

**To Study Indications and Feto-Maternal Outcome of Elective LSCS****Kuldeep Rathod<sup>1</sup>, Shruti Tailor<sup>2</sup>, Saral Bhatia<sup>3</sup>, Nilam Prajapati<sup>4</sup>**<sup>1</sup>Senior Resident, Government Medical College, Surat<sup>2</sup>Senior Resident, Government Medical College, Surat<sup>3</sup>Associate Professor, Government Medical College, Surat<sup>4</sup>Assistant Professor, Government Medical College, Surat

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Conflict of interest: Nil

**Abstract****Objective:** To study indications and feto-maternal outcome of Elective LSCS.**Methods:** A prospective observational study was conducted in Department of Obstetrics and Gynaecology enrolling 130 consenting subjects undergoing Elective Caesarean section over the period of 12 months.**Results:** In our study, majority of the subjects(77.69%) belonged to age group of 20-29 years. 46.84% of the study subjects underwent their elective Caesarean section after 38 weeks of gestation. In our study, 53.84% of subjects were primipara. Majority of the subjects(35.38%) underwent their elective Caesarean section for previous CS with negative consent for VBAC followed by 15.38% subjects for prev 2 lscs, 14.61% for cephalo-pelvic disproportion. 3% of subjects had developed maternal complications and 2.3% subjects had neonatal complications.**Conclusion:** As caesarean section being associated with maternal morbidity and neonatal outcome, decision for Elective Caesarean section should be undertaken after considering all obstetric factors and medical conditions.**Keywords:** Elective LSCS (Lower segment Caesarean section), VBAC (Vaginal Birth after Caesarean section).

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**Introduction**

WHO has decided 15% as an optimal rate of Caesarean section.[1] However, there is consistent rise in rates of Caesarean section with increase in number of institutional deliveries. There is rising trends towards a primary Caesarean delivery. Also, history of prior pregnancy complications, history of prior CS, maternal factors and various fetal factors are associated with increased Caesarean section deliveries. There are various situations where a decision of an elective Caesarean section has to be taken as an obstetric indication, medical reasons or as per maternal request.

**Aims and Objectives:** To study indications and feto-maternal outcome in an Elective LSCS in a tertiary care centre of South Gujarat.**Materials and Methodology:** A prospective observational study was conducted in department of Obstetrics and Gynaecology enrolling 130 consenting subjects undergoing Elective Caesarean section over the period of 12 months after HREC approval.**Inclusion Criteria:** All the consenting women undergoing Elective Caesarean section**Exclusion Criteria**

- Pregnancy before 37 weeks
- Non consenting patient
- IUFD

All consecutive consenting women were admitted for elective Caesarean section after confirmation of Gestational age. Routine investigations were undertaken and detailed personal, past and family history was taken on admission. Obstetric examination was done and confirmation of indication of Elective Caesarean section was done. After Elective Caesarean section, subjects were managed as per departmental protocols. Subjects were followed till discharge. Maternal and neonatal complications were noted intra-operatively as well as post-operatively. Data entry and analysis were done.

**Results**

During the study period, age group of the subjects undergoing Elective LSCS were studied. The observations are mentioned in Table no: 1 below.

**Table 1: Age group of study subjects:**

Age	No of participants(n=130)	Percentage
< 19 years	6	4.61
20-29 years	101	77.69
30-39 years	23	17.69
> 39 years	0	0

Majority of the subjects (77.69%) undergoing Elective Cesarean section were in age group between 20-29 years. Mean age of our study participants was 25 years. Six subjects (4.61%) of our study participants belonged to age group of less than 19 years in which five subjects were primigravida and one subject was second gravida indicating the need to improve awareness regarding

post marriage conception. In the study conducted by Asiegbu et al[2], 1% of subjects underwent Elective Cesarean section under 19 years of age, 42.6% in age group of 20-29 years, 53.3% in age group of 30-39 years.

The gestational age at which subjects underwent elective Cesarean section was noted and depicted in Table no: 2

**Table 2: Gestational age of study subjects:**

Gestational age	No of participants(n=130)	Percentage
37 to 37+6 weeks	28	21.53
38 to 38+6 weeks	41	31.53
39 to 39+6 weeks	41	31.53
≥ 40 weeks	20	15.38

Majority of our study participants(78.44%) underwent their elective Caesarean section after 38 weeks of gestation. However, one study participant underwent an elective Caesarean delivery at ≤37 weeks of gestation due to previous caesarean section with Severe Gestational Hypertension with asymmetric IUGR with short interdelivery interval with abnormal doppler. Similar observations were observed in study conducted by Alan et al[3], where

majority of subjects (49.1%) underwent Elective Cesarean section at 39 weeks of gestation, 29.5% subjects at 38 weeks and only 6.3% at 37 weeks of gestation.

