



Original Research Article

Analysis of caesarean section in a district hospital

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Abstract

Background: Caesarean section is a surgical operation to deliver a baby or babies by means of an incision through the abdomen and uterus. The World Health Organization (WHO) has recommended an ideal caesarean section (CS) rate as 10-15%.

Methods: This is a retrospective study of all the caesarean deliveries performed between 1st October 2019 to 31st March, 2020 in the Department of Obstetrics and Gynaecology in Regional Hospital, Bilaspur, HP, India. Data were analysed from the hospital records. Maternal data collected included the age, parity, type of CS and indication of CS.

Results: During the study period a total of 809 patients delivered. 121 patients had undergone CS with the CS rate being around 14.96%. Maximum number of patients were between 21-30 years (80.17%) and 56.19% were primipara. Foetal distress (32.23%) was the commonest indication followed by post caesarean pregnancy (25.62%) and failed induction (14.05%).

Conclusions: The caesarean rate in our institution during the study period was 14.96% which is near the standard caesarean rate. Most of caesareans were done in emergency (92.66%). Our main emphasis is on reduction of rate of repeat caesarean sections which can be lowered at our level by increasing the trained staff for the continuous monitoring of such cases.

Keywords: foetal distress, post caesarean pregnancy, failed induction, failed progression.

Introduction

Caesarean section is a surgical operation to deliver a baby or babies by means of an incision through the abdomen and uterus¹Caesarean section (CS) is one of the commonly performed surgical procedures in obstetrics².

In recent years, the caesarean section rate is increased both in developed and developing countries; both primary and repeat caesarean section rates. The reasons for the increase are

multifactorial which includes 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. But as per WHO statement (2015) -“Every effort should be made to provide caesarean sections to women in need rather than striving to achieve a specific rate”

This study is aimed to find the rate of caesarean deliveries and various indications of the procedure in our institution.

Methods

This is a retrospective study of all the caesarean deliveries that occurred in the period between 1st October 2019 to 31st March 2020 in the Department of Obstetrics and Gynaecology in Regional Hospital, Bilaspur, Himachal Pradesh, India. This is a secondary care hospital receiving referred patients from nearby civil hospitals, Community health centres, peripheral health centres.

Data were analysed from the hospital records. Maternal data collected included the age, parity, type of CS and indication of CS. The caesarean rate was calculated as:

(Total number of caesarean deliveries / Total number of deliveries) × 100.

The indications for caesarean section included foetal distress, malpresentation, previous caesarean section, failed induction, failed progression, cephalopelvic disproportion, medical disorders etc. The study was approved by the institutional ethical committee.

Results

During the study period a total of 809 patients delivered and 121 patients had undergone caesarean section.

Table 1: Month wise deliveries, caesarean section and caesarean section rates

Month	Total Deliveries	Caesarean Section	CS Rate
October 2019	132	17	12.88%
November 2019	123	19	15.45%
December 2019	122	12	9.84%
January 2020	157	24	15.29%
February 2020	143	20	19.99%
March 2020	132	29	21.97%

Table 1 shows month wise distribution of deliveries, caesarean sections and Caesarean section rates from October 1, 2019 to 31st March 2020. Caesarean section were lowest in December 2019 (9.84%) and highest in March 2020 (21.97%).

Table 2: Caesarean section rates

Mode of Delivery	Number of cases	Percentage
Vaginal Delivery	688	85.04%
Caesarean Delivery	121	14.96%
Total	809	
Type of Caesarean		
Emergency	112	92.66%
Elective	9	7.44%

Table 2 shows that the caesarean section rate at the institution comes to be around 14.96% whereas vaginal delivery rate was 85.04%. Majority of the CS (92.66%) were done as emergency procedure as patients mostly came to this hospital when there was emergency or were referred. Only 7.44% cases had elective CS.

Table 3: Demographic analysis of patients who underwent caesarean

Parameters	Number of cases	Percentage	
Age	20 years and below	8	6.61%
	21-30 years	97	80.17%
	31-40 years	15	12.39%
	>40 years	1	0.83%
Parity	Primi	68	56.20%
	Multi	53	43.80%
Residence	Rural	96	79.34%
	Urban	25	20.66%

Demographic analysis shows maximum number of patients to be between 21-30 years (80.17%). Those of 20 years and below were 6.61%, 31-40 years group had 12.39% and only 0.83% were above 40 years. 68 patients (56.20%) were primipara and 43.80% cases were multipara (Table 3). Majority of the patients (79.34%) belonged to the rural areas and 20.66% cases were from urban areas.

