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Original Research Article

Assessment of indications of lower section caesarean section at tertiary care centre: a cross sectional study

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ABSTRACT

Background: Caesarean section is one of the commonly performed surgical procedures in obstetrics and is certainly one of the oldest operations in surgery. One of the most dramatic features of modern obstetrics is the increase in the caesarean section rate. The present study was conducted to estimate proportion of various indications of LSCS and also to assess socio demographic profile of mothers undergoing caesarean section in a tertiary care centre.
Methods: The present cross sectional observational study was conducted at Government Medical College & Hospital, Akola in the post natal ward (PNC). Non probability convenient sampling method was used. All patients admitted to PNC ward after LSCS were included in study. For data collection paper based pre tested, semi –structured questionnaire was used.
Results: Previous LSCS was indication for LSCS in 32% cases. Eclampsia, preeclampsia and Anaemia were the indications for LSCS in 19.3%, 8.6% and 5.3% cases respectively. Other common indications includes CPD, meconium stained liquor, fetal distress, breech presentations, twin pregnancy and preterm labour.
Conclusions: The proportion of LSCS is more than WHO recommended proportion of LSCS. It may be due to present institute acts as tertiary care center. Still this proportion is high, so encouragement should be given to trial of labour in selected low risk cases and in Primi patients whenever possible.

Keywords: LSCS, Delivery, Caesarean section

INTRODUCTION

Caesarean section is one of the commonly performed surgical procedures in obstetrics and is certainly one of the oldest operations in surgery. One of the most dramatic features of modern obstetrics is the increase in the caesarean section rate.[1] The steadily increasing global rates of cesarean section have become one of the most debated topics in maternity care as its prevalence has increased alarmingly in the last few years.[2,3] Cesarean section is a major surgical procedure with a corresponding level of risk and should be performed in the presence of specific and clearly defined indications while some of the obstetricians consider it to be quite simple, efficient, safe and psychologically. well-tolerated procedure and far superior to secondary interventions such as vacuum delivery or emergency cesarean section.[4] Cesarean section is subject of professional controversy.[5] Controversy over the rate of cesarean section is going on though there is no clear evidence on the relative benefits of higher or lower rates.[6] Today cesarean birth accounts for 15-25% of all deliveries in developed countries with maternal mortality of less than 1:10,000.[7]

In recent years, the caesarean section rate is increased in different parts of the world, both in developed and

developing countries. There is an increase in trend in both primary and repeat caesarean section rates. The reasons for the increase are multifaceted. Fetal distress, especially its detection by continuous electronic fetal monitoring, more liberal use of caesarean section for breech presentation and improved safety of caesarean section are commonly cited causes.[3] According to WHO, which reviewed 110,000 births from nine countries in Asia during 2007 – 2008, 27% births were delivered by caesarean section. India had 18% incidence. The WHO's recommendation is that primary caesarean sections to be kept at less than 15%. In Kerala, this is 30%.[8]

The present study was conducted to estimate proportion of various indications of lower section caesarean section (LSCS) and also to assess socio demographic profile of mothers undergoing caesarean section in a tertiary care centre.

METHODS

The present cross sectional observational study was conducted at Government Medical College & Hospital, Akola in the post natal ward (PNC). The study was conducted by Department of Community Medicine, Government Medical College & Hospital, Akola. Data was collected from 1st June to 30th June. Non probability convenient sampling method was used. All patients admitted to PNC ward after LSCS were included in study. Patients those who were not willing to take part in study, those who were referred out and maternal deaths were excluded from study. Total 166 mothers were underwent LSCS, out of them 16 were excluded due to various reasons so total 150 had participated. Informed consent was obtained from all study subjects. For data collection Paper based Pre tested, Semi –Structured questionnaire was used. Study protocol was reviewed by ethical committee and granted permission for the study. Data was entered in duplicate into an Epidata Software Package (Epidata entry Version 3.1; Epidata Association, Ondense, Denmark. http://www.epidata.dk), the database were compared and discrepancies resolved by checking the original data. Data was analysed using SPSS 20.0 for windows (SPSS inc., Chicago, IL, USA).

RESULTS

During study period, in the month of June 2016, total deliveries conducted were 296. Out of which, deliveries conducted by Caesarean section were 166 (56.08%).

Table 1 show that more than half of mothers (53.3%) were in age group of 19-24 yrs followed by 25-30 yrs age group which constitutes 42.0%. Majority of mothers (80%) were housewives. Sixteen percent of mothers were engaged in unskilled work. 62.7% of mothers were Hindu by religion. Unmarried pregnancies were 4%. Illiteracy was high amongst mothers (26%). Only 2% of mothers studied after higher secondary certificate examination. Seventy four percent of mothers were belonged to nuclear family.

Table 1: Socio-demographic profile of study subjects.

Variables	Frequency (n=150)	Percentage
Age		
19-24	80	53.3%
25-30	63	42.0%
30-36	7	4.7%
Occupation		
Professional	1	0.7%
Semi-professional	1	0.7%
Clerical	3	2.0%
Skilled	1	0.7%
Semiskilled	0	0.0%
Unskilled	25	16.7%
Housewife	119	79.3%
Religion		
Hindu	94	62.7%
Muslim	41	27.3%
Buddhist	14	9.3%
Christen	1	0.7%
Marital status		
Married	142	94.7%
Unmarried	6	4.0%
Divorced/Separated	2	1.4%
Education		
Illiterate	39	26.0%
Primary	47	31.3%
Secondary	53	35.3%
Higher secondary	8	5.3%
Graduate	2	1.3%
Post graduate	1	0.7%
Type of Family		
Nuclear	111	74.0%
Joint	39	26.0%

Table 2 shows that, in 32% of cases, previous LSCS was indication for LSCS. Eclampsia, preeclampsia and anaemia were the indications for LSCS in 19.3%, 8.6% and 5.3% cases respectively. Other common indications includes CPD, meconium stained liquor, fetal distress, breech presentations, twin pregancy and preterm labour. Other less common indications includes Prolonged Labour, Abruptio Placenta, Fibroid uterus, Heart disease, hypothyroidism, Placenta previa and Ante partum hemorrhage (APH).

