Successful uncomplicated vaginal birth in patient with 4 previous cesarean sections at Obstetrics and Gynecology Hospital in Damascus, Syria: A case report

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Abstract
Background: Since the vaginal birth is the best recommended route of delivery with a lower mortality and morbidity for mothers and babies compared with repeat CS, a successful vaginal delivery after one or more cesarean sections has been reported, but the risks and benefits of trial of vaginal labor should be determined previously.

Case presentation: In this study we report a case of 30-year-old woman with 4 previous cesarean sections who was admitted with preterm labor, the fetal head was crowning so it was safer to proceed with vaginal delivery. Although the baby was preterm there was no maternal and neonatal morbidity and mortality and the uterine scar was intact.

Conclusions: VBAC may be suggested as an option to lower CS and its complications especially in low resources countries, after doing risk-benefit assessment first.

Keywords: Cesarean section; Vaginal birth; VBAC; TOLAC; Risks; Benefits; Case report.

Abbreviations: CS: Cesarean section; VBAC: Vaginal birth after cesarean; TOLAC: Trial of labor after cesarean.
in Damascus complaining of regular uterine contractions. She is gravida 7 para 4 and has four living full term children, all of them delivered by cesarean sections and she had two miscarriages.

The patient had a planned cesarean birth for her first baby, the second one was an elective repeat cesarean section and it was done in 2013, the third was in 2016 and the fourth in 2020, the type of uterine incisions were unknown, no significant medical, family, and psychosocial history.

In the current pregnancy, the patient was 34 weeks gestation age experiencing preterm labor, afebrile, and had a history of mild uterine contractions which started 3 days ago and increased in intensity during the last hours with sensation of slow fluid trickle from the vagina. She had taken one course of dexamethasone during the 32nd week of gestation.

The abdominal ultrasound showed: normal pregnant uterus contains a single living cephalic presentation fetus and a fundal lying placenta, fetal parameters were: BPD: 34.2w-FL: 34w - FHR: 147 bpm. She had regular uterine contractions with stable vital signs: blood pressure of 110/70 mm Hg, and a heart rate of 92 beats/min.

By vaginal examination the cervix was fully dilated and effaced, fetal station was +4, with ruptured membrane; an intravenous line was established and blood sample was taken for cross matching, her hemoglobin was 11.5 and CRP 7.4.

Anesthesia staff was notified that an emergency cesarean section might be necessary. Her consent was taken to deliver her vaginally and perform an episiotomy as there was no time to perform a cesarean section.

An elective mediolateral episiotomy was performed and a female infant weighing 2200 g was born (apgar scores were 4 and 8 at 1 and 5 minutes respectively). The uterine scar was intact on manual examination and the episiotomy was repaired, the postpartum period was without any complications.

Unfortunately we did not have the time to measure the thickness of the lower uterine scar; however when performing postpartum transvaginal ultrasound the full thickness of the lower uterine segment was 5 mm and the myometrial thickness was 3.13 mm Figure 1.

We have done serial CBC measurements every 6 hours. She was hemodynamically stable and was discharged home with her infant on postpartum day 2.

Discussion

Because of the increasing rate of cesarean section globally in the last years [9], affected by the fact that prior cesarean delivery is the common indication to repeat cesarean section, the famous dictum by Craigin “once a cesarean always a cesarean” [10] making the cesarean section the most common surgical procedure in many countries (guise) and the quick decision when performing the first cesarean [11], even so repeating the cesarean section has led to many short and long term maternal complications (bowel or bladder injury, infection, placenta previa, placenta accrete spectrum and even the need to do hysterectomy which is increased with increasing number of cesarean deliveries) [12,13] all of these rise the attention about trying vaginal birth after cesarean [14], and several studies have been conducted trying to provide proof that vaginal delivery can be safe after a single previous cesarean section [5,6].

But before making the decision to do TOLAC, physician should know pros and cons of TOLAC and the accurately candidates for it.

In successful TOLAC (VBAC) the patient will be able to move and will be discharged earlier after delivery with lower rate of infection, hemorrhage and thromboembolism compared to elective repeat cesarean and it reduced the surgical complication and abnormal placentation due to multiple cesarean delivery [12-14].

On the other hand when TOLAC attempt fails more complications will be developed compared to cesarean section [12].

The uterine scar rupture is one of the fatal rare complications of TOLAC, and may associated with fetal distress and need to emergency cesarean, uterine repair or even hysterectomy [15]. The incidence of uterine rupture in women with previous CS ranges between 0,2-1% and related to the interval between CS and VBAC. Asgarian, et al. recommended that the interval between 2-4 years is the best interval time to achieve a successful VBAC [16], in our case the interval between the last cesarean and the vaginal delivery was 3 years and it is considered sufficient.

Vaginal bleeding, loss of fetal station, increased uterine contractions, new onset of intense uterine pain and fetal bradycardia are various sign and symptoms of uterine rupture, and as the abnormality of the fetal heart rate is the most common sign that indicate to uterine rupture, it is recommended to do continuous fetal heart rate monitoring during TOLAC [12].

Zhang et al. reported increasing uterine rupture risk when using Oxytocin to induce labor in TOLAC compared with the
The datasets used and/or the likelihood of successful TOLAC [27], discuss TOLAC attempt clinically in each woman with a history of previous CS to evaluate the absence of scar defect occurrence is low, compared when the thickness is between 2.1-4.0 mm the risk of uterine defect occurrence during VBAC, can serve in predicting uterine defect occurrence during VBAC, and thus when the thickness is between 2.1-4.0 mm the risk of defect occurrence is low, compared when the thickness is between 0.5 and 2.0 mm.

Some studies reported TOLAC success rate between 68% - 83% [14-26] and this rate increases when there is a history of previous vaginal delivery [24-27]. Therefore, a risk-benefit assessment should be done individually in each woman with a history of previous CS to evaluate the likelihood of successful TOLAC [27], discuss TOLAC attempt with the woman and provide her with evidence-based information about benefits and risks of VBAC [28].

In our case the delivery was very close and there was not time to monitor fetus, even so it is important to monitor both the mother and her fetus very closely by experienced team and to be ready to perform an emergent cesarean section in any time [29].

A mediolateral episiotomy was performed to facilitate labor and birth as the women had no previous vaginal delivery, a manual examination to the uterine scar was done even so it is not recommended and rarely carried out now [30].

In Syria, where there is a growing economic crisis and problems in providing good medical services, the VBAC may form a new cheap and safe option to decrease the number of unnecessary and repeated CS and lower cesarean section complication, thus the health care providers should consult parents about conducting VBAC and provide them with the suitable information to make a decision.

Conclusion

TOLAC may be suggested in patient with prior cesarean sections history especially in low resources countries and when the delivery is expected minutes later but it is still controversial, so a risk-benefit assessment should be done to predict the success of TOLAC, and make the vaginal delivery safe choice by estimate the risks and benefits individually.

Syrian health care providers should present VBAC as possible delivery option in order to lower CS and its complications.

Declarations

Consent for publication: Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Ethical approval and consent to participate: The study is exempt from ethical approval in our institution.

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Authors’ contributions: Wessam Taifour, Ali Deeb, Nour Abbass and Louren Kassabra: study conception and design, data collection, writing the paper. Amer Jari and Haitham Abbassi: study concept, Critical revision of the article.

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