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CASE REPORT

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Vaginal birth after four Cesarean deliveries: A case report

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Abstract

Background: Vaginal birth after cesarean (VBAC) is rarely offered as a delivery option, for gravid women with more than two cesarean deliveries, due to the increased risk of adverse fetal and maternal outcomes.

Case presentation: A 38-year-old Para 4+0 Gravida 5 who had had four previous cesarean deliveries was admitted in the second stage of labor in Maragua sub-county hospital. She delivered a live male infant by spontaneous vaginal delivery with no complications. She had an open bilateral tubal ligation on day two post-delivery and was discharged on day three post-bilateral tubal ligation.

Conclusion: Vaginal delivery after cesarean delivery, while not recommended, is possible even in patients who have had multiple caesareans deliveries. Patient sensitization about antenatal care and involvement in their birth plans should also be prioritized.

Keywords: TOLAC, VBAC, bilateral tubal ligation (BTL)

Introduction

The trial of labor after cesarean delivery (TOLAC), when successful, leads to vaginal birth After cesarean (VBAC). There has been a steady increase in cesarean deliveries worldwide due to the increased primary cesareans, repeated cesareans, and decreased VBAC trials (1). Successful VBAC leads to decreased maternal morbidity and neonatal complications with reduced hospital stays and downtime. However, it is associated with maternal and neonatal complications, which can be fatal and may include scar dehiscence, uterine rupture, birth asphyxia, antepartum hemorrhage, postpartum hemorrhage, and maternal and neonatal deaths (2). Comprehensive assessment for predictors for successful VBAC combined with early informed decision-making from mothers could tilt the scale towards more successful births.

This is a case report of a patient who delivered her fifth born vaginally after four cesarean deliveries.

Case presentation

A 38-year-old Para 4+0 Gravida 5 at 39 weeks of gestation was admitted to the labor ward at Maragua Sub-county Hospital in the second stage of labor. All her four children were delivered through the cesarean route. The first cesarean delivery was in 2010 due to breech presentation, while the rest were subsequently secondary to the previous scar in 2013, 2015, and 2017 with the babies weighing 3, 3.4, 3.8, and 3 kilograms, respectively. She reported one antenatal clinic (ANC) visit at about 28 weeks gestation; however, no record was available. She took folic acid as a self-prescription. No antenatal ultrasound had been done. She had no known food and drug allergies, no chronic illness, or blood transfusion history. She worked as a hairdresser and had

separated from the father of her first four children for over a year, and a different partner was responsible for the pregnancy.

On examination, she was in a general fair condition. Her blood pressure (BP) was 116/77 mmHg, pulse rate 76 beats per minute (BPM), afebrile at 36.1 degrees with no pallor cyanosis or jaundice. Her fundal height was 36/40 in a longitudinal lie, cephalic presentation. The fetal heart rate was present and regular. Vaginal examination revealed a soft and fully dilated cervix, and membranes were bulging. Spontaneous rupture of membranes happened during the vaginal examination, and meconium grade two liquor drained. The patient felt the urge to bear down, and a live male infant weighed 3 750 grams with an initial APGAR score of 8 in the first minute and 10 after ten minutes was delivered. Active management of the third stage and repair of first-degree perineal laceration was done. The estimated blood loss was 300 mls.

A pelvic ultrasound scan was done in the postpartum period. No myometrial defect was noted (Figures 1-3). Open bilateral tubal ligation was done in the first week postpartum. No keloid was noted on the old cesarean scar, minimal adhesions were encountered in the abdomen, and no scar dehiscence was palpated on the lower uterine segment. The patient was discharged on the third postoperative day for the tubal ligation on ferrous sulfate 200mg od, ibuprofen 400mg TDS, paracetamol 1g TDS, amoxicillin 500mg TDS, and metronidazole 400mg p.otds for five days. She was advised to do sitz baths, good perineal hygiene, and present for review after weeks.

