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Original Research Article

Indication and complication of caesarean section at tertiary care hospital: a retrospective study

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ABSTRACT

Background: The incidence of cesarean section is steadily rising. Cesarean delivery has played a major role in lowering both maternal and perinatal morbidity and mortality rates. There are various factors involved in the rise of rate of cesarean section like rising incidence of primary cesarean delivery, identification of high-risk pregnancy, wider use of repeat cesarean section, rising rates of induction of labor and failure of induction, no reassuring fetal status etc.

Methods: A retrospective cross-sectional study was conducted. Data was collected from patient records of the hospital during 1st January 2018 to 30th June 2018. All patients (N= 602) who had delivered their baby by cesarean section were included in the study. Data were analyzed by help of SPSS version 21 after proper compilation.

Results: Among all women who underwent cesarean section, majority were age group between 21 and 30 years (67.1%). Repeat cesarean section (48.5%), followed by fetal distress (18.9%), oligohydramnias (6.6%) and cephalopelvic disproportion (6.5%) were most common among all major indication of cesarean section. Intrapartum complication (2.0%) includes postpartum hemorrhage (1.2%), CS hysterectomy (0.5%), bladder injury (0.3%) and postpartum complication (2.3%) including UTI (0.8), wound infection (0.5%), sepsis (0.5%), lactation failure (0.5%) were major maternal complication of cesarean section.

Conclusions: Reduction of number of primary cesarean section, successful VBAC, individualization of the indication and careful evaluation, following standardized guidelines can help to keep rate of cesarean section to the possible minimum level.

Keywords: Fetal distress, Malpresentation, Previous cesarean section

INTRODUCTION

Cesarean section is one of the most commonly performed surgical procedure in appropriateness of increasingly employing a surgical procedure to short circuit or entirely bypass labour and delivery.¹

According to WHO, though there is no ideal CS rate, CS rate above 10-15% does not confer additional health benefits in terms of fetal and maternal morbidity and mortality.² According to ICMR study conducted in 30

teaching hospitals in India; there is an increase in CS rate from 21.8% in 1993-1994 to 25.4% in 1998-1999.³ The rapid increase in cesarean birth rates from 1996 to 2011 without clear evidence of concomitant decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean delivery is overused.⁴

The aim of this study is to analyse the indications so as to find out the cause behind the rise in rate of CS and modify them so as to reduce the rate or to keep the rate to the minimum possible level.

METHODS

A retrospective cross-sectional study was carried out among 602 patients who underwent cesarean section dating from 1st January 2018 to 30th June 2018 in Department of Obstetrics and Gynecology at tertiary care hospital SKIMS, Soura, Jammu and Kashmir. Data was collected from hospital records.

All patients who delivered their babies by CS during the study period were included in this study. Various variables such as mode of delivery, type of cesarean section, indications and complications of cesarean section were recorded along with demographic data such as age, parity and gestational age.

Data of all the 602 patients was analyzed by using SPSS version 21, Software and Microsoft excel.

RESULTS

In present study of 602 cases that underwent cesarean section, previous cesarean section was the leading indication to CS [292 (48.5%)] followed by fetal distress [114(18.9%)], oligohydramnias [40(6.6%)], cephalopelvic disproportion [39(6.5%)], failure to progress [34(5.6%)], malpresentation [23(3.8%)], Toxemia of pregnancy [18(3.0%)], GDM [13(2.2%)] (Table 1).

Table 1: Indication of cesarean section.

Indication	Frequency (n)	Percent
Repeat CS	292	48.5
Fetal distress	114	18.9
Failure to progress	34	5.6
Mlpresentation	23	3.8
Toxemia	18	3.0
Placenta previa	8	1.3
Twins	2	.3
APH	9	1.5
Post dated	4	.7
Prom	6	1.0
CPD	39	6.5
Oligohydroamnios	40	6.6
GDM	13	2.2
Total	602	100.0

As shown in foregoing table, out of previous CS cases, [90 (28.7%)] patient were having previous cesarean section with oligohydramnias, [36 (11.5%)] patient were having previous CS with cephalopelvic disproportion. Previous 2 LSCS, previous 3 LSCS, previous 4 LSCS were seen in [4 (1.3%)], [33 (10.5%)], [17 (5.4%)] respectively.

Others are PROM [28 (8.9%)], fetal distress [27 (8.6%)], Toxemia 27 (8.6%), failure to progress [20 (6.4%)],

malpresentation [17 (5.4%)], GDM [9.0 (2.9%)], post-dated [6 (1.9%)] (Table 2).

Table 2: Indication in previous cesarean section.

Indication in previous scar	Frequency (n)	%
Scar with fetal distress	27	8.6
Scar with failure to progress	20	6.4
Scar with malpresentation	17	5.4
Scar with toxemia	27	8.6
Scar with CPD	36	11.5
Scar post dated	6	1.9
Scar with prom	28	8.9
Scar with oligohydroamnios	90	28.7
Scar with GDM	9	2.9
Previous 2 LSCS	4	1.3
Preiousv 3 LSCS	33	10.5
Previous 4 LSCS	17	5.4
Total	314	100.0

Maximum number of CS was in age group of 20-30 years [404(67%)] followed by >30 years [188(31.1%)] followed by <20 years [10(1.7%)] (Table 3).

