Maternal and Foetal Outcomes in Patients with Previous Caesarean Section Undergoing Trial of Vaginal Birth at a Tertiary Care Centre in North India

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Abstract

Objective: The objective of this study is to evaluate clinical criteria conventionally known to affect mode of delivery in previous caesarean section cases. We also aim to study the maternal and neonatal outcome in vaginal birth after Caesarean section and repeat Caesarean Section.

Study Design: This is a prospective longitudinal study.

Patients and Methods: Pregnant women with previous caesarean section presenting in antenatal clinic were recruited in the study. A detailed history was taken and routine antenatal care given. Mode of delivery decided as per the protocol followed in routine. Maternal and neonatal outcome were noted.

Result: The VBAC rate was 67.6%. Foetal distress and meconium stained liquor were the most common indications [-ʎl^]^ædôæ^•æ!^æ}Å•^&ci[}Ědŷc^!çæ|Åà^c,^^}Å]!^çi[*•Åôæ^•æ!^æ}Åæ³Åå&*!!^}ci]!^*}æÅ^•å*³å, &æ\$c|^Å { [!^ʎi}Å the vaginal delivery group (p value <0.001). The number of prior vaginal deliveries after Caesarean section was •i*}i, &æ}c|^Å { [!^ʎi}Åc@^\cap*i}æ|Åå^|ic^!^\f*![*]ÅÇIÅçæ|*^Ł€Ě€€FDĚÚ}&iå^}&^Å[-\ôæ^•æ!^æ}Å@^•c^!^&c[{ ^/æ}åÅi}-^&ci[*•Å { [!^ʎi}Åc@^\cap*i}æ]Åa^[ic^!-^}&^Åi]^ædôæ^•æ!^æ}Å•^&ci[}Å*![*]ÈÅV@^\^Å, æ•Å}[Å•i*}i, &æ}cháā-^!^}&^Å in the neonatal outcome in the two groups.

Conclusion: Successful trial of labour in previous caesarean is associated with better outcomes than emergency

Keywords: Vaginal birth after caesarean; Previous caesarean section; Scar dehiscence; Scar rupture

Introduction

Caesarean section is the most commonly performed surgery in obstetrics. Due to the rise in Caesarean section rate in past few years, the number of pregnancies with previous Caesarean section has also increased. There is no consensus regarding decision of mode of delivery in patients with previous Caesarean section. In recent years, there has been increasing concern about the increase in morbidity associated with trial of labour after previous Caesarean, particularly the risk of uterine rupture [1]. Despite many studies being conducted regarding factors affecting the outcome of VBAC like interval between previous Caesarean and current pregnancy, indication of previous caesarean, previous successful vaginal deliveries, postoperative wound sepsis etc., there are no standard guidelines for patients of previous caesarean section to attempt VBAC. There is insufficient evidence to recommend the mode of delivery in pregnancies with previous Caesarean [2] and this subject continues to be a matter of debate at present. Studies now prove that VBAC is a safer alternative to repeat elective Caesarean section for the mother and baby [3,4]. Data regarding this issue are still lacking in India which prompted this study.

Methodology

142 pregnant women with previous one caesarean section before 36 weeks of gestation presenting in antenatal clinic of tertiary care hospital in North India were included in the study. Prevalence of VBAC is 40% in previous caesarean section patients. Keeping a 10% margin of error at 95% confidence interval, estimated number of patients required for this study was 100. Patients with more than one previous Caesarean section, grossly contracted pelvis, previous vesico-vaginal fistula repair

or other universally accepted indication of elective LSCS were excluded from study. The study recruited 168 patients with previous one lower segment caesarean section attending antenatal clinic of tertiary care hospital, however, 26 were lost to follow-up. Patients' history were taken including a detailed obstetric history with special reference to indication of previous caesarean, preoperative, intraoperative and postoperative complication, wound sepsis and delayed stitch removal. Patients received routine antenatal care. Patients were followed till term and the mode of delivery was decided according to the routine hospital protocol. Only two women had to undergo elective Caesarean section due to placenta previa and contracted pelvis. The remaining 140 women opted for vaginal delivery. At term gestation vaginal examination was performed by the consultant for pelvic assessment to decide the mode of delivery. Maternal and foetal monitoring was done as per labour protocol followed in the department. Decision for repeat emergency Caesarean was taken by registrars or consultants who were blinded to the study. If the patients had to undergo emergency repeat caesarean section, all operative findings were noted including integrity

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Page 2 of 5

were also included as we wanted to study their effect on decision making among pregnant women. The Caesarean section rate was 32.4 % and the rate of successful VBAC was 67.6%. Two patients had elective repeat Caesarean section in view of placenta previa and contracted

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Page 3 of 5

Caesarean section is there, whereas patients are taken up for Caesarean section at the slightest indication in low resource settings.

Page 4 of 5

blood transfusion and prolonged catherization were more common with repeat emergency Caesarean section as compared to vaginal delivery both in our study as well as previous studies. Hence, there is increased morbidity associated with repeat Caesarean section (elective or emergency) than vaginal delivery [22,23]. Failed trial of VBAC leading to emergency Caesarean section is associated with even more morbidity than elective repeat Caesarean section.

Neonatal outcomes in vaginal and caesarean deliveries were documented in terms of low birth weight (11.4% vs. 2.5%), admission to NICU (2.1% vs. 2.2%), Apgar score of less than 7 at 5 minutes (none vs. 2.2%), transient tachypnea of newborn (none vs. 1.04%), neonatal sepsis (none vs. 2.2%) and still birth (1.04% vs. none). No neonatal death was seen in any of the groups. No statistically significant difference was seen in neonatal outcome in both groups. Bailit et al. [21] reported NICU admission and neonatal death in 19.3% and 0.3% patients respectively with emergency repeat Caesarean which was significantly higher than vaginal delivery. Due to smaller sample size probably, our study could not prove this difference.

The limitation of this study is small sample size. Due to small sample size, the correlation of the factors affecting success of VBAC trial with scar rupture could not be made.

Conclusion

In our study, the factors which affect success of trial of labour in previous caesarean patients are interdelivery interval, previous successful VBAC andcephalo-pelvic disproportion as an indication of previous Caesarean section. Better maternal outcomes are associated with successful vaginal birth after Caesarean section. Infectious morbidity is more in those having emergency repeat caesarean section than those having vaginal delivery in these patients. Other complications like prolonged catheterization, blood transfusion and hysterectomy were also more common in those who had repeat caesarean section than those having vaginal delivery. Neonatal outcomes were not significantly different. Hence we conclude that successful trial of labour in previous caesarean is associated with better outcomes than emergency caesarean section. Appropriate selection of patients for trial of VBAC, keeping the above-mentioned factors into account is necessary and can decrease the associated morbidity, especially in low resource settings.

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