 25 (n=148)	63 (42.6)	85 (57.4)	115 (77.7)	33 (22.3)
	Less than 25 (n=125)	79 (63.2)	46 (36.8)	116 (92.8)	9 (7.2)
	P value<0.05; significant				
C.	EDUCATION OF WOMEN				
	Illiterate/ Primary (n=40)	36 (90)	4 (10)	37 (92.5)	3 (7.5)
	Above primary (n=233)	106 (45.5)	127 (54.4)	194 (83.3)	39 (16.7)
	P value>0.05				
D.	PAST C-Section				
	No (n=214)	119 (55.6)	95 (44.4)	191 (89.2)	23 (10.8)
	Yes (n=59)	23 (38.9)	36 (61.1)	40 (67.8)	19 (32.2)
	P value<0.05; significant				
E.	RELIGION				
	Others (n=61)	33 (54.1)	28 (45.9)	51 (83.6)	10 (16.4)
	Hindu (n=212)	109 (51.4)	103 (48.6)	180 (84.9)	32 (15.1)
	P value>0.05				
F.	TYPE OF FAMILY				
	Joint (n=119)	68 (57)	51 (43)	101 (84.9)	18 (15.1)
	Nuclear (n=154)	74 (48)	80 (52)	130 (84.4)	24 (15.6)
	P value>0.05				
G.	DESIRED NO. OF CHILDREN				
	3 or more (n= 11)	8 (72.7)	3 (27.3)	9 (81.8)	2 (18.2)
	2 or less (n= 262)	134 (51)	128 (49)	222 (84.7)	40 (15.3)
	P value>0.05				

* Number shown in brackets ( ) represent percentage

TABLE 2 Behavior of women towards cesarean delivery at maternal request.

Variable	Number
SOURCE OF AWARENESS ABOUT CDMR	
	NUMBER, n=131 (percentage)
Mass media	62 (47)
Friends	49(37)
Doctor	14 (11)
Internet	4(4)
Books	2(1)
REASONS FOR DESIRE FOR C-SECTION	NUMBER, n=42 (percentage)
To avoid pain	28 (67)
Auspicious dates	5(12)
Fear of sexual dysfunction	5(12)
Family pressure	4(9)
REASONS FOR NOT DESIRING C-SECTION	NUMBER, n=89 (percentage)
Fear of operation	32 (36)
Difficulty in subsequent conception	20(23)
Duration of hospital stay	14(16)
Delayed recovery	13(14)
Others	10(11)

This study showed that the rates of C-section in general are 21.2%, which is much higher than the recommended limits by WHO i.e., 15%. Also, 48% of the total study subjects had an idea about Cesarean delivery on maternal request (CDMR). About 15.4% of the total respondents felt that Cesarean delivery on maternal request (CDMR) is a better option than Normal vaginal delivery. This was found to be more in comparison to a study in University of California, Irvine, Orange, CA, USA which showed that only 6.1% of women thought that CDMR was "A good idea" (Pevzner et al, 2011). Though on the other hand the results of our study (15.4%) were low in comparison to another study done by Zhang et al in South East China in the year 2006, wherein 20% of the women wanted to practice CDMR (Zhang et al 2008).

Out of these women, 12% were already aware about the possible adverse effects of CDMR yet they wanted to practice it for their present pregnancy. These findings were higher in comparison to a study conducted by Barber EL et al in Yale School of Medicine, New Haven, Connecticut, USA where only 8% women wanted to practice CDMR (Barber EL et al, 2011). Thereby the variations in the results of our studies can be explained by the difference in the chosen population, timing of the study and methods of collection of data.

Awareness about Instrumental Assisted Delivery (IAD) for example forceps, vacuum suction was less than that of CDMR, 37% and 48% respectively. Reasons as to why these women choose Cesarean mode of delivery showed lack of adequate knowledge and prevalence of various social customs in our society. Our study also showed that out of the total women aware about CDMR (48%), only 6.9% of the women were aware about the possible adverse effects of CDMR. The above findings can be attributed to the inadequate knowledge amongst women in regards to CDMR. Henceforth more women are opting for Cesarean mode of delivery without realizing the after-effects, which they might get subjected to. In contrast, women in western countries have adequate knowledge about both the pros and cons of this practice thereby comparatively less of them consider CDMR as a better option.

