



Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/15709

DOI URL: <http://dx.doi.org/10.21474/IJAR01/15709>



RESEARCH ARTICLE

STUDY OF THE PROPORTION AND VARIOUS INDICATIONS ASSOCIATED WITH PRIMARY CESAREAN SECTION IN MULTIPAROUS WOMEN IN TERTIARY CARE HOSPITAL IN WESTERN MAHARASHTRA

Dr. Papa Vamsi Sirija and Dr. Prashant Kharde

Manuscript Info

Manuscript History

Received: 15 September 2022

Final Accepted: 19 October 2022

Published: November 2022

Key words:-

Indications Of Primary Caesarean
Section, Multipara, Primary Caesarean
Section

Abstract

Background : World wide raise in cesarean section rate in the last three decades has been the cause of alarm and need for study in depth .cesarean section has been one of the most commonly performed surgical procedures . Primary caesarean section in the multipara means first caesarean section done in the patients who had previously delivered vaginally once or more⁽¹⁾. Aims and objectives of this study were to know the proportion and various indications of primary caesarean section in multipara.

Methods : This was a prospective observational study of primary caesarean section in multipara women admitted at tertiary care hospital in western rural Maharashtra during the period of 1 year from june2021 to june2022. Multipara with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of >20 weeks gestation were included⁽²⁾. Women with previous abortions and previous section were excluded.

Results: During the study period of one year, total 8124 deliveries occurred, out of which 3000 (37.39%) underwent caesarean section and 386 (12.61%) were primary caesarean section in multigravida. Out of these multigravida patients who underwent primary caesarean section- most of the patients were unbooked (77.72%). Majority of the cases were direct admission in the hospital (61.13%). Maximum number of the patients were in the age group of 22- 30 years (55.95%). Two third of the patients were literate (69.44%) Maximum number of patients were Gravida 2 (48.72%). Almost all of them (94.85%) underwent emergency caesarean section. The most common indication for primary LSCS in multigravida patients was fetal distress 120 (30.79%) followed by malpresentation in 76 (19.39%) patients, severe pre eclampsia and eclampsia in 82 (19.39%), Obstructed labour in 36 (9.55%), and antepartum hemorrhage in 43 (12.1%), Twin pregnancy in 29 (6.44%). Most common maternal complication was pyrexia 40 (10.36%)

Most common indication for caesarean section in multipara was fetal distress followed by mal-presentation and severe pre-eclampsia

Conclusion and interpretation: From the above study it is very clear that, many unforeseen complications occur in woman who previously had a normal vaginal delivery, Present study also concludes that Fetal distress is a major contributor to primary CS in multigravida. Proper

antenatal evaluation with early detection and management of high risk cases can reduce the likelihood of intrapartum fetal distress.

Copy Right, IJAR, 2022,. All rights reserved.

Introduction:-

Caesarean section is one of the most commonly performed operation in women and can be life saving for the child, the mother or both in certain cases. During last few decades incidence of caesarean section has gone up manifolds. Caesarean births have become safer due to improved anesthetic and surgical techniques. Availability of blood and blood products and broad spectrum antibiotics .caesarean section in the multipara means first caesarean section done in the patients who had previously delivered vaginally once or more⁽³⁾. There are chances of cephalopelvic disproportion in multipara even after having previously full-term vaginal deliveries. Multiparity is a problem associated with poverty, illiteracy, ignorance and lack of knowledge of the available antenatal care and family planning methods. A multipara who has earlier delivered vaginally may still require a caesarean section for safe delivery. It is a common belief amongst public that once a mother delivers her child or children normally, all her subsequent deliveries will be normal. As a result, such multiparous mothers often neglect routine antenatal check-ups. It is for these reasons that attention has been directed to the indication for caesarean section in women who have previously delivered vaginally. There are several indications of caesarean sections in multipara, chiefly fetal distress, severe contraction of the pelvis, other forms of dystocia, major degree of placenta previa and severe preeclampsia and eclampsia⁽⁴⁾. The other indications include, bad obstetric history (BOH) and difficult vaginal operative delivery. Keeping this in mind, present study has been done to study the indications of caesarean section being done in multigravida who had earlier delivered successfully by cesarean section⁽⁵⁾.