Table 3 shows that, out of 55 primipara 52 were live births, 1 (1.81%) baby died after birth and 2 (3.63%) were still births. Amongst multipara, 92 (96.8%) were live births, 2 (2.10%) baby died after birth and 1 (1.05%) was still birth. Proportion of Still birth is higher amongst primipara.

Table 2: Various indications for LSCS.

Variables*	Primipara	Multipara	Frequency	Percentage
Previous LSCS	00	48	48	32
Preeclampsia	09	20	29	19.3
Eclampsia	07	06	13	8.6
Anemia	02	06	08	5.3
CPD and Obstructed labour	05	02	07	4.6
Fetal distress	05	01	06	4
Meconium Stained liquor (MSL)	04	02	06	4
Post dated	04	02	06	4
Breech presentation	04	01	05	3.3
Preterm labour	03	01	04	2.6
Twins	03	01	04	2.6
Prolonged Labour	03	00	03	2
Abruptio Placenta	01	01	02	1.3
Fibroid uterus	02	00	02	1.3
Heart disease, hypothyroidism	02	00	02	1.3
Placenta previa	01	01	02	1.3
Ante partum hemorrhage (APH)	01	00	01	0.6
At will of patient	01	00	01	0.6
Diabetes	00	01	01	0.6
Intra uterine growth retardation (IUGR)	00	01	01	0.6
Occipitoposterior Presentation	01	00	01	0.6
PIH with Rh Negative mother	00	01	01	0.6
Premature rupture of membranes (PROM)	01	00	01	0.6
Transverse lie	01	00	01	0.6

*some patients were having multiple causes; CPD: Cephlopelvic disproportion

Table 3: Outcome of LSCS Pregnancy in study subjects.

Outcome	Primipara (%)	Multipara (%)
Live	52 (94.54)	92 (96.8)
Died after birth	01 (1.81)	02 (2.10)
Still birth	02 (3.63)	01 (1.05)
Total	55 (100)	95 (100)

DISCUSSION

Caesarean section is a major abdominal surgery which is life saving for mothers and fetus by providing alternate route of delivery. This procedure offer great benefit in situation in which vaginal delivery carries high risk of complications and death. We have conducted this study in the month of June in post natal ward of tertiary care hospital. Total deliveries conducted in this month were 296 out of these 130 were vaginal deliveries and 166 were caesarean section deliveries. It is because GMC Akola acts as a tertiary care referral centre. Most of the complicated and high risk ANCs of District hospital, Sub district hospitals, Rural hospitals, Maternity hospitals and PHCs are referred to GMC Akola for further management.

Sakael TM et al conducted a hospital based study from 2001-2005 which showed that proportion of Caesarean section cases were 32.6%.[9] Similar study conducted by Haider G et al in Isra university hospital, Hyderabad Pakistan showed that 64% deliveries were conducted by caesarean section.[10] According to WHO no region in the world is justified in having caeseran section rate 10 to 15%. Thus we are exceeding WHO criteria.

In present study 'previous LSCS' was indication in 32% of cases and CPD in 4.2% cases. A study conducted by Katke Rajshree D et al found that proportion of previous

LSCS was 45.8% and CPD in 4.64% cases.[11] A Study by Nikhil Anand et al found that previous LSCS was indication in 48.9% cases and CPD in 6.32% cases.[12] In a study conducted Bade P et al at Latur GMC showed that proportion of previous LSCS was in 24.8% cases.[13]

In present study Eclampsia and preeclampsia were the indications for LSCS in 19.3%, and 8.6% cases. Katke Rajshree D et al found that proportion of PIH as a indication of LSCS in 8.86% cases.[11]

In present study fetal distress was seen as a indication in 4% cases A Study by Nikhil Anand et al mentioned fetal distress as LSCS indication in 10.94% cases.[11]

In present study breech presentation is seen in 3.3 cases. In a study conducted by Bade P et al mentioned breech presentation in 2.9 cases for LSCS.[13] PIH, Breech presentation, fetal distress, and cephalopelvic disproportion were the common indications for LSCS in primi. PIH was the commonest cause in multipara.

Prolonged labour is seen in 2% of cases in present study. Maimoona Hafeez et al conducted a cross sectional study mentioned that prolonged labour was seen in 18.29% cases.[14]

CONCLUSION

In this study, caesarean section rate (56.08%) is found to be higher as compared to other studies and WHO guidelines. Caesarean sections rate is high probably because Govt Medical College, Akola acts tertiary care centre. Previous LSCS is a common indication in 32% of mothers. Besides previous LSCS, Eclampsia, Preeclampsia, Anaemia and Cephalopelvic disproportion are the common indications for LSCS are seen in present study. Proportion of Still birth is high in primiparas.

If proportion of LSCS is low amongst primipara then proportion of previous LSCS would decrease and subsequently proportion of LSCS in Multipara would also decrease. Encouragement should be given to trial of labour in selected low risk cases and in primi patients. The results of the study cannot be generalized to general population as it is small sample hospital based single centered study so it is possible that it may not be showing exact picture of LSCS delivery.

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