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Case Report

Vaginal Delivery After Two Cesareans. About a Clinical Case

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Abstract

We present a case of a multiparous woman, followed in a peripheral maternity of less than 1000 birth/year, in Belgium. This G5P3 patient was willing to give birth naturally despite two previous cesarean. She already had a successful vaginal delivery for her third child the patient wanted to experimented, for whom she made the choice to give birth at home followed by a midwife and not in a medical institution. In this context we allowed the trial of labor. After a spontaneous labor she gave birth vaginally without complications.

With this case we discuss the condition of access to trial of labor after cesarean - TOLAC, for woman who have two previous cesarean. Despite the international guidelines, in our country there is only a few women with two cesarean to attempt vaginal delivery. For the majority of them they have planned cesarean and are not allowed to attempt TOLAC. However, the chance of successful vaginal delivery are high even with more than one cesarean and the risk of uterine rupture is similar to the risk expected with one previous cesarean. Extend the offer of TOLAC to women with two previous cesarean could contribute to reduce the rate of cesarean, its complications and cost. Nevertheless, the safety of vaginal delivery is still a concern and those women should be followed in medical institution than can provide emergency medical care.

Keywords: *TOLAC; Cesarean Section; Vaginal Delivery*

Introduction and Case Report

This is the case of a 32 years old woman of Congolese origin, gravida 5 para 3 at the moment of the follow up in our maternity. She had no medical history and a body mass index at 24 kg/m^2 at the beginning of pregnancy. She had an history of two c-section. The first one at 38 weeks for a preeclampsia complicated with intra uterine growth restriction. The second cesarean occurred during the labor at 41 weeks for acute fetal distress. For her third child the patient wanted to experimented a vaginal delivery and decided not to be followed in an hospital. She gave birth at home with a midwife. The postpartum period has been complicated with a deep venous thrombosis and pulmonary embolism for which she has been treated.

For her fourth child, she decided to be followed un our obstetrical unit. The first contact in prenatal consultation was at 34 weeks. At this term the date of birth has been determine with the date of last menstrual period, and the ultrasound biometrics. The pregnancy was without complications, there was no gestational diabetes. Fetal growth was estimated to be normal with a 47th percentile at 35 weeks 3/7.

In consultation the patient expresses her will to give birth naturally, despite the two anterior cesarean.

Since she already had a vaginal delivery for the previous pregnancy, we allowed the trial of labor on the condition of a spontaneous labor with strict eukinesia and continuous fetal monitoring during the labor.

The labor started spontaneously at 39 weeks, the patient didn't ask for epidural analgesia. After 4h30 of labor and without oxytocin, the patient was at complete dilation. At this part of labor, we realized an amniotomy. She gave birth spontaneously after 7 minutes of expulsive effort. The new born was a girl weighting 2930g with an apgar score at 9/10/10. The expulsion of placenta was complete. We made a vaginal suturing for an uncomplicated perineal tear. She had been discharged with her baby after a 3 days stay at the maternity without complications.

Discussion

Since the second part of the 20th century there is an increase of cesarean rate and its complications all over the world [1]. There is a wide variation of the cesarean rate depending of the part of the world, from 10 to 60% and its stills increasing [2]. This phenomenon, is now considered has a public health issue. In 2015 the WHO reminded that above 10 to 15% of cesarean per year there is no evidence that there is an improvements in regards of materno fetal morbi mortality.

With the global increase of cesarean there is an increase of specific complications as cesarean scar pregnancy, abnormal placentation, uterine rupture during the labor and delivery, but also increased risk of complications due to repeated cesarean. From the infant side, it seems that cesarean birth has a negative impact on new born future health [3,4]. Some studies also suggest that promoting vaginal birth the could help to reduce the cost in health care [5,6].

