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Vaginal birth after cesarean section in Greece and the contribution of the midwives

Nousia Konstantina[1,2,3], Michalopoulos George[2,3], Grigoriadis Charalampos[4], Stournaras Stamatis[1], Brezeanou Christina[1], Vrachnis Nikolaos[4], Farmakides George[1]

[1] 6th Department of Obstetrics and Gynecology, Elena Venizelou hospital, Athens, Greece
[2] Lito hospital, Athens, Greece
[3] Gaia Maternity hospital, Athens, Greece
[4] 2nd Department of Obstetrics and Gynecology, Aretaieio hospital, University of Athens Medical School, Athens, Greece

Correspondence
Farmakides George
6th Department of Obstetrics and Gynecology, Elena Venizelou hospital, 2 Elena Venizelou Square, GR - 11521 Athens, Greece
E - mail: g.farmakides@hospital-elena.gr

Abstract

Introduction: The aim of this study was to examine the success rate and safety of vaginal delivery after cesarean section, as well as the value of midwives' contribution in these cases.

Material and Methods: This was a retrospective clinical study, including women diagnosed with singleton uncomplicated pregnancies and history of one or more previous cesarean sections, who underwent trial of labor, supported by midwives during the antepartum and intrapartum period.

Results: In total, 79% of this study group achieved vaginal birth after cesarean section. No major complications, such as uterine rupture or massive obstetric hemorrhage, were observed during the trial of labor in any case. There was no need for blood transfusion, emergency cesarean section or obstetric hysterectomy in this study group.

Conclusion: It seems that pregnant women who were appropriately informed and prepared from a midwife during the antepartum period achieved higher rates of vaginal birth and satisfaction from the trial. All pregnant women should be informed about the higher risk of complications after repeated cesarean sections in comparison with the potential risks of vaginal delivery after cesarean section and a trial of labor should be offered if they agree with the process in the absence of other obstetrical indications for cesarean section.

Key words: VBAC; TOLAC; cesarean section; midwife; Greece

During the last decades the incidence of cesarean section (CS) in Greece has dramatically increased. Unpublished data report cesarean section rates over 60% in several obstetric care departments. From 1994 to 2000 the incidence of primary cesarean section raised from 6% to 19% in selective University obstetrical departments[1].

Nowadays, the most common indication for elective CS is the obstetrical history of previous CS, leading to elevated total incidence of CS. Howev-

er, the history of CS could not be considered as an indication for CS in all future pregnancies. Vaginal birth after cesarean section (VBAC) could be characterized as a safe, alternative option, in the absence of obstetrical contra - indications, that leads to decreased percentages of CS and offers satisfaction to the mother.

In addition, increased CS rates are reported in the United States of America as well, probably because of the decrease in VBAC rates during the same period[2]. At 1990's a peak in VBAC incidence was noticed; however, during the last decades the percentage of pregnant women who underwent a trial of labor after CS (TOLAC) was lower.

The purpose of this study was to investigate the efficacy and safety of vaginal birth after cesarean section in low risk populations, as well as the value of midwifery contribution during the antepartum and intrapartum period.

Material and Methods

This was a clinical study organized under the cooperation of obstetricians and midwives from two private (Lito and Gaia hospital) and one public (Elena Venizelou hospital) obstetrical departments in Athens, Greece. All cases of TOLAC that took place in three departments (Lito, Gaia and Elena Venizelou hospital) between January 2013 and October 2014, were retrospectively analyzed. Written informed consent was provided in all cases.

During the antepartum period, midwives gave responsible and detailed information about the process of VBAC to the women. Additionally, midwives tried to offer emotional support to the pregnant women and to teach them position exercises and the breathing technique during labor, in order to prepare them for a successful TOLAC.

During the intrapartum period monitoring of the labor was performed. Pain management was achieved by encouragement of the midwives and included ambulation, showers, emotional support and changing positions of the mother. Ambulation and breast stimulation were used according to the individual's needs. The obstetricians were responsible for the decision of labor augmentation, oxytocin administration or epidural anesthesia. In the presence of signs suspicious for fetal distress during the trial of labor, the decision for CS or continuation trial was responsibility of the obstetricians.