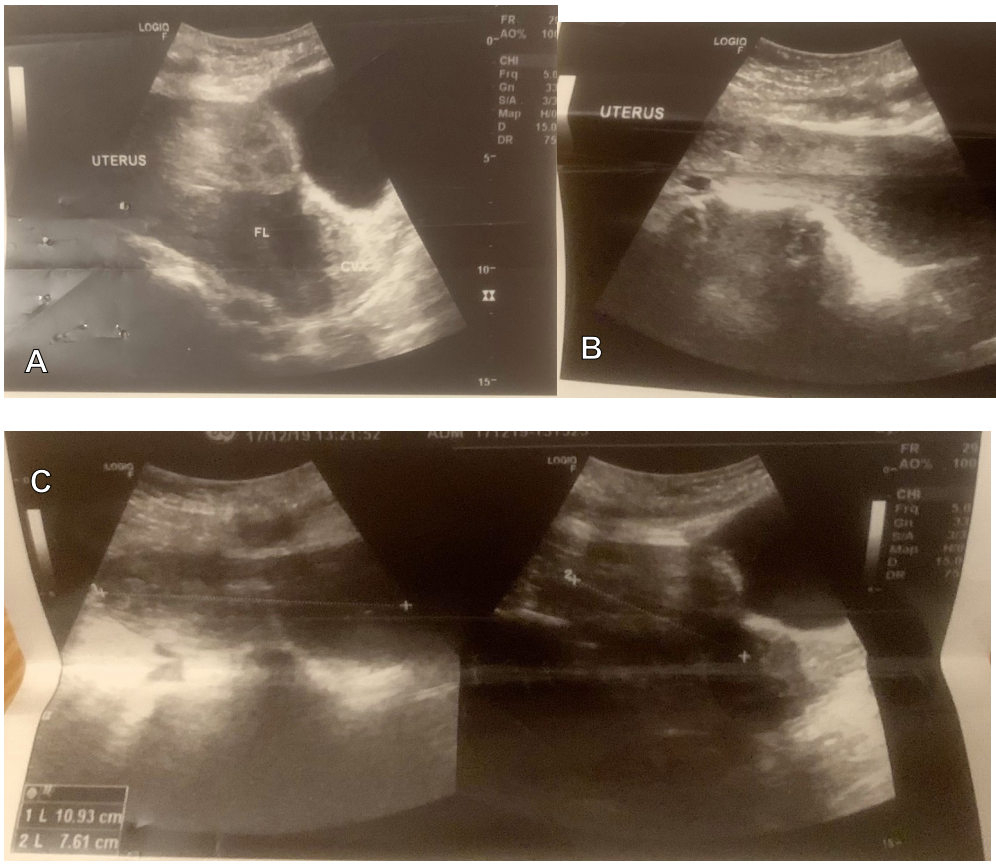

Figure A-C: Ultrasound scan showing uterus and myometrial thickness post spontaneous vaginal delivery (SVD)

Discussion

Cesarean delivery is one of the commonest procedures, and it is lifesaving for both mother and baby when indicated. There is an increase in cesarean deliveries due to increased primary cesareans, repeat cesareans, more high-risk pregnancies, and a decrease in VBAC rate (3). Vaginal birth after cesarean delivery is a controversial subject, and obstetricians have different opinions. In a study conducted among privately practicing obstetricians in Kenya, 58% felt a falling trend of a trial of labor after cesarean delivery (4). However, most of them were still willing to attempt the practice, and VBAC still does occur either out of chance or choice with varied success rates. In another study conducted at Kiambu hospital in Kenya amongst women

attempting VBAC after one prior cesarean delivery, successful vaginal birth occurred in only 50.7% of the women. Other studies worldwide have reported success rates between 60% - 77% (5).

The predictors of successful VBAC include; prior vaginal birth, low maternal Body Mass Index (BMI), lower birth weight or gestational age, white race, higher bishop score, and fetal malpresentation as the indication for previous CS (6). The chances of successful VBAC increase when the interpregnancy or inter-delivery interval is less than 6.3 years and more than 24 months, respectively (7). Therefore such factors can be used to predict VBAC success. The predictors of failure include induction of labor, previous cesarean delivery due to failed induction, recurring indications in a previous pregnancy, advanced age, obesity, diabetes, hypertensive disease in pregnancy, non-white race, macrosomia, or cephalo-pelvic disproportion (8). Therefore, patient education and involvement in the birth plan are essential. A study done at Kenyatta national hospital, Kenya, showed that most mothers have very little information about TOLAC regarding indications, success rates, informed consent, and the importance of indications of previous cesarean delivery. Furthermore, the women's choice of mode of delivery was significantly influenced by the counseling doctor and their qualifications (9).

The increased risk of uterine rupture is one of the main reasons TOLAC is not advocated. Uterine rupture is more prevalent in patients with two prior cesarean deliveries (1.59%) than those with one previous cesarean delivery (0.72%). Additionally, patients with two prior caesareans have a higher incidence of cesarean hysterectomy, 0.56%, than 0.19% for those with one scar. Uterine scar condition, intrapartum management, and maternal health status correlate with uterine rupture risk in labor (7). Sonographic measurement of the lower uterine segment is a practical way of examining the scar condition before labor and predicting the risk of rupture. The cut-off figures on the acceptable thickness before TOLAC range from 1.5 to 4.05 mm. Furthermore, a lower uterine segment thickness >3.65 mm, measured using a standardized ultrasound technique, was associated with a lower likelihood of uterine rupture (10). However, most of the data available on VBAC is from women with only one previous cesarean delivery. This is so because TOLAC after more than one previous cesarean is discouraged in most centers. In addition, the Royal College of Obstetricians and Gynaecologists (RCOG) has guidelines for TOLAC with a caveat to practice caution in women with two previous cesarean deliveries. However, reports of women with multiple prior cesarean deliveries delivering vaginally are continuously being reported (11).

The patient, in this case, can be postulated that she had good prognostic factors like an inter-delivery interval >24 months, fetal weight being <4000 grams, delivery conducted by skilled medical professionals, indication for previous cesarean deliveries other than Cephalopelvic Disproportion (CPD), adequate pelvis, and reaching active labor that may have led to the good outcome. Other factors like African descent and method of repair of the previous scars or other hitherto unknown factors could also have contributed. The risk factors that could result in maternal and fetal complications included four prior cesarean deliveries, she was older than 35 years old, laboring from home before she came to the hospital in the second stage of labor, had no prior obstetric scan, and had meconium-stained liquor (MSL). Therefore, there is a significant and urgent need for intensifying patient education regarding risks and danger signs during pregnancy and the importance of attending antenatal clinics to avoid adverse maternal and fetal complications.

Conclusion

Vaginal delivery after cesarean delivery, while not recommended, is possible even in patients who have had multiple cesareans deliveries. Patient sensitization about antenatal care and involvement in their birth plans should also be prioritized.

Consent for publication

Informed consent for publication was obtained from the patient.

Declarations

Conflict of interests

The authors declare no conflicts of interest.

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