

Indication, Rate & Determinants of Caesarean Section Delivery in a 750 Bedded Hospital in Unnao IndiaRuchi Kumari¹, Jyotsana Gupta², Neha Verma³¹Assistant Professor, Department of Obstetrics and Gynaecology, G S Medical College, Pilkhuwa, Hapur, U P, India²Associate Professor, Department of Obstetrics and Gynaecology, Naraina Medical College & Research Centre, Kanpur, U P, India³Assistant Professor, Department of Obstetrics and Gynaecology, Saraswati Medical College, Unnao, U P, India

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Abstract:**Introduction:** In obstetrics caesarean section is a major lifesaving intervention worldwide for pregnant women and their newborns. It is amongst most frequently performed surgical procedures. Both primary as well as subsequent caesarean section rates are continuously rising which needs to be decreased. The main objectives of this study were to analyze the rate of Caesarean Section, proportion of various indications of C-Section & factors which are affecting their rate.**Aims & Objectives:** To determine.

1. Rate of Caesarean section.
2. Indications of Caesarean section and
3. Factors affecting rate of Caesarean section.

Methods: A retrospective study was conducted for the duration of 1 year from 1st July 2021 to 30th June 2022 in Obstetrics and Gynecology department of Saraswati Medical College, Unnao (U.P), North India. Data of all live births was collected. In case delivery was conducted by caesarean section their indications as well as other demographic factors which can affect nature of delivery for example age and residential area of patient were recorded.**Results:** A no. of 489 women were delivered during this time period, out of that 184 women were delivered by caesarean section and normal delivery were 305. The overall caesarean section rate was 37.62% and normal delivery rate was 62.37%. In maximum no of cases i.e. 29.86% fetal distress was indication for caesarean section after that previous LSCS in 24.95%, malpresentation in 18.81%, contracted pelvis in 6.13%, hypertensive disorders of pregnancy in 4.29%, antepartum hemorrhage in 10.02% and obstructed labor in 5.93%.**Conclusions:** In this study, caesarean section rate was 37.62% which is comparable to other studies but higher as compared to WHO guidelines as it is a referral centre. Fetal distress & previous LSCS are most common indication in 29.86 & 24.95% of mothers respectively.**Keywords:** Caesarean Section, Caesarean section rate, Previous LSCS.

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Introduction

In obstetrics caesarean section is a major lifesaving intervention worldwide for pregnant women and their newborns. It is amongst most frequently performed surgical procedures. In whole world, both developing and developed countries most remarkable feature of modern obstetrics is that there is alarming increase in caesarean section rate both primary as well as repeat caesarean section rates.[1]

This increase in C-Section Rate is because of early recognition of fetal distress by using continuous CTG, more frequent caesarean sections are being

done for malpresentation. Today's small family norm has paid more emphasis on fetal welfare thus changing the delivery practices from normal delivery towards caesarean section and also there is limitations in use of destructive procedures and high cavity forceps.

The indications for caesarean sections vary from institution to institution as no standard classification system exists for their indications. [2,3] The major challenge is lack of standardized definitions. There can be multiple or related

indications for cesarean section.[4] Amongst most common primary caesarean section indications are abnormal fetal heart rate, labor dystocia malpresentation of fetus, suspected fetal macrosomia and multiple pregnancy.[5] The most common indication for repeat caesarean is previous LSCS. It is important to know the indication of cesarean section to prevent the caesarean births which can be prevented. The aim of our study is to determine rate of caesarean sections, their indications and the relative contribution of them to caesarean section rate. It is one of the significant step to determine indication for cesarean section so that it can guide us to minimize its rate.

Aims & Objectives

To determine the

1. Rate of Cesarean section.
2. Indications of Cesarean section and
3. Factors affecting rate of Cesarean section.

Material and Methods

To find out the caesarean rate and their indications, the data of all the deliveries that were conducted for the duration of 1 year from 1st July 2021 to 30th June 2022 in the Obstetrics and Gynecology Department of Saraswati Medical College, Unnao (U.P), North India was collected retrospectively. Data of all live births was collected. In case the delivery was conducted by caesarean section their indications as well as other demographic factors which can effect nature of delivery for example age

and residential area of patient (urban/rural) were recorded. Documentation of the surgical procedure whether elective or emergency was also done. Patient's past obst. history and other obstetric parameters in current pregnancy like gestational age, antenatal care, presentation, lie and no. of fetuses, estimated fetal weight etc. were also documented.

In majority of cases of caesarean delivery, the indication was fetal distress, malpresentation, previous caesarean section, cephalopelvic disproportion, contracted pelvis, obstructed labor, antepartum hemorrhage, hypertensive disease of pregnancy and caesarean delivery on maternal request (CDMR). The caesarean section rate was derived as total number of caesarean deliveries for that year as a proportion of total deliveries that occurred in that year. The rate for each indication was derived annually as the caesarean deliveries that were performed for each and every indication per 1,000 live births.