Various effort and proposal have been made to reduce the global number of cesarean and promote vaginal delivery [7]. One of the main strategy to reduce cesarean is the trial of labor after cesarean (TOLAC) offering the possibility to woman who had a cesarean to attempt labor and vaginal delivery. The principal concern with TOLAC is the risk of uterine rupture, during labor and delivery. When it occurs, uterine rupture is an obstetrical emergency with a high maternal and neonatal morbimortality. Nonetheless, it's still a rare event and could be prevent with appropriate medical care [8]. Success of TOLAC around 70 and to 80 % leading to vaginal birth after cesarean is estimated around 70 and 80% depending of the studies. But in case of failed TOLAC, a cesarean should be made during the labour, sometimes in extreme emergency with an increased risk of complications compared to elective repeat cesarean [9].

When it comes to trial of labor after cesarean, the safety of labor and delivery is the main concern. To prevent complications a series of condition must be respected. For a long time the TOLAC was only allowed to woman with an unique previous cesarean. However, many studies tends to prove that there is no difference in term of complications and maternal or neonatal morbi mortality with two or more cesarean compared to one cesarean. For these reasons, several international societies have changed their recommendations to allow TOLAC to those women with two or more cesarean in the history [10,11]. For these patients with multiple cesarean the uterine rupture still a rare event and the absolute risk appears to be low, with no evidence of an increase in maternal or neonatal morbi mortality [9,12]. On the other hand, the success rate of TOLAC is high and similar whether with one or two cesarean (70 to 80% or slightly lower depending on the studies) [13].

During the labor and the delivery, the fetal heart rate should be monitored continuously the medical staff (mostly gynecologists and anesthesiologists) should be available quickly in order to be able to perform an emergency cesarean in less of 30 minutes in case of complications or uterine rupture. For this reason, on site medical presence is the ideal situation [10,11,14]. If the benefit of vaginal birth seems to be clear, the offer of trial of labor after cesarean is still limited partly due to concern about safety. In Belgium the cesarean rate varies around 21% each year [2]. The majority of maternity unit are relatively small (mostly less than 1000 birth per year). Despite of the

recommendations, medical staff may be reluctant to offer a TOLAC to woman with more than one cesarean regarding to the capacity to handle an emergency cesarean and poor assessment of risk.

This atypical case raises the question of offering TOLAC to woman with two or more cesarean in their history. For those women, a lot more asking to experiment natural delivery it seems reasonable to offer them to attempt normal birth. There has been other cases described before in our country [15]. But for now most of the patients with two prior cesarean don't have this opportunity and have repeated c-section. Since the risk of uterine rupture is low and similar both with one or two previous cesarean [16] we can argue that all the maternity practicing TOLAC and offering it to women with one cesarean could extend their indication to those with two prior cesarean, especially for woman with a previous successful vaginal birth. To predict the probability to achieve vaginal birth several criteria has been described: a spontaneous labor, a bishop score higher than 5 at the entrance to the maternity, a BMI lower than 30 kg/m^2, a maternal age less than 40 years old, and a gestational age earlier than 40 weeks. On the other side, fetal macrosomia and a previous labor stagnation are more predictive for failed TOLAC [10]. When counseling women with previous cesarean, obstetrician have to weigh the advantage of a successful VBAC and the risks of a failed TOLAC. Calculators have been developed to help practitioners and patients when it comes to discuss the route of delivery [17].

Conclusion

In Belgium, the trial of labor after cesarean is mainly offered to women with one cesarean in their history. However, several international guidelines agree to extend TOLAC to women with two (or more) previous cesarean. This clinical case relaunches the discussion about appropriate use of TOLAC and highlights an increasing proportion of women willing to experiment natural delivery despite multiple c-section. If the advantages of TOLAC are clear, the safety of vaginal birth has to be a priority. For those women with previous cesarean scar and candidate to TOLAC, the follow up, the labor and the delivery has to be manage in an hospital with the possibility ability to handle obstetrical emergencies.

Disclosure

The authors don't have any conflict of interest in this topic.

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