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Therapeutic Mapping after Massive Uterine Rupture as Result of Multiple VBAC (Vaginal Birth after Cesarean Section). A Case Report

Sofoudis C[1], Orfanos P[1], Balamoti S[1], Karouta A[2], Georgoulias G[1]

[1]Department of Obstetrics and Gynecology, Konstantopoulio General Hospital, N. Ionia, Attica, Greece.
[2]Department of Ultrasound, Konstantopoulio General Hospital, N. Ionia, Attica, Greece.
chrisostomos.sofoudis@gmail.com

***Corresponding Author:** Dr. Chrisostomos Sofoudis, MD, PhD, MPH, Adress: Ippokratous 209,11472, Athens, Greece.*

Abstract

***Objective:** Presentation of a 32-year-old woman (gravida 5, para 5) with massive uterine rupture one week after second vaginal birth at home, after 3 caesarian deliveries. Assiduous discussion concerning birth outcome, delivery complications, optimal treatment and therapeutic management of similar cases.*

***Case:** A 32-year-old multiparous woman was admitted to the emergency department of our hospital complaining of sudden severe abdominal pain, episodes of vomiting and hyperthermia, seven days after second vaginal birth at home and 3 cesarean deliveries in the past. The physical and laboratory examination revealed diffuse septic condition. (WBC:20.000, T:38.5C), Hct: 25,6%. Massive uterine rupture was diagnosed by emergency abdominal ultrasound.*

Patient underwent emergency exploratory laparotomy. The aim of this procedure was the clinical certification of uterine rupture and proper management and treatment of the patient.

Critical clinical point is always the procedure of abdominal hysterectomy, in order to restore the rupture complications.

Postoperative course was uneventful. She was discharged from the hospital at the 5th pod in good clinical condition.

***Conclusion:** Uterine rupture represents the most significant obstetrical complication, often occurring in patients undergoing vaginal birth after prior caesarian deliveries. Due to massive uterine bleeding all these patients must be immediately admitted to exploratory laparotomy/.*

Keywords: *uterine rupture, VBAC, exploratory laparotomy, hysterectomy*

Introduction

Vaginal birth after cesarean section (VBAC) represents the term applied to women who undergo vaginal delivery following cesarean delivery in a prior pregnancy. [1-3]

A VBAC is a "successful" trial of labor (TOL) resulting in a vaginal birth. A trial of labor after cesarean (TOLAC) is a planned attempt to labor by a woman who has previously undergone a cesarean delivery and desires a subsequent vaginal delivery and may result in either a "successful" VBAC or a "failed" trial of labor resulting in a repeat cesarean delivery. [4]

Since 1970, the rate of cesarean delivery has increased dramatically from 5% in 1970 to 31.9% in 2016, with a peak of 32,9% in 2009. As a consequence, women becoming pregnant who have experienced a prior pregnancy with cesarean delivery has increased.

The dictum "once a cesarean, always a cesarean" became questioned and from mid-1980s to the mid-1990s VBAC rate increased by over 20% with an

associated decrease of cesarean rates. Over this time, the number of reported significant complications increased. Such complications and accompanying malpractice suits let to a decrease in VBAC. [5]

Uterine rupture consists of the most urgent obstetrical complication strongly associated with clinically significant uterine bleeding, fetal distress, expulsion or protrusion of the fetus, placenta or both into the abdominal cavity,

In such cases need for prompt cesarean delivery and uterine repair or hysterectomy is mandatory. Risk factors for uterine rupture include previous cesarean sections, multiparity, malpresentation and obstructed labor, uterine anomalies, and use of prostaglandins for induction of labor. Previous cesarean section is, however, the most commonly associated risk factor.

Uterine dehiscence is also described as a common complication, referred as an "uterine window", with patients most often asymptomatic.

Case

A 32 years old multiparous woman (gravida 6, para 5) was admitted to the emergency department of our hospital complaining of suddenly developed acute abdominal pain, episodes of vomiting and hyperthermia.

Her past obstetric history consisted of 2 vaginal births (last one a week before the day of admission), 3 prior cesarean deliveries and 1 abortion.

She referred use of heroin (last time 18 years ago), informing as HCV positive patient (treatment period 6 months).

Laboratory tests revealed septic clinical status of the patient (WBC:20.000, T:38.5C). Hct: 25.%. Emergency abdominal ultrasound consisted of massive accumulation of free fluid inside the peritoneal cavity. (Figure I.)