Aims and Objectives:-

1. To find out the proportion of caesarean section in multiparous women
2. To study various factors associated with primary caesarean section in multiparous women

Methods:-

It was a prospective study of all the cases of primary caesarean section in multigravida admitted at tertiary care center in Maharashtra during the period of 1 year from June 2021 to June 2022. Permission from ethical committee of the institution was obtained. Study was done in parous women who had previous vaginal deliveries Inclusion Criteria was all Multigravida with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of > 20 weeks gestation. Women with previous abortions and previous section and Pregnancy with medical disorders were excluded from the study. Information was collected in a predesigned proforma about demographic profile, obstetric history, physical examination, indication of cesarean section, maternal and perinatal outcome.

Statistical analysis :

All statistical analyses are expressed in percentage (%).

Results:-

Table 1:- Blood and weight parameters.

Parameters	No. of patients	Percentage
Anemia		
Normal Hb	126	33.68
Mild	218	55.70
Moderate	32	8.03
Severe	8	2.07
Very severe	2	0.52
BMI		
Underweight	72	19.17
Normal	280	73.57
Overweight	30	6.74
Obesity	2	0.52

Table 2:- Indications.

Indication	No. of patients	Percentage
Malpresentations	76	19.39
Antepartum hemorrhage	43	12.09
Fetal distress	120	30.79
Obstructed labour	36	9.55
Severe preeclampsia and antepartum eclampsia	82	19.39
Twin pregnancy	29	6.44
Total	386	100.0

Table 3:- Postoperative outcome.

Maternal outcome	No. of patients	Percentage
Healthy	212	76.42
Postoperative morbidity	88	23.57
Abdominal distention	5	1.55
Pyrexia	38	10.36
URTI	32	8.29
Wound infection	9	2.85
PPH	2	0.52
Total	386	100

Table 4:- Other parameters.

Parameters	Healthy	%	Post-op morbidity	%	P value
Booking status					
Unbooked	218	56.47	82	21.24	0.001
Booked	77	19.95	9	2.33	
Direct/Referred					
Direct	200	51.81	36	9.33	<0.001
Referred	95	24.61	55	14.25	
Emergency/Elective					
Emergency	279	72.28	91	23.58	0.023
Elective	16	4.15	0	0	
Socioeconomic status					
Lower	91	23.57	48	12.43	0.0001
Upper lower	171	44.04	38	9.84	
Lower middle	32	8.29	5	1.29	
Upper middle	1	0.26	0	0	

Anemia					
Normal Hb	106	27.46	21	5.44	
Mild	160	41.45	55	14.25	
Moderate	18	4.66	11	2.85	<0.024
Severe	6	1.55	4	1.03	
BMI					
Underweight	37	9.58	37	9.58	
Normal	242	62.69	42	10.88	
Overweight	16	4.15	10	2.59	<0.001
Obese	0	0	2	0.52	
Educational status					
Uneducated	75	19.43	43	11.13	
Primary	139	36.01	40	10.36	

Secondary	76	19.68	8	2.07	<0.001
Graduate	5	1.29	0	0	
Type of work					
Sedentary	7	1.81	1	0.25	
Moderate	228	59.06	70	18.13	0.45
Heavy	60	15.54	20	5.18	

Total no of deliveries happened during this period were 8124 and total no of cesarean sections performed during this period was 3000 and out of which underwent primary cesarean section in multigravidas was 386 .which comprises of 37.39% percentage among cesarean sections .

In the present case scenario fetal distress has been the most common indication for primary cesarean section in multigravidas followed by malpresentations and then followed by severe pre eclamisa and eclamsia.

