

A Prospective Clinical Study of Maternal and Foetal Outcome in Previous Caesarean Section

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ABSTRACT

Background: Caesarean section had a limited place due to inadequate facilities or done only for badly obstructed labour and complicated vaginal deliveries were tried even at the cost of fetal welfare. **Aim & objective:** The aim of our study to find out the incidence of vaginal birth after previous caesarean section and maternal complication related to previous caesarean section. **Material & Methods:** The study was undertaken on pregnant women with a previous history of caesarean section either one or more coming for delivery during January 2007 to April 2008. All women booked and emergency cases with previous caesarean section who came in the labour room for delivery were included in the study group. **Results:** The results show that 23.33% mothers had complications during the postpartum period. The incidence of morbidity was highest (45.7%) among emergency caesarean group and lowest (17.14%) in the elective caesarean group, whereas it was 25.71% in the vaginal delivery group. **Conclusion:** The procedure is not benign and needs to be performed only when circumstances distinctly required it and increasing maternal age is associated with a higher rate of uterine rupture.

Key-words: Caesarean section, Vaginal delivery, Antenatal, postpartum complication.

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INTRODUCTION

Caesarean delivery is defined as birth of a foetus through an incision in the abdominal wall and the uterine wall. This delivery does not include removal of the foetus from the abdominal cavity in case of the rupture of the uterus or in case of an abdominal pregnancy.¹ The caesarean delivery is the most common surgical procedure performed on women. In the days of modern obstetrics, with all diagnostic and therapeutic aids, facilities of expert anesthetists. Potent antibiotics and liberal availability of blood transfusions, the incidence of caesarean section is rising very fast. Some of the recent genuine indications for primary

caesarean section are;²

- Pregnancies conceived by assisted reproductive techniques.
- To avoid litigation for alleged neglect in vaginal delivery.
- With better neonatal facilities more premature and IUGR babies are saved.
- Use of modern electrotechnique fetal monitors overdiagnosed fetal distress, is also responsible for increasing the incidence of primary caesarean section.

In ancient obstetrics, caesarean section had a limited place due to inadequate facilities or done only for badly obstructed labour and complicated vaginal deliveries were tried even at the cost of fetal welfare. Obviously the rise in

incidence of caesarean section is more directed to the welfare of the baby besides saving the mother from risk of complicated vaginal delivery. In these days of small families, the baby's right to survive has increased. This has consecutively increased the incidence of post caesarean pregnancy.² Previous caesarean section always casts a shadow on future pregnancy and labour. The danger of allowing a vaginal delivery is that of scar rupture, severe haemorrhage, shock, neonatal cerebral palsy and seizures or fetal death on one hand, and on the other hand vaginal delivery require a shorter hospital stay, early ambulation less chances of bleeding and infection, psychological satisfaction, scar related remote complications are avoided, devoid of potential complication of abdominal operative procedures and economical. Whereas elective caesarean section may be faced with problems of unexpected and undiagnosed prematurity and other complications related to operative procedures. Though maternal mortality with repeat caesarean section is less than 1% maternal morbidity is higher than vaginal delivery.³ Keeping all these facts in mind, there is great variation in the tendency of obstetricians of different countries when the problem of managing patients with previous caesarean section arise in labour. Caesarean section is not only to be performed in appropriate cases, but also at appropriate time to avoid complications. The problem has become especially important in present days due to the increasing number of caesarean section for a wide variety of indications, the subsequently number of women with a history of previous caesarean section contribute a separate obstetrical entity. The aim of our study to find out the incidence of vaginal birth after previous caesarean section and maternal complication related to previous caesarean section.

MATERIAL & METHODS:

The clinical study was conducted prospectively in the Department of Obstetrics and Gynaecology at Shri Krishna Hospital attached to Pramukh Swami Medical College, Karamsad, from January 2007 to April 2008. The study was undertaken on pregnant women with a previous history of caesarean section either one or more coming for delivery during the above mentioned period. On admission, each patient was personally interrogated, examined and all the clinical details were recorded as per proforma. A regular check up was carried out for those high risk patients who were attending the antenatal clinic. All women booked and emergency cases with previous caesarean section who came in the labour room for delivery were included in the study group. Exclusion criteria included previous uterine scar due to hysterotomy, myomectomy, rupture uterus and perforation of the uterus. From history, examination and investigation, patients were classified in two categories.

A) Those who could be allowed vaginal delivery-Trial of labour.

B) Those requiring repeat caesarean section.