Our study also found that out of the 48% women who were aware about CDMR, only 31.5% women wanted to practice CDMR. So there is a huge gap between knowledge and practice of CDMR. The reasons elucidated as to why these women did not wished to practice CDMR were

Volume : 4 | Issue : 11 | November 2014 | ISSN - 2249-555X

fear of an operation (36%) topping the list, followed by difficulties in subsequent conception (23%), length of hospital stay (16%), delayed recovery (14%) and others (11%). This observation can be explained to some extent through the following reasons: Firstly, to think of knowledge as a process, makes expressing a preference inherently problematic because choice until the moment of birth is neither static nor final. Secondly, this study shows that whilst women may support choice in principle, in practice women's autonomy is limited by both available care provision and individual circumstance. Thirdly, this study suggests that women's overriding choice in decision-making is not universally desirable because many of them trust their caregivers as experts.

Our study also found out various reasons as to why women want to practice CDMR. Out of these reasons, most common was avoidance of pain (67%) followed by fear of sexual dysfunction and auspicious date of birth (both 12% each). Similar results were shown in the study done by Zhang et al in South East China (Zhang et al 2008). In our study, correlation between many socio-demographic factors and practice of CDMR were found out. A significant association was found out firstly between age and practice of CDMR as well as awareness of CDMR (p value = 0.001 for both). It was observed that practice of CDMR was more common amongst women above 25 years of age. This can be explained by the fact that as the women ages, her awareness as well as knowledge about various health-related issues increases. Also she becomes more mature which ultimately affects her decision-making capabilities.

Secondly, a significant association was also found between history of previous Cesarean section delivery and CDMR (p value = 0.000). Similar results were also observed in another study done by Romero ST, Coulson CC, Galvin SL (2011) in North Carolina wherein CDMR was desired by 34/316 (11%) candidates; repeat cesarean was desired by 32/70 (46%) patients. Also our findings affirm those of existing research in the UK reporting the percentage of women who express a preference for planned CS during their first pregnancy is low (Kingdon C et al, 2009).

Conclusion:

In the past, the relationship between healthcare professionals and their patients has been described as largely paternalistic. Today, the century old adage "doctor knows best" has been superseded by the principle of "patient choice" in public and private healthcare systems across the developed countries.

Our study showed that the trend of cesarean section mode of delivery has increased far above the recommended limits given by the World Health Organization. It was seen that less than half of the study subjects were aware about CDMR and yet the rates of CDMR were found to be such that this requires immediate attention and notice, as this could be one of the major factors contributing to the increased cesarean section rates globally. It was also seen that there is an increase in knowledge and intended use of CDMR. Out of all the correlates statistically associated with CDMR, age of the woman and previous history of cesarean delivery came to be significantly associated with the awareness as well as practice of CDMR. However due to short duration of the study as under short-term research of Indian Council of Medical Research, the actual practice of CDMR could not be judged.

There are some possible adverse consequences of Cesarean Delivery on demand not due to medical reasons and there is an urgent need to promote the awareness about these adverse -effects associated with CDMR. Increase in prevalence of CDMR may result in increased economical burden over the individual as well as on health services. Therefore it is important to bring about greater awareness about this practice in general society along with emphasis on the adverse effects associated with this practice. Also awareness about the benefits of normal vaginal delivery on reproductive health can help overcome the misconceptions prevalent in the society regarding the cesarean delivery.

REFERENCE American College of Obstetricians and Gynecologists. Cesarean delivery on maternal request. ACOG Committee Opinion No. 394. Obstet Gynecol 2007; 110:1501–1504 | 2. World Health Organization. Appropriate technology for birth. Lancet 1985;2: 436-7 | 3. Cesarean delivery on maternal request in South East China. Zhang et al (2008) | 4. S N Mukherjee. Rising cesarean section rate. J Obstet Gynecol India 2006;56(4):298-300. | 5. Snyman, L. Is the high caesarean section rate a cause for concern? Obstet Gynaecol Forum 2002;12(2):8–13. | 6. Pevzner L, Preslicka C, Bush MC, Chan K. Women's attitudes regarding mode of delivery and cesarean delivery on maternal request. J Matern Fetal Neonatal Med. 2011 Jul;24(7):894-9. | 7. Romero ST, Coulson CC, Galvin SL. Cesarean Delivery on Maternal Request: A Western North Carolina Perspective. Matern Child Health J. 2011 Mar 13. | 8. Kingdon C, Neilson J, Singleton V, Gyte G, Hart A, Gabbay M, Lavender T. Choice and birth method: mixed-method study of caesarean delivery for maternal request. BJOG. 2009 Jun;116(7):886-95