The primary outcome of this study was to estimate the total success rate of TOLAC. Moreover, the incidence of major reported complications during VBAC, such as uterine rupture or massive obstetrical hemorrhage, was investigated as well in this study group.

Results

During the study period, 66 cases of TOLAC were examined. All were Greek pregnant women, with high level of education, aged between 27 - 40 years old (mean age 33.8 years), under the care of the midwifes and the obstetricians during the antepartum and intrapartum period. Three pregnant women who were included in this study group had an obstetric history of two previous CS. All were singleton, uncomplicated pregnancies with cephalic presentation.

The most common indication for CS at previous gestation was the failed induction of labor or the absence of labor progress (46%). Moreover, in 14% of cases fetal distress during the intrapartum period was the reason for the previous CS.

In total, the success rate of TOLAC in this study group was 79%, as 52 out of the 66 study group women achieved vaginal delivery. Labor started spontaneously in 89% of cases, while induction by breast stimulation and rupture of the membranes took place in 11% of cases. All infants had excellent Apgar scores at the first and fifth minute after labor, with a mean birth - weight of 3,410 gr (range: 2,500 - 4,300gr).

The majority of cases in which trial of labor was not successful were led to CS because of non progress of labor (11/14, 79%). Suspicious signs for fetal distress during the intrapartum monitoring led to CS in three cases.

No major complications such as uterine rupture or massive obstetrical hemorrhage were reported.

There was no need for blood transfusion or obstetrical hysterectomy in any case. The mean hospital stay was 2.3 days (range: 1 - 5 days).

Discussion

In our study study, 66 pregnant women with singleton, uncomplicated pregnancies after previous CS were led to TOLAC. All women were informed and appropriately prepared from midwives during pregnancy and a high success rate - comparable to other published studies - is reported (79%)[3].

In agreement with other, previously published studies, it seems that women who receive detailed information and are prepared for VBAC by midwives throughout pregnancy achieve vaginal birth in higher percentages than pregnant women without appropriate preparation[4].

It is true that the population of women who wish to undergo TOLAC has special needs during the antepartum and intrapartum period. An holistic approach that a certified nurse - midwife can offer, is very useful.

Moreover, the risk of complications after repeated cesarean sections, such as placenta previa or placenta accreta in future pregnancies associated with an elevated risk for massive hemorrhage and obstetrical hysterectomy, is high. The American College of Obstetricians and Gynecologists (ACOG) promotes the value of trial of labor after low transverse CS in the absence of obstetrical contra - indications, in an attempt to decrease the incidence of CS and associated complications[5].

Furthermore, the fear of uterine rupture in case of spontaneous labor after CS leads a number of obstetricians to perform elective CS before the achievement of complete neonatal lung maturity; this practice is associated with an increase of infants' admission to neonatal intensive care units. The ACOG recommends that the uncomplicated elective CS should not be performed prior to 39 weeks of gestation.

However, the abovementioned risk of uterine rupture during TOLAC remains low, being estimated at 6.2 cases per 1,000 vaginal births after CS[6]. In addition, the incidence of obstetric hysterectomy due to TOLAC is approximately 0.5 per 1,000 vaginal births after CS[6]. Although the incidence is low, all candidates should receive detailed information and give informed consent prior to the trial of labor after CS, as these changes are not acceptable by all women.

Nevertheless, TOLAC should be undertaken in organized obstetric units, under continuous cardiotocography, with high standards of obstetric, anesthesiology, surgical, neonatal and hematology care, capable to support emergency cesarean section or other complications.

After appropriate counseling the ultimate decision to undergo TOLAC or repeat CS should be made by the pregnant woman in consultation with the team of health providers. The midwife can contribute in order to increase the success rate of the trial[7,8]. The collaboration between obstetricians and midwives is crucial for the high quality care of the woman, according to the ACOG statement of policy[8].

In conclusion, the midwife can be of a great help to educate, give psychological - emotional support and lead the pregnant woman to achieve a successful TOLAC.

Conflict of interest

All authors declare no conflict of interest.

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