Assiduous examination of the abdominal ultrasound revealed abrading of the layers of myometrium. Massive uterine rupture was diagnosed. (Figure II.)

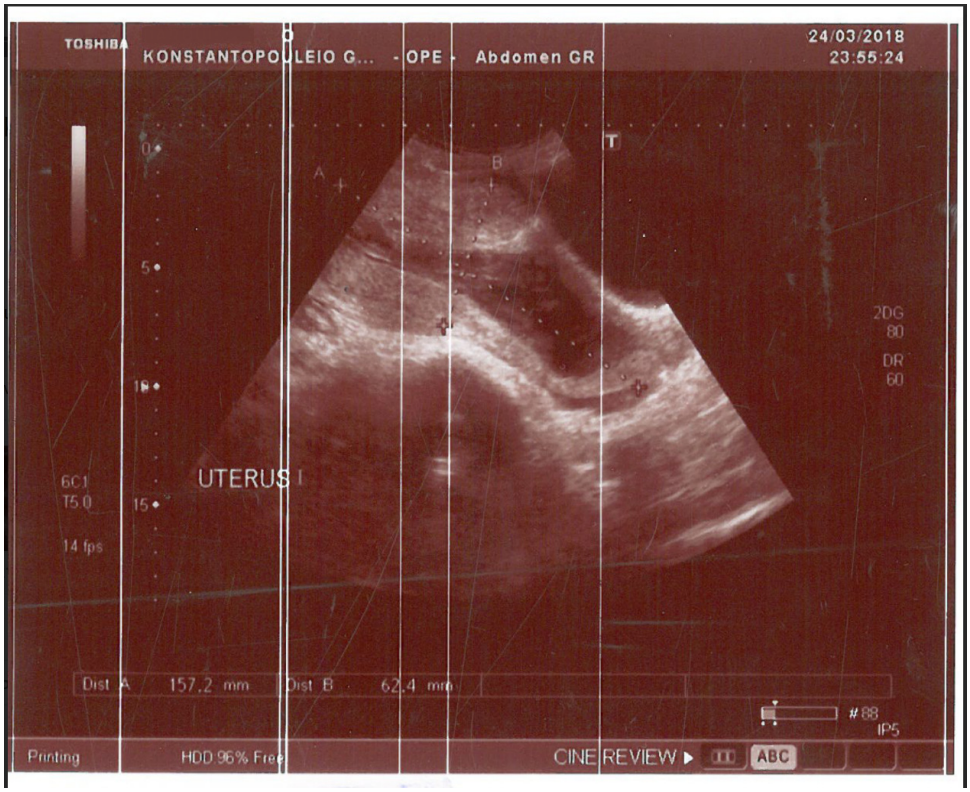

Figure I. *Loss of myometrium continuity in the anatomic area of anterior wall. Enlarged intrauterine cavity filled with echogenic and cystic elements.*