1. Out of 386 patients, most of them were unbooked (77.72%) and direct admission (61.13%), only 150 (38.86%) patients were referred from different places.
2. Most of the patients 216 (55.95%) belong to the age group of 26-30 years followed by 123 (31.86%) in age 21-25 years, 41 (10.62%) patients in age group of 31-35 years. Only 5 patients (1.29%) were above 35 years of age
3. Period of gestation in 229 of the patients (59.33%) was 37-40 weeks followed by 111 patients (28.76%) in 32-36 weeks, 12 patients (3.10%) in 28-31 weeks of gestational age and 8 patients (2.07%) were in gestational period of >40 weeks.
4. Distribution of patients according to education showed that most of them were having primary education 179 (46.37%). About 118 (30.56%) patients were illiterate followed by 84 (21.76 %) patients who had secondary education and only 5 (1.29%) patients were graduates. This also reflects the improved literacy rates in last few years
5. Distribution of socioeconomic class on the basis of modified Kuppaswamy Scaler most of the patients shows majority (54.1%) were from upper lower class followed by 139 (36%) patients in lower class, 37 (9.6%) patients from lower middle class and only one (0.30%) patient was found to be from upper middle class.
6. Type of work distribution reveals that Most of the patients were Moderate worker 298 (77.20%), followed by heavy worker 80 (20.72%) and only 8 (2.07%) were sedentary workers. Nutritional status of the patients (Table 1) shows that only 34% of woman had normal Hemoglobin level but majority (73.5%) had normal BMI.
7. Most of patients 300 (77.72%) did not require blood transfusion and only 86 (22.28%) patients received blood transfusion. Analysis of maternal outcome (Table 3) shows that out of 386 patients, 91 (23.57%) patients had different complications. Most common maternal complication was pyrexia in 40 (10.36%) patients, followed by Upper respiratory tract infection in 32 (8.29%) patients, wound infection in 11 (2.85%) patients and abdominal distention in 6 (1.55%) patients. Correlation of post operative maternal morbidity with various risk factors reveals that most of the patients having postop morbidity were Unbooked (21.24%), Referred (14.25%), operated in emergency (23.58%), of low socioeconomic status (12.43%), with moderate to severe anemia (3.88%), who are underweight (9.58%), or overweight (2.59%), having low level of education (11.13%) and moderate to heavy worker.

Discussion:-

A prospective study was done in Department of Obstetrics and Gynecology at tertiary care hospital in maharashtra during the period of 1 year from june 2021 to June 2022. A total of 386 subjects of Primary Caesarean section on multigravida were selected for the study with inclusion and exclusion criteria's

A multipara who has earlier delivered vaginally may still require a caesarean section for safe deliveryTotal number of deliveries during the study period of 1 year was 8185 and the total number of caesarean section was 3000 with a caesarean section rate of 37.39%

Himabindu P et al found a comparable caesarean section rate of 40% in her study. 14 The high caesarian section rate in our institution was tertiary referral center having a wide catchment area ⁽⁶⁾. Out of 3000 caesarean section 1280 (35.18%) were done in primigravida and 386 (12.61%) in multigravida. Repeat caesarean section was done in 1334 (52.20%) patients .

Among 386 study subjects 289 patients (77.72%) were unbooked. This fact reveals poor level of antenatal booking of the patients in India particularly in Maharashtra . This may be because of low level of female literacy and lack of

public awareness regarding the need for antenatal checkup. Our results are comparable with the study done by Desai E et al (72.09%) and Himabindu P et al (71%).

A total of 236 patients (61.13%) were direct admission in the hospital and only 150 (38.86%) patients were referred from different places. The finding reflects lower number of institutional deliveries in maharashtra. Most of the cases were direct admission and came to hospital only when some complications occurred. Almost similar results were reported by Desai E et al, who found that the cases which were received directly rather than referred were more in numbers (48.84%).

Out of 386 patients, most of the patients (55.95%) belong to age group of 26-30 years followed by 31.86% to the age group 21-25 years. This is because in India legal age of marriage for the girls is 18 years. Sethi P et al also reported in his study that maximum number of women undergoing primary caesarean section were from the age group of 25-29 years (41%). Unnikrishnan B et al also reported the similar results⁽⁷⁾.

Distribution of patients according to parity shows that most of the patients (49.73%) were Gravida-2 followed by Gravida-3 (32.12%). It reflects that in the last few years' family size has been shifted from 5-6 children per couple to 2-3 children per couple. Grand multiparity has been significantly reduced in the past few years. Sethi P et al also reported the similar results 35% Gravida-2, 30% of Gravida-3 parity status.

Most of the patients (59.33%) belong to gestational period of 37-40 weeks followed by (28.76%) period of 32-36 weeks. Rowaily MA et al reported in his study on primary cesarean section in multigravida found that most of the patients (78.8%) belong to gestational age of 37-42 weeks followed by 18.2% patients in gestational age of less than 37wks⁽⁸⁾.