The major limitation of this study is that we have not included the maternal and perinatal morbidity and mortality which is due to caesarean section.

Observation

A no. of 489 women were delivered during this time period, out of that 184 women were delivered by caesarean section and normal delivery were 305. The overall caesarean section rate was calculated as 37.62 %.

Table 1: Demography of patients who underwent C-section.

Age		Parity		Residence	
Below 30years	Above 30years	Primipara	Multipara	Rural	Urban
284 (58.07%)	205 (41.92%)	285 (58.30%)	204 (41.7%)	344 (70.34%)	145 (29.65%)

A no. of 489 women were delivered during this time period, out of that 284(58.07%) were below 30 years & 205(41.92%) were above 30 years. 285 (58.03%) were primi para and 204(41.07%) were multipara. Majority of women 344(70.34%) were resident of rural area and only 145(29.65%) were resident of urban area.

Table 2: Type of delivery

Type of Delivery	C-Section	Vaginal	Total
	184 (37.62%)	305 (62.37%)	489 (100%)

Out of 489 women delivered during study period 305(62.37%) women were delivered vaginally and 184(37.62%) were delivered via c-section.

Table 3: Indications of C-section

Fetal distress	Obstructed labour	CPD	Malpresentation	HDP	APH	Previous LSCS
146(29.86%)	29 (5.93%)	30(6.13%)	92 (18.81%)	21(4.29%)	49(10.02%)	122(24.95%)

On analyzing all indications, it was seen that in maximum no of cases i.e, 29.86 % fetal distress was the indication for CS followed by previous LSCS (24.95%), malpresentation (18.81%), CPD (6.13%), hypertensive disorders of pregnancy (4.29%), antepartum hemorrhage (10.02%) and obstructed labor (5.93%).

Table 4: Type of C-section

Type of C-Section	Elective	Emergency
	98(20.04%)	391(79.95%)

During study period out of 184 women who delivered viac-section391 (79.95%) women had emergency c-section and only 98(20.04%) women had elective c-section.

Discussion

One of the major abdominal surgeries that is being done now a days is Cesarean section that is beneficial for both the mother and their fetus by providing alternative method of delivery. Cesarean delivery offers great advantage in situations where vaginal route of delivery may lead to high rate of morbidity and mortality. This study was conducted for the duration of 1 year between 1st July 2021 to 30th June 2022 in the Obstetrics and Gynecology Department of Saraswati Medical College, Unnao (U.P). Total deliveries conducted in this time period were 489 out of these 305 (62.37%) were delivered vaginally and 184 (37.62 %) were delivered by caesarean section.

A hospital-based study conducted by Sakae TM et al during 2001-2005 concluded the proportion of Caesarean section cases as 32.6% [6]. In another study done by Haider G et al in Pakistan, 64% deliveries were conducted by caesarean section. [7] In our study in 24.95 % of cases were indicated for previous cesarean section and cephalopelvic disproportion was the indication in 6.13 % cases. A study conducted by Katke Rajshree D et al concluded that previous cesarean section cases was indication in 45.8% and cephalopelvic disproportion in 4.64% cases. [8] A Study by Chaurasia V et al concluded previous cesarean section as indication in 31.6% cases and cephalopelvic disproportion in case of 11.8% cases. [9] In a study conducted Bade P et al at Latur GMC showed that proportion of previous cesarean section was in 24.8% cases. In present study hypertensive disorder of pregnancy was the indications for LSCS in 4.29% cases. Katke Rajshree D et al found the proportion of hypertensive disorder of pregnancy as a indication in 8.86% cases of LSCS. [8] In this study in 29.86 % cases were indicated for fetal distress. Chaurasia V et al found fetal distress was the indication of cesarean in 21.6% cases. [9] In present study malpresentation is seen in 18.81% cases. Bade P et al found malpresentation as the indication for 2.9 % cases of LSCS. [10]

Conclusion

Today's small family norm has paid more emphasis on fetal welfare thus changed the delivery practices from normal delivery towards caesarean section. Caesarean section rate calculated in this study is 37.62% which is comparable to other studies but higher as compared to WHO guidelines as it is a referral centre. Fetal distress & previous LSCS are most common indication in 29.86 & 24.95% of mothers respectively. Besides fetal distress & previous LSCS hypertensive disorders, malpresentation, obstructed labor, antepartum hemorrhage and cephalopelvic disproportion were

the common indications for LSCS in the present study. Trial of labor should be encouraged in primiparous women and in selected low risk cases. To safely reduce rate of primary caesarean deliveries, necessitate diverse approaches for every indication of cesarean. There should be individualized approach to the indication, and it should be carefully evaluated by considering standardized protocols and evidenced-based obstetrics should be practiced. Regular audits should be done in each and every institution. All these above-mentioned measures can help us limit caesarean section rate.

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