International Journal of Science, Environment and Technology, Vol. 10, No 5, 2021, 193 – 197
ISSN 2278-3687 (O)
2277-663X (P)

METHOD OF DELIVERY AFTER PREVIOUS CESAREAN SECTION

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Abstract: Vaginal birth after cesarean section (VBAC) describes a vaginal delivery in a women who has given birth via cesarean section in a former pregnancy. Patients desiring VBAC delivery undergo a trial of labor (TOL), also called trial of labor after cesarean section (TOLAC). While TOL is an accepted and generally safe practice, serious potential complications include uterine rupture or uterine dehiscence and associated maternal and/or neonatal morbidity. Providers caring for patients with prior cesarean section need to counsel patients regarding potential risks and benefits of TOL and the factors which affect the likelihood of successful vaginal delivery. These providers must be knowledgeable regarding intrapartum management of patients undergoing TOLAC and able to recognize and appropriately manage potential complications. This activity reviews the evaluation and management of patients undergoing vaginal birth after cesarean delivery and highlights the role of interprofessional team members in collaborating to provide well-coordinated care and enhance outcomes for affected patients.
Keywords: Vaginal birth after cesarean section, management.

INTRODUCTION

Vaginal birth after cesarean section (VBAC) is one of the strategies developed to control the rising rate of cesarean sections (CSs). It is a trial of vaginal delivery in selected cases of a previous CS in a well-equipped hospital [1]. In 1916, Cragin popularized the dictum, “once a caesarean section, always a caesarean section” [2]. That was the era of the classical CS. In the present era of lower segment caesarean section (LSCS), cesarean-related morbidity and mortality are significantly reduced. The dictum now is “once a caesarean section, always an institutional delivery in a well-equipped hospital”. The reasons which led to the reversal of the old dictum are based upon the newer concepts of the assessment of scar integrity, fetal well-being, and improved facilities of emergency CS [3,4]. Nevertheless, a previous CS does cast a shadow over the outcome of future pregnancies [5,6]. With present techniques and skill, the incidence of cesarean scar rupture in subsequent pregnancies is very low. The strength of the uterine scar and its capacity to withstand the stress of subsequent pregnancy and labor cannot be completely assessed or guaranteed in advance. These cases require the assessment and supervision of a senior obstetrician during labor [7-9]. Hence, the present

*Received Sep 14, 2021 * Published Oct 2, 2021 * www.ijset.net*

study was undertaken to assess the success and safety of VBAC in selected cases of one previous LSCS and to evaluate the maternal and fetal outcome in these cases.

MATERIAL AND METHODS

This is a prospective study conducted at the University Obstetric-Gynecological Hospital "Koço Gliozheni", Tirana, in the period 2010-2014. The study included 103 pregnant women scheduled for natural childbirth who had previously had a cesarean delivery. Maternal parameters, obstetric factors and neonatal outcome were evaluated in the study. Statistical analysis was done by individual t test. We also compared the total cesarean delivery rate and the TOLAC rate with the national data. A p-value of < 0.05 was considered statistically significant.

RESULTS AND DISCUSSION

The study involved 103 pregnant women with an average age of 33.6 (8.7) years ranging from 20 years to 47 years. Cases predominate in the age group 30-34 years (38.4%), followed by the age group 35-39 years (34.9%), with a significant difference between them (p <0.01). Regarding parity, most women 86 (83.5%) have <3 children while 17 (16.5%) of them have ≥3 children (p <0.01) In the study prevails the normal weight (40%) followed by overweight (25%) with significant difference with other categories of BMI (p <0.01). In terms of delivery 68 of women or 66% of them gave birth naturally while 35 (34%) of them with cesarean section (p <0.01). We defined a successful TOLAC (or defined as VBAC) as deliveries with NVD, vacuum-assisted delivery, or low forceps assisted delivery. A failed TOLAC represented the cases that ended with receiving a CS for any reason. Induction of labor/augmentation Induction of labor and augmentation using a single agent of oxytocin was applied for most of the patients after informed consent. The usage and dose were given individually by the patient's labor course and the frequency of uterine contractions.

Table 1. Karakteristikat sociodemografike dhe klinike te grave shtatezana N=103

Variables	N	%	P
Mosha M (SD)	33.6 (8.7)	20 – 47 vj	
Grupmosha			
20-24	6	5.8	
25-29	17	16.7	
30-34	40	38.4	<0.01
35-39	36	34.9	

40-44	3	3.1	
≥ 45	1	1.2	
Parity			
<3	86	83.5	<0.01
≥3	17	16.5	
BMI			
Underweight	8	7.5	
Normal	41	40.0	
Overweight	26	25.0	<0.01
Obese I	14	13.3	
Obese II	9	8.3	
Obese III	6	5.8	
Mode of delivery			
Vaginal	59	57.3	
Vaginale-instrumental	9	8.7	<0.01
Sectio Cesarea	35	34	
Interval from previous SC, yrs			
<2	13	12.6	<0.01
≥2	90	87.4	

We classified the method of delivery into NVD, low forceps- or vacuum-assisted vaginal birth, or CS. Patients who were put in to trial of labor first tried delivery spontaneously with or without the help of induction. If faced with difficulty while delivering, then either a low forceps- or a vacuum-assisted procedure would be used, according to the visiting staffs' decision. Conversion to cesarean delivery was indicated when the patient experienced either difficult labor or complications. Table 1 demonstrates the number of cases for each method. There were 54 (71.1%) normal vaginal deliveries, 9 (11.8%) vacuum-assisted deliveries, and 5 (6.6%) low forceps-assisted deliveries. There were 8 cases that were converted to CS, and the conversion rate was 10.5%.