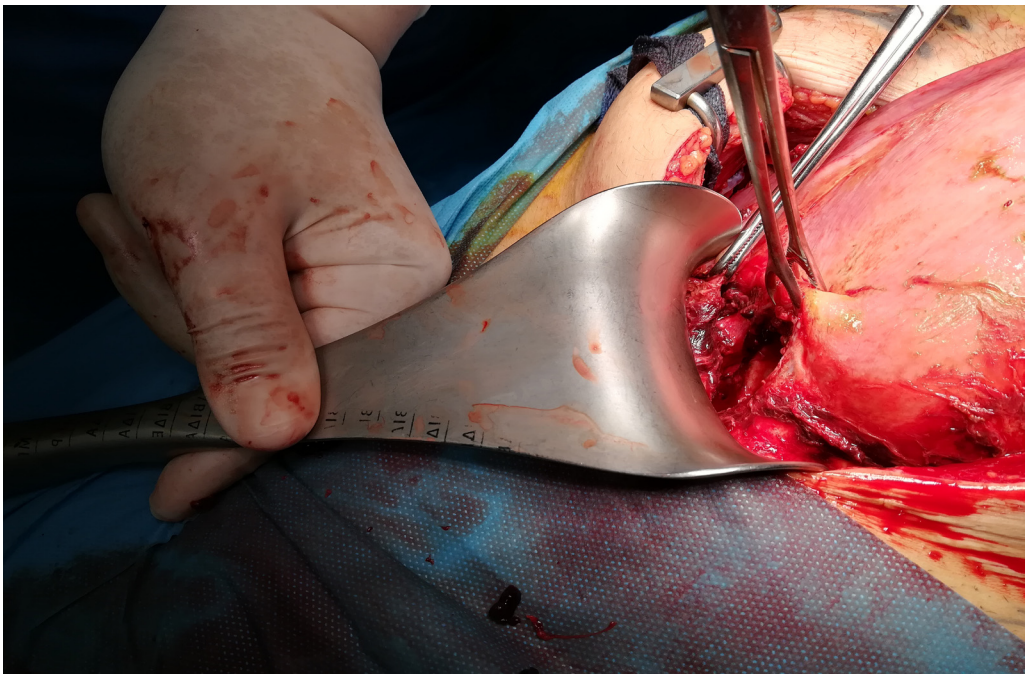

Figure II. *Massive uterine rupture beneath the anatomic area of caesarean scar*

In order to establish proper and accurate diagnosis in correlation with the severity of the clinical status, patient underwent emergency exploratory laparotomy.

Entering the peritoneal cavity, a massive uterine rupture maximal diameter 10 cm was revealed at the anatomic area of the uterine isthmus, beneath the caesarian scar. Inside the uterine cavity were noticed residues of placenta and inflammatory elements.

After anatomic drainage of uterine and peritoneal cavity, we are focused on suturing the area of massive rupture. Individual stiches were used in order to keep the uterus in permanent contraction. Patient received two units of blood, two units of frozen plasma and uterine contractive solutions.

In these cases, important dilemma is undergoing of abdominal hysterectomy, in order to stop the uterine bleeding, or not. Hopefully, uterine contraction and decrease of uterine bleeding removed such thoughts.

Postoperative treatment concluded intravenous antibiotic agents (cefoxitin and clindamycin), antiflammatory agents (lornoxicam) and periodically use of analgesics.

The 5th pod, patient discharged from the hospital in good clinical condition.

Discussion

Vaginal birth after cesarean delivery (VBAC), when successful, is associated with a decrease in maternal morbidity and decreased risk of complications in future pregnancies. Women who have undergone successful VBAC benefit from the avoidance of surgical recovery in the postpartum period.

Increase in proper VBAC deliveries will result in lower cesarean delivery rate and decreased risk of surgical complications as well.

The risk for uterine rupture needs to be determined in women attempting vaginal birth after multiple cesarean deliveries.

60 to 80 percent of women who are considered candidates for a trial of labor after cesarean (TOLAC) to attempt vaginal birth after cesarean (VBAC) will have a successful vaginal birth (VBAC). [6]

Patients with prior vaginal delivery seems to have higher success rates of vaginal delivery, so as patients entering labor spontaneously, compared to women undergone induction of labor.

TOLAC in women with three prior CD an at least one prior vaginal delivery is a viable option and is not associated with higher risk of adverse maternal or fetal outcomes. Maternal morbidity is increased with trial of labor after multiple cesarean deliveries, compared with elective repeat cesarean delivery, but the absolute risk for complications is small. [7]

Complicated primary cesarean delivery with post-partum hemorrhage and infection, seems to increase the risk for uterine rupture at subsequent trial of labor after cesarean. [8-9]

Facing such dilemmas, ultimate answer to these problems is always after exploratory laparotomy undergoing in hysterectomy, especially in cases of young patients. Fertility preservation was always referred and will be the most significant factor in premenopausal patients.

Resulting, vaginal birth after previous cesarean section needs to be looked after in an appropriately staffed and equipped unit for an immediate cesarean delivery and advanced neonatal support. Proper treatment and fertility preservation are mandatory factors in such cases.

Disclosure of interest

All authors declare no financial interest with respect to this manuscript.

Conclusion

Uterine rupture represents one of the most urgent obstetrical condition with massive and most of all severe complications.

Vaginal birth after previous cesarean delivery, however, demands a cautious approach, including antenatal counseling and risk assessment, suitable staffed and equipped delivery suite, continuous intrapartum care and maternal monitoring, continuous electronic fetal monitoring, resources for immediate cesarean section within 30 min, advanced neonatal resuscitation.

Multidisciplinary cooperation is mandatory in order to optimize optimal birth outcome and quality of life of the mother.

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