



A STUDY OF TRENDS IN CAESARIAN SECTION IN A TERTIARY CARE HOSPITAL IN FARIDABAD

Community Medicine

Dr. S .L .Vig	Senior Medical Officer, ESIC Medical College & Hospital Faridabad.
Mr. Lokesh Parashar	Assistant Professor cum Statistician, ESIC Medical College & Hospital Faridabad.
Dr. Sangeeta Narang *	Assistant Professor, ESIC Medical College & Hospital Faridabad. *Corresponding Author
Dr. Narendra Singh	Professor and Head Community Medicine, ESIC Medical College & Hospital Faridabad .
Dr. J C Sharma	Professor and Head Obstetrics and Gynecology, ESIC Medical College & Hospital Faridabad.

ABSTRACT

Background: WHO has considered the ideal rate for caesarean sections to be between 10% and 15%. Caesarean section done at proper time in a good health care facility can effectively decrease both maternal and perinatal mortality and morbidity. In India, C-section rates vary widely -- it is 6% in Nagaland and Bihar and 58% in Telangana, showed National Family Health Survey-4 (NFHS-4) data. Although many studies have been done on rates of Caesarian Section in various places , but no study on the rates and reasons for caesarian section has been done till date in ESIC institutions. This study was done to find out the caesarian rates and pregnancy outcome amongst the ESI beneficiaries in ESIC Hospital Faridabad.

Methods: Cross-sectional retrospective study of deliveries conducted in a tertiary care hospital. Hospital records including case sheets of 250 LSCS done from January 1st to December 31st, 2019 in a tertiary care hospital were studied using a checklist. Systematic random sampling was used to select the records.

Results: The total number of deliveries conducted during the year 2019 in this hospital were 3375. Out of these 1109 (36%) were caesarean sections (LSCS). During the study period, the total numbers of deliveries were 1326, out of which 482 (36%) were caesarians. 86% of these caesarians were performed in Emergency. Mean age of mothers was 27 yrs., 27% were primigravida and 31% second gravida, 42% gave history of previous LSCS. Mean gestational age at which LSCS were performed is 38 wks. of pregnancy. Main indications for performing LSCS were fetal distress (52.9%) and previous LSCS. (32%) Majority of newborns weighed between 2.5 to 3.0 kg., with good Apgar scores. No significant gender difference was observed in newborns.

KEYWORDS

ESIC is a social security organization committed to providing curative, preventive, promotive and rehabilitative and monetary services to its beneficiaries. In addition ,they are getting full maternal and child health services. This path breaking study on estimation of the rates of Caesarian section and its indications will help the policy makers in formulating suitable strategies for improving maternal and perinatal morbidity and mortality amongst the ESIC beneficiaries in India.

WHO has considered the ideal rate for caesarean sections to be between 10% to 15%. Caesarean section done at proper time in a good health care facility can effectively decrease both maternal and perinatal mortality and morbidity In India, C-section rates vary widely -- it is 6% in Nagaland and Bihar and 58% in Telangana, showed National Family Health Survey-4 (NFHS-4) data.

As per the NFHS(2015-2016) records, the rate of LSCS is around 17% of all deliveries.

In India the rate of caesarean section delivery has increased from 3 per cent to 10 per cent between 1992-93 and 2005-06 (IIPS, 2007) which are lower compared to some developing nations like Brazil and China. Based on DLHS-3 data, the caesarean section delivery rate in India is 9.2 per cent.

Although many studies have been done on rates of Caesarian Section in various places , but no study on the rates and reasons of caesarian section has been done till date in ESIC institutions. This study is being done to find out the pregnancy outcome and caesarian rates amongst the ESI beneficiaries in ESIC Hospital Faridabad.