Out of total 386 patients, 215 (55.70%) of patients had mild anemia, 31 (8.03%) of patients had moderate anemia and 8 (2.07%) and 2 (0.52%) of patients had severe and very severe. The incidence of Anemia in antenatal patients in India is reported in >80% patients⁽⁹⁾.

Most of the patients (95.85%) underwent Emergency caesarean section and only 16 (4.15%) had elective caesarean section. Study done by Sethi P et al in 100 patients showed almost similar results showing 91% emergency operative and only 9% were electively operated.

The most common indication for primary LSCS in multigravida patients was fetal distress 120 (30.79%) followed by malpresentation in 76 (19.39%) patients, severe pre eclampsia and eclampsia in 82 (19.39%), Obstructed labour in 36 (9.55%), and antepartum hemorrhage in 43 (12.1%), Twin pregnancy in 29 (6.44%). Most common maternal complication was pyrexia 40 (10.36%)

Himabindu P et al also reported fetal distress (24.7%) as the most common indication for Caesarean section in his study he also showed that most common abnormal presentation was breech for which caesarian section was done.

Out of 386 patients 87 (22.54 %) received blood transfusion. Study done by Rouse DJ et al reported that those women who undergo primary caesarean, only 3.2% required blood transfusion⁽¹⁰⁾.

From the above study it is clearly noticed that postoperative morbidity was statistically significantly higher in unbooked patients, referred patients, Emergency LSCS, low socioeconomic status, anemia, Obesity, lower level of education and it is also reemphasized that Multigravida is more often neglected women having low attention of family.

From the above discussion it is noticed that the women in India need to be empowered by better education so that she herself and the family are aware of the possible complications during pregnancy and delivery and to avoid them regular antenatal checkups, early diagnosis of pregnancy and its high risk factors, and their management is possible

Early recognition of complications in multipara and proper management including caesarean section will improve maternal and fetal outcome.

Funding:

No funding sources.

Conflict of interest:

None declared

Ethical approval:

The study was approved by the Institutional Ethics Committee

References:-

1. Solomon B. The dangerous multipara. *Lancet*. 1932;2:8-11. [https://doi.org/10.1016/S0140-6736\(00\)90086-2](https://doi.org/10.1016/S0140-6736(00)90086-2). Last accessed on 1 January 2022.
2. Rao JH, Rampure N. Study of primary caesarean section in multiparous women. *J Evol Med Dental Sci*. 2013;2(24):4-7.
3. Desai E, Leuva H, Leuva B, Kanani M. A study of primary caesarean section in multipara. *Int J Reprod Contracept Obstet Gynecol*. 2013;2(3):320-4.
4. Rajput N, Singh P, Verma YS. Study of primary caesarean section in multigravida patients. *Int J Reprod Contracept Obstet Gynecol*. 2018;7:185-91
5. Unnikrishnan B, Rakshith P, Aishwarya A, Nithin K, Rekha T, Prasanna P et al. Trends and Indications for Caesarean Section in a tertiary care Obstetric Hospital in Coastal South India. *AMJ*. 2010;3(12):821-5.
6. Himabindu P, Sundari MT, Sireesha KV, Sairam MV. Primary caesarian section in multipara. *IOSRJDMS*. 2015;14(5)
7. Sethi P, Vijaylaxmi S, Shailaja G, Bodhare T, Devi S. A study of primary caesarean section in multigravidae. *Perspect Med Res*. 2014;2:3-7.
8. Rowaily MA, Fahad A, Alsalem, Mostafa A Abolfotouh. Caesarean section in a high-parity community in Saudi Arabia: clinical indications and obstetric outcomes. *BMC Pregnancy Childbirth*. 2014;14(92):1-10
9. Ajeet S, Jaydeep N, Nandkishore K, Nisha R. Women's knowledge, perceptions, and potential demand towards caesarean section. *Natl J Community Med*. 2011;2(2):244-8.
10. Rouse DJ, MacPherson C, Landon M, Varner MW, Leveno KJ, Moawad AH et al. Blood transfusion and caesarean delivery. *Obstet Gynecol*. 2006 Oct;108(4):891-7.