Table 3: Age Group

Age group	Frequency (n)	Percent
<21	10	1.7
21-30	404	67.1
>30	188	31.2
Total	602	100.0

Maximum number of CS was in multiparous women [354(58.8%)] (Table 4).

Table 4: Parity.

Parity	Frequency (n)	Percent
Primi	248	41.2
Multi	354	58.8
Total	602	100.0

The tabulated data shows that majority of caesarean section were emergency [383(63.6%)] (Table 5).

Table 5: Type of cesarean section.

Type of Cesarean	Frequency (n)	Percent
Elective	219	36.4
Emergency	383	63.6
Total	602	100.0

[12 (2.0%)] patients had intrapartum complications like PPH [7(1.2%)], CS hysterectomy [3(0.5%)], bladder injury [2(0.3%)] (Table 6) and [14(2.3%)] patients had postpartum complications like wound infection [3(0.5%)], sepsis [3(0.5%)], UTI [5(0.8%)], lactation failure [3(0.5%)] (Table 7).

Table 6: Intra operative complications.

Intra operative complications	Frequency (n)	%	Valid percent	Cumulative percent
PPH	7	1.2	58.3	58.3
CS hysterectomy	3	0.5	25.0	83.3
Bladder injury	2	0.3	16.7	100.0
Total	12	2.0	100.0	
Total	602	100.0		

Table 7: Postpartum complications.

Postpartum complications	Frequency (n)	%	Valid percent	Cumulative percent
Wound infection	3	0.5	21.4	21.4
Sepsis	3	0.5	21.4	42.9
UTI	5	0.8	35.7	78.6
lactation failure	3	0.5	21.4	100.0
Total	14	2.3	100.0	
Total	602	100.0		

DISCUSSION

Growing rate of CS is a matter of concern everywhere in the world. The present study is a retrospective hospital record-based study, carried out in the department of obstetrics and Gynecology at tertiary teaching institute maternity hospital SKIMS Soura Jammu and Kashmir. In present study the most common indication for caesarean section was repeat caesarean section (48.5%) followed by fetal distress (18.9%) (Figure 1).

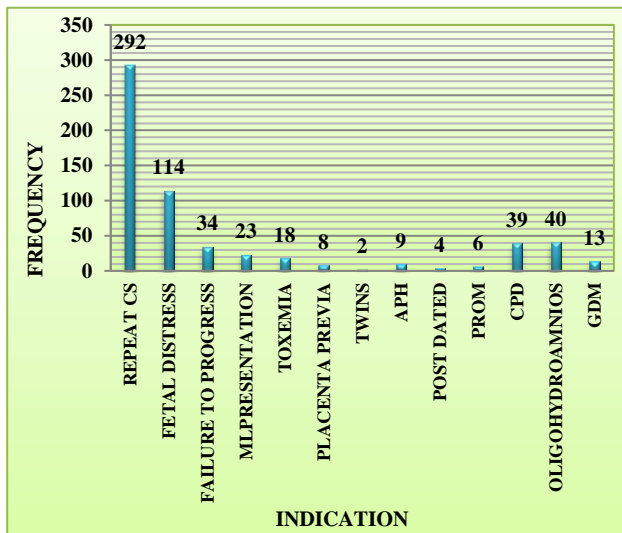


Figure 1: Indication for caesarean section.

Similar results were obtained in study conducted by Pandya JM et al (46.2%) and (13.4%) respectively. Previous cesarean section was the commonest indication in a study conducted in developed countries as well.^{5,6} Practice of trial for vaginal birth after cesarean (VBAC) is less in our institute due to doubtful scar strength, details regarding previous CS being not available. No

trial was given to patients with previous 2 or more sections and also in those women who refused for vaginal delivery. In present study maximum number of cesarean sections were in age group of 21 to 30 years 67.1% which is comparable to studies done by Jawa A, et al and Sarma P, et al.^{7,8}

Maximum numbers of caesarean section were observed in multiparous women 58.0% as compared to primiparous 41.2 %. Similar results were seen in study done by Dhakal KB et al 53.5% and 46.5% respectively.⁹ In present study 63.6% of cases were operated in emergency for cesarean section, while 36.4% patients were planned for elective cesarean section. Similar results were found in study done by Pandya JM et al.

The caesarean sections were associated with increased risk of maternal and perinatal morbidity as compared to vaginal deliveries even in low risk cases.^{5,10}

In present study, the intra partum complication was PPH (1.2%), caesarean section hysterectomy (0.5%), bladder injury (0.3%) and post-partum complication was UTI (0.8%), lactation failure (0.5%), wound infection (0.5%), sepsis (0.5%). In a study by Das RK et al the morbidity rate was found as 12.02%.¹¹ Surgical site infection (4.35%) was the commonest complication followed by atonics PPH (2.43%).

CONCLUSION

The main indications of CS were previous CS, fetal distress, oligohydramnias, cephalopelvic disproportion etc.

Maternal complications of CS were low. Reduction of number of primary cesarean section, successful VBAC, individualization of the indication and careful evaluation,

following standardized guidelines can help to keep rate of cesarean section to the possible minimum level.

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