Table 4: Percentage of Caesarean Section in relation to Period of Gestation

Period of Gestation	Number of cases	Percentage
< 37 weeks	7	5.79%
=>37 weeks	114	94.21%

Table 4 depicts the distribution of caesarean sections according to period of gestation. Majority of the cases had period of gestation more than 37 weeks at the time of caesarean (94.21%). Only 5.79% deliveries were preterm.

Table 5: Indication of caesarean deliveries

Indications	Number of cases	Percentage
Fetal distress	39	32.23%
Post caesarean pregnancy	31	25.62%
Failed induction	17	14.05%
Malpresentation	15	12.39%
Failed progression	10	8.26%
Cephalopelvic disproportion	4	3.31%
Placenta previa with APH	2	1.65%
DTA	1	0.83%
Medical disorders	1	0.83%
Vaginal varicose veins	1	0.83%

Among the indications, it was observed that fetal distress (32.23%) was the commonest cause followed by post caesarean pregnancy (25.62%) as shown in table 5. 14.05% cases were due to failed induction and malpresentations constituted 12.39%.

Discussion

The World Health Organization (WHO) has identified an ideal caesarean section (CS) rate for a nation of around 10-15%. In the present study we found the CS rate of the institution to be 14.96% which is lower to the findings of Bhasin SK et al³. Santhanalakshmi C et al⁴ found CS rate to be comparable (12.5%) whereas G Singh et al⁵ and Haidar G et al⁶ (Pakistan) reported CS rate as high as 51.1% and 67.7% respectively.

In the present study majority of the CS (92.56%) were performed as emergency cases which is higher than findings of Gupta M et al⁷ who found emergency cases to be 62.08%.

Demographic data analysis of the present study showed that 80.17% cases belonged to 21-30 years which is similar to the findings of Jawa A⁸. Majority of our cases (79.34%) belonged to rural areas whereas Gupta M et al⁷ found most of the cases belonging to urban areas. In our institution majority of the patients come from a rural background.

In the present study, foetal distress was the commonest indication (32.23%) of CS. Studies by Barber EL et al⁹ and Liu S et al¹⁰ also showed similar results. This is in contrast to the findings of Santhanalakshmi C et al⁴ and Gupta M et al⁷

where previous caesarean was the leading indication of CS.

The post caesarean cases accounted for the second commonest indication in out hospital (25.62%). The incidence of CS in previous CS case can be minimized by routine practice of a trial of labour of Vaginal Birth after Caesarean (VBAC). VBAC is less in our hospital due to details regarding previous CS mostly being not available, doubtful scar strength, greater number of complicated referral cases to deal with and shortage of trained personnel for continuous monitoring of such cases. Few studies found that VBAC with a well-defined protocol.

Failed induction constituted 14.05% of caesarean deliveries whereas malpresentations comprises 12.39% of caesarean deliveries. Failed progression constituted 8.26% of the indications in our study which is similar to the findings of the study done by Gupta M¹⁶. Judicious use of oxytocics and maintenance of a partogram in cases of failure to progress will help reduce the rate of CS in such cases.

Conclusion

The caesarean rate in our institution during the study period was 14.96% which is near the standard caesarean rate. Most of caesareans were done in emergency (92.66%). Most common three indication of the caesareans were fetal distress (32.23%) followed by post caesarean pregnancy (25.62%) and failed induction (14.05%). Our main emphasis is on reduction of rate of repeat caesarean sections which can be lowered at our level by increasing the trained staff for the continuous monitoring of such cases. Reduction of the rate of primary caesarean deliveries will require careful evaluation of individual cases, practice of evidenced-based obstetrics and audits in the institution.

Acknowledgement

Authors are thankful to the hospital authorities, the record section and Department of Obstetrics

and Gynaecology for allowing the authors to collect the hospital data for preparing this article.

Funding: No funding sources

Conflict of Interest: None declared

Ethical Approval: The study was approved by the Institutional Ethics Committee

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