RESULTS:

The overall incidence of caesarean section was found to be 39.66% during the study period in this hospital (table 1). During the study period of 16 months, 13.36% mothers were admitted in this hospital for delivery with a history of previous one or more caesarean section

Table 1: Overall incidence of caesarean section in this institution

Year (Jan 2007 to April 2008)	Total no. of cases	%
Total no. of deliveries	1122	-
Total no. of caesarean section	445	39.66

Table 2: incidence of previous caesarean section

Year (Jan 2007 to April 2008)	Total no. of	%
Total no. of deliveries	cases	
Total no. of cases with previous ≥ 1 LSCS	1122 150	- 13.36

(table 2). The results show that 84.66% mothers were admitted with the history of one prior caesarean delivery, 14.67% & 0.67% mothers have two & three prior caesarean delivery (table 3).

Table 3: Number of previous caesarean section in this institution

No. of previous CS	Total no. of cases	%
1	127	84.66
2	22	14.67
3	1	0.67
TOTAL	150	100

The present study observed repeat caesarean section was done in 107 mothers. Most of the repeat caesarean section was required for recurrent

Table 4: Main indication for repeat caesarean section (n=107)

Indication	No. of cases	%
CPD	32	29.91
Previous ≥ 2 CS	18	16.82
Foetal distress	13	12.16
Scar tenderness	22	20.56
Severe	4	3.74
Oligohydramnios		
alpresentation	4	3.74
NPOL	5	4.67
APH	5	4.67
Twin pregnancy	1	0.93
Cord presentation	1	0.93
PROM	2	1.87
Total	107	100

indications like CPD (29.91%) (table 4). The results show that 23.33% mothers had complications during the postpartum period. The incidence of morbidity was highest (45.7%) among emergency caesarean group and lowest (17.14%) in the elective caesarean group, whereas it was 25.71% in the vaginal delivery group (table 5).

Table 5: Post partum maternal complications

Complication	Vaginal Delivery	Repeat CS		Rupture uterus	Total no. of cases	%
		EI CS	EM CS			
Atonic PPH	1	0	5	0	6	4
Traumatic PPH	5	1	1	1	8	5.33
Secondary PPH	0	1	0	0	1	0.66
Pyrexia	0	1	4	0	5	3.33
Wound Sepsis	0	1	1	0	2	1.33
Wound Gapping	0	0	2	0	2	1.33
Burst Abdomen	0	0	0	1	1	0.66
Vomiting	0	2	0	0	2	1.33
Retention of Urine	1	0	0	0	1	0.66
ARF	0	0	0	1	1	0.66
Surgical Emphysema	0	0	1	0	1	0.66
DIC	0	0	1	0	1	0.66
Maternal Death	2	0	1	1	4	2.67
Total	9	6	16	4	35	

DISCUSSION:

The incidence of caesarean section varies from hospital to hospital, as it is dependent on various factors like facilities available, geographical condition and proportion of complicated cases admitted from the area served by the hospital. According to David A Millar incidence of caesarean section was 24.7%, Daftary SN⁴ found 12.4%, Notzon & colleagues⁵ found 23.6%, Martin et al⁶ found 29.1% and Seffah⁷ found 17.0%. The high incidence of caesarean delivery rate in present series may be explained by a number of mothers admitted with recurrent indications of previous caesarean delivery and to some extent increased concern about foetal and maternal safety of labour in women with prior caesarean births. The incidence of previous caesarean section was 13.36% because the focus on the welfare of the baby besides saving the mother from risk of complicated vaginal delivery, so the number of mothers coming with a history of previous one or more caesarean section is increasing. According to Meehan,⁸ the incidence of previous caesarean section was 6%, Thomas⁹ found 16.7% and Chhabra & Arora¹⁰ suggested 11.1%. The present study show that 84.66% mothers were admitted with a history of one prior caesarean deliveries. Indian women still prefer a vaginal delivery as it is natural, non-invasive, less costly, less morbid and enriching experience. At present small family norm also restricts multiple caesarean deliveries.

Most of the repeat caesarean section was required for recurrent indications like CPD (29.91%). Mehta et al¹¹ reported CPD in 22.72%, foetal distress in 27.27%, malpresentation in 13.64%, scar tenderness in 20.45%, placenta previa in 9.1% and NPOL in 6.82% cases. The present study observed that 23.33% mothers had complications during the postpartum period. The incidence of morbidity was highest (45.7%) among

emergency caesarean group and lowest (17.14%) in the elective caesarean group, whereas it was 25.71% in the vaginal delivery group. Lack of antenatal and intranatal care is an important cause of maternal mortality. Avoidance of delay in reaching the hospital by improvement in transportation, good network in referral system and strengthening reproductive health care services are necessary to achieve the goal of safe motherhood.

CONCLUSION

Worldwide rise in the CS rate during the last three decades has been the cause of alarm and need an in depth study. The procedure is not benign and needs to be performed only when circumstances distinctly required it and increasing maternal age is associated with a higher rate of uterine rupture.

Conflicts of Interest: None.

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