In our study, the subjects were divided in terms of Parity, the results obtained are depicted in Table No: 3

**Table 3: Parity of study participants**

Parity	No of participants(n=130)	Percentage
Nullipara	27	20.76
Primipara	70	53.84
2nd para	28	21.53
3rd para	5	3.84

Majority of our study (53.84%) participants were primipara as compared to 47.4% in the study conducted by Asiegbu et al [2] and 56% in study conducted by Galzie et al [4]. However, 20.76% pregnant women underwent their primary elective Caesarean delivery for indications like gross

cephalo-pelvic disproportion, Malpresentation or on maternal request which was only 2% in study conducted by Galzie et al. [4]

The indications for which women underwent Cesarean section were studied and mentioned in Table No: 4

**Table 4: Indications of Elective Cesarean section in study participants**

Absolute Indications	No of Participants(n=40)	Percentage
Major degrees of Placenta previa	2	1.53
Prev ≥ 2 lscs	21	16.15
Transverse lie	4	3.07
Past H/O Myomectomy	1	0.77
Prev Cs with short interdelivery interval	11	8.46
Active Genital Warts	1	0.7
Relative indications	No of Participants(n=90)	Percentage
Prev Cs with negative consent for VBAC	46	35.38
Cephalo pelvic disproportion	19	14.61
Breech Presentation	13	10
Maternal request	7	5.38
Twins with first non cephalic	3	2.30
Heart disease	2	1.53

Majority of elective caesarean section (35.58%) in our study were undertaken for previous caesarean section with negative consent for VBAC. Similar observation where majority of subjects underwent Elective Cesarean section for previous LSCS was observed in study conducted by Thakur V et al (78.87%) [5], Agrawal et al (35.84%) [6] and Soukayna et al (47.18%) [7]. 14.61% of the study subjects underwent Elective Cesaeran section for Cephalo-pelvic disproportion as compared to 10% in study conducted by Asiegbu et al [2] and 21.6% in

study conducted by Agrawal et al [6]. 1.53% of subjects underwent Elective Cesarean section for major degrees of Placenta Previa as compared to 3.52%, 0.57% and 9% in study conducted by Soukayna et al [4], Thakur V et al [5] and Asiegbu et al [2] respectively.

Maternal complications were noted during their hospital stay. Maternal complications noted are given in Table

**Table 5: Maternal Complications noted in study subjects**

Maternal Complications	No of Subjects(n=16)	Percentage(%)
PPH	2	1.5
Need for Blood transfusion	8	6.1
OBICU admission	4	3.07
Shock	1	0.7
Obstetric Hysterectomy	1	0.7

12% of the study subjects developed complications in our study as compared to 28.7% in study by Thakur V et al [5]. Obstetric hysterectomy was undertaken in one subject (0.7%) with intra-operatively diagnosed placenta increate in the caesarean section undertaken for previous CS with central placenta previa. There were no maternal

deaths in our study. 6.7% of the study subjects required post-operative blood transfusion which was similar to 5.17% in the study by Thakur V et al [5]. Neonatal outcome was recorded in terms of their Birth weight, APGAR Score and Neonatal complications. This data is compiled in Table No 6 below.

**Table 6: Neonatal outcome of study participants**

Neonatal weight	No of participants(n=133)	Percentage
< 1.5 kg	0	0
1.5-2.5 kg	35	26.31
2.5-3.5 Kg	91	68.42
>3.5 kg	7	5.26
APGAR	No of participants(n=133)	Percentage
Normal	132	99.24
Abnormal	1	0.75
Complications	No of participants(n=3)	Percentage
Congenital Malformations	2	1.5
Meconium Aspiration	1	0.75
Sepsis	0	0
Respiratory distress syndrome	0	0
Early neonatal death	0	0

Majority of the subjects (68.42%) had neonatal weight between 2.5-3.5 kg as compared to 80.35% in the study conducted by Nnadi et al. [8]

Majority of the subjects (99.24%) had normal APGAR at birth. However, in one subject one minute and five minute APGAR apgar score was 7/10 and 8/10 respectively with baby weight 1.6kg in which the Cesarean section was undertaken for maternal request with twin gestation with gestational hypertension. However, another twin baby weight was 2.6kg with normal APGAR.

2.3% of the neonate developed complications as compared to 4.5% and 5.3% in study conducted by Asiegbu et al [ 2] and Agrawal et al [6] respectively. Among the neonates that developed complications

in our study, two subjects had congenital malformations that was detected post- delivery and one neonate had an intra-operative meconium stained liquor (where Cesarean section was taken for Cephalo-pelvic disproportion) and hence baby was admitted in NICU for observation.

#### Discussion

In our study, majority of the Cesarean section were undertaken after 37 completed weeks of gestation reducing the risk of prematurity and thus Respiratory distress in newborn. Hence emphasising that Elective Cesarean section should be undertaken after fetal lung maturity is achieved. Majority of the subjects who underwent Cesarean section were primipara. However, 20.7% of the nullipara

pregnant women underwent primary Elective Cesarean section. These group of subjects should be counselled about the benefits, risk and morbidities related to Cesarean delivery and the pregnant lady should be given an option for deciding their mode of delivery. In our study, majority of the Elective Cesarean section were undertaken for previous Cesarean section with negative consent for VBAC emphasizing the need to reduce the rates of primary Cesarean section. Pregnant ladies with prior Cesarean section should be made aware regarding Trial of Labour after Cesarean birth (TOLAC) from their antenatal period and should be given an option for Elective Repeat Cesarean section or TOLAC. 7.06% of the study participants underwent their Elective Cesarean section for previous Cesarean section with short interdelivery interval emphasizing the need to strengthen family planning and proper birth spacing. There were 10% of study subjects who underwent Cesarean section for Breech presentation indicating that pregnant ladies with Breech presentation should be given an option of ECV(External Cephalic Version) if not contraindicated.

### Conclusion

There are various maternal and fetal factors responsible for the modes of delivery. The indications for Cesarean section have been evolved over times. As caesarean section being a surgical procedure, it is associated with maternal morbidity and neonatal outcome hence decision for Elective Cesarean section should be undertaken after consideration of all obstetric factors and medical conditions. So, Elective cesarean section if planned should be considered after 39 completed weeks of gestation. The rates of Elective Cesarean section can be reduced by reducing the rates of primary Cesarean section as majority of the subjects had previous Cesarean section.

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