Birthweight has failed to show an increase in uterine rupture rate [10-13]. Nevertheless, we were curious if it would relate to the success of VBAC. When comparing the bodyweight of the newborn between VBAC (normal vaginal deliveries with assisted deliveries) and failure

of TOLAC (conversion to cesarean), failure of TOLAC was significantly associated with higher newborn weight (3058 g vs. 3377 g, $p < 0.01$). We recorded the Apgar score at 1 minute and 5 minutes after delivery to evaluate the neonatal outcome. The Apgar scores of 1 minute and 5 minutes failed to show a difference between the VBAC group and the cesarean group. Even when we analyzed each subgroup with the cesarean group, there was no significant difference in neonatal outcome. Failure of VBAC and conversion rate to CS was 10.5%. Among the patients who failed VBAC and converted to cesarean section, the most common reason was dysfunctional labor (75%), followed by fetal distress (12.5%). Other reasons included two induction failures and one abrutio placentae [14,15]. Our subgroup of dysfunctional labor involved the use of oxytocin, either for induction of labor or labor augmentation, but did not include induction failure (prolonged latent phase). However, the dosage of oxytocin and the time involved were not analyzed in this study.

CONCLUSION

Majority of the cases of previous CS done for nonrecurrent indication can be delivered safely by the vaginal route, without any major complication to the mother and the newborn, in an institution having facilities for emergency CSs. It has been proved to be a safe alternative to repeat an elective CS.

REFERENCES

[1] Blanchette H. The rising cesarean delivery rate in America: what are the consequences? Obstet Gynecol 2011;118:687–90.

[2] FastStats. Available at: https://www.cdc.gov/ nchs/fastats/delivery.htm. Accessed March 25, 2020.

[3] ACOG Practice Bulletin, No. 295: vaginal birth after cesarean delivery. Obstet Gynecol 2019;133:393–5.

[4] Guise JM, Denman MA, Emeis C, et al. Vaginal birth after cesarean: new insights on maternal and neonatal outcomes. Obstet Gynecol 2010;115:1267–78.

[5] Grobman WA, Lai Y, Landon MB, et al. Development of a nomogram for prediction of vaginal birth after cesarean delivery. Obstet Gynecol 2007;109:806–12.

[6] Grobman WA, Lai Y, Landon MB, et al. Does information available at the time of admission for delivery improve prediction of successful birth after cesarean? Am J Perinatol 2009;26: 693–701.

[7] Nomogram (MFMU) Network. VBAC calculator. Available at: https://mfmunetwork. bsc.gwu.edu/PublicBSC/MFMU/VGBirthCalc/ vagbrth2.html. Accessed March 25, 2020.

[8] Nomogram-(MFMU) Network. VBAC calculator. Available at: https://mfmu.bsc.gwu.edu/ PublicBSC/MFMU/VGBirthCalc/vag- birth.html. Accessed March 25, 2020.

[9] Maykin MM, Mularz AJ, Lee LK, Gaw S. Validation of a prediction model for vaginal birth after cesarean delivery reveals unexpected success in a diverse American population. Am J Perinatol Rep 2017;7:e31–8.

[10] Costantine MM, Fox K, Byers BD, et al. Validation of the prediction model for success of vaginal birth after cesarean delivery. Obstet Gynecol 2009;114:1029–33.

[11] Chaillet N, Bujold E, Dubé E, Grobman WA. Validation of a prediction model for vaginal birth after caesarean. J Obstet Gynaecol Can 2013;35:119–24.

[12] Schoorel EN, Melman S, van Kuijk SM, et al. Predicting successful intended vaginal delivery after previous caesarean section: external validation of two predictive models in a Dutch nationwide registration-based cohort with a high in- tended vaginal delivery rate. BJOG 2014;121:840–7.

[13] Fagerberg MC, Marsál K, Källén K. Predicting the chance of vaginal delivery after one cesarean section: validation and elaboration of a published prediction model. Eur J Obstet Gynecol Reprod Biol 2015;188:88–94.

[14] Metz TD, Allshouse AA, Faucett AM, Grobman WA. Validation of a vaginal birth after cesarean delivery prediction model in women with two prior cesarean deliveries. Obstet Gynecol 2015;125:948–52.

[15] Haumonte JB, Raylet M, Christophe M, et al. French validation and adaptation of the Grobman nomogram for prediction of vaginal birthafter cesarean delivery. J Gynecol Obstet Hum Reprod 2018;47:127–31.