Proportion of Caesarean Section to the total births is considered as one of the important indicators of emergency obstetric care (World Health Organization, 2009). A figure below 5% implies that a substantial proportion of women do not have access to surgical obstetric care; on the other hand, a rate higher than 15% indicates over utilization of the procedure for other than life saving reasons (WHO, 1985; WHO,

1993). Based on the WHO systematic review, increases in caesarean section rates up to 10-15% at the population level are associated with decrease in maternal, neonatal and infant mortality

METHODS

This cross-sectional retrospective record study was conducted at ESIC Medical College and Hospital, Faridabad, Haryana, India from 1st January 2019 to 30th June 2019. These cases were traced through the registers kept in labour room, postnatal wards, and OT. The labour register was used to determine the number of deliveries during the study period. All caesarean sections performed at the hospital during this 6-month period were included in the study. There was no exclusion criterion. Systematic random sampling was used to select 250 case sheets of LSCS done from January 1st to December 31st, 2019 . Data were collected in a preconceived format, entered in MS excel sheet and analyzed in SPSS 25 version.

RESULTS

Total number of deliveries in this hospital during study period was 1306 ; there were 845 cases of caesarean section(36%). Among them 31 women had elective LSCS while rest 188 (86%) women underwent emergency caesarean section.

Mean age of the study participants was 27 yrs.

Table 1 : Age –wise distribution of study population

Age	Number of mothers in age group	Percentage
17 – 20	16	7.3
21 – 24	63	28.8
25 – 28	76	34.7
29 – 32	41	18.7
33 – 36	15	6.8
37 – 40	8	3.7
Total	219	100.0

The mean age of mother is 26.56 years and Standard deviation is

4.522 years. Minimum age of mother in our study is 17 years and maximum age of mother is 40 years.

The maximum (76) women were between 25- 28-year age group followed by 63 women in 21-24 age group. While 16 women were young (<20 year) and only 8 women were elderly (>36 years).

74 women were primigravida and 76 women were second gravida . both groups constituted the majority of cases (68.6%). 20.6 % of the women were third gravida while a total 11% were fourth gravida onwards.

Table-2

Number of pregnancies	Number of mothers	Percentage
G1	74	33.9
G2	76	34.7
G3	45	20.6
G4	13	5.9
G5	8	3.6
G6	3	1.4
Total	219	100.0

The commonest indication for LSCS was foetal distress. 71 women had history of cesarean section in last pregnancies .

Table 3: Indication of LSCS.

Reason for LSCS	Number Mother	Percentage
Foetal distress	87	39.7
BREECH	8	3.7
Cephalopelvic disproportion	10	4.6
failed induction	7	3.2
Gestational diabetes	2	0.9
IUGR	4	1.8
Meconium stained liquor	20	9.1
P.LSCS	71	32.4
Nonprogress of labour & Acute foetal distress	2	0.9
Gestational Hypertension	1	0.5
Total	219	100.0

In present study no stillbirth has been reported. No maternal deaths till their discharge have been reported. The average birthweight of the baby was 2.7 kg . all newborns were having good APGAR Score.

Table-4

Birth weight in kg	Number of babies	Percentage
1.5 – 2.0	16	7.3
2.01 – 2.5	28	12.8
2.51 – 3.0	145	66.2
3.01 – 3.5	19	8.7
3.51 – 4.0	11	5.0
Total	219	100

Mean birth weight of baby is 2.7367 and standard deviation is 0.3848 of birth weight

Minimum birth weight of baby is 1.6 kg and maximum 3.8kg

Table-5

Gestational age(week)	Number of mothers	Percentage
34.1 – 35	3	1.4
35.1 – 36	9	4.2
36.1 – 37	36	16.4
37.1 – 38	45	20.5
38.1 – 39	58	26.5
39.1 – 40	43	19.6
40.1 – 41	23	10.5
41.1 – 42	2	0.9
Total	219	

42 Mean of Gestational age is 38.1867 and standard deviation of Gestational age is 1.5468

Minimum of Gestational age find our study is 34 weak and maximum weak

DISCUSSION

The incidence of cesarean section during this study is 36% out of them only 31 (14.2%) women had elective LSCS while rest 188 (85.8%)-

LSCS were done in emergency. Our results show a high rate of caesarean section though largely are done in emergency. The reason for this could be that the ESIC Medical College and hospital is a tertiary care center where the patients come in emergencies as evident by higher number of caesarean sections done in emergency.

Other medical colleges of India on the contrary have lower incidence (25%) reported by Kambo et al. as cesarean rate (elective:18% and emergency:81%). Daniel S et al reported 28.7% caesarean rate (elective :46.06% and emergency :53.9%). in Sub-Sahara region . In Asia survey the overall cesarean rate was 27.3%. China had the highest overall cesarean rates (46.2%) followed by Vietnam, Thailand and Sri Lanka; Cambodia had the lower (14.7%).

Mean age of our study participants was 27 years with Maximum 139 patients between 21-28-year age group, which is comparable with other studies .In this study 74 patients were nulliparous and primary cesarean rate was 58% in our study. The commonest indication of LSCS in our study was foetal distress followed by past history of LSCS.

Conflict of interest: Nil

Financial implications: Nil

Policy Implications: ESIC is a social security organization committed to providing curative, preventive, promotive and rehabilitative and monetary services to its beneficiaries. In addition ,they are getting full maternal and child health services. This path breaking study on estimation of the rates of Caesarian section and its indications will help the policy makers in formulating suitable strategies for improving maternal and perinatal morbidity and mortality amongst the ESIC beneficiaries in India.

Limitations of the study : This study has been conducted in a tertiary care center and medical college where high risk cases are being referred. This may be the cause of greater number of emergencies LSCS. This study does not include cases referred to private sector.

REFERENCES

- Ali M. Maternal and fetal outcome comparison between emergency and elective caesarean. Professional. 2005;12(1):32-8.
- IIPS and Macro International: National Family Health Survey (NFHS-4), 2015-16, India. Int Institute Population Sci, Mumbai, 2007.
- Jain M, Patel A. A cross sectional study of rate, indications and complications of primary caesarean section. Int J Reprod Contracept Obstet Gynecol. 2016;5:1814-9.
- Kambo, I & Bedi, N & Dhillon, Bhupinder & Saxena, Nirakar. (2002). A critical appraisal of cesarean section rates in India. International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics. 79. 151-8. 10.1016/S0020-7292(02)00226-6.
- Loe VA, Gbary EA, Koffi SV, Koffi AK, Traore M, Konan JK, et al. Analysis of caesarean rate and indications of university hospitals in sub-Saharan African developing countries using Robson classification system: the case of Cocody's hospital center, Abidjan-Cote d'Ivoire. Int J Reprod Contracept Obstet Gynecol. 2016;5:1773-7.
- Lumbiganon P, Laopaiboon M, Gülmezoglu AM, Souza JP, Taneepanichskul S, Pang R, et al. Method of delivery and pregnancy outcomes in Asia: the WHO global survey on maternal and perinatal health 2007-08. Lancet. 2010;375:490-9.
- Rahman H, Pradhan D. Rising trends and changed indications of caesarean sections in Sikkim, India: cause for concern? Int J Reprod Contracept Obstet Gynecol. 2016;5:1851-6. Cite this article as: Yadav S, Kaur S, Yadav SS, Thakur B. Analysis of caesarean rate, indications and complications: review from medical college Ambala, Haryana, India. Int J Reprod Contracept Obstet Gynecol 2016;5:3326-9
- World Health Organization, UNFPA, UNICEF and AMDD "monitoring emergency obstetric care: A Handbook", WHO, Geneva. 2009.
- WHO. Indicators to monitor maternal health goals. Report of a technical working group, Geneva. 1993.
- World Health Organization. WHO Statement on Caesarean Section Rates, 2015. Available at apps.who.int/iris/bitstream/10665/161442/1/WHO_RHR_15.02_eng.pdf. Accessed on 20 April 2016.