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► To cite this version:

Letizia Gremillet, Léa Morello, Claude d'Ercole, Xavier Carcopino, Julie Blanc, et al.. Be prepared for unexpected events: A case of vaginal rupture during breech delivery [Letter]. 2020, pp.280. 10.1016/j.ejogrb.2020.05.047 . hal-03216061

HAL Id: hal-03216061

<https://amu.hal.science/hal-03216061>

Submitted on 28 Aug 2024

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Journal Pre-proof

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PII: S0301-2115(20)30330-4
DOI: <https://doi.org/10.1016/j.ejogrb.2020.05.047>
Reference: EURO 11384

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To appear in: *European Journal of Obstetrics & Gynecology and Reproductive Biology*

Received Date: 20 May 2020

Please cite this article as: Gremillet L, Morello L, D'Ercole C, Carcopino X, Blanc J, Netter A, Be prepared for unexpected events: a case of vaginal rupture during breech delivery, *European Journal of Obstetrics and amp; Gynecology and Reproductive Biology* (2020), doi: <https://doi.org/10.1016/j.ejogrb.2020.05.047>

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Be prepared for unexpected events: a case of vaginal rupture during breech delivery

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Dear Editor,

More than any other physicians, obstetricians are confronted with critical situations. Most of these situations are sufficiently frequent and well known to be taught, and medical staff are generally prepared to respond appropriately. However, it is much more difficult to react correctly when the situation is both extremely rare and extremely urgent.

We report the case of a 37-year-old pregnant woman with no prior medical or surgical history, gravida 5, para 4 (4 previous vaginal births with newborns between 3000 and 4200 grams of weight). The follow-up of the current pregnancy was unremarkable aside from a complete

breech presentation. An external cephalic version was attempted without success at 37 weeks' gestation, and a subsequent pelvimetric MRI returned measurements allowing vaginal breech delivery. The patient presented at the delivery room at 39 weeks' gestation with uterine contractions. The cervical dilatation was 3 cm at admission, and epidural anesthesia was set. The labor progressed slowly given the parity of the patient (1 cm/h after 5 cm), and oxytocin was used at minimal speed for augmentation at 8 cm of dilatation for labor arrest for one hour as the frequency of uterine contractions was inadequate. The labor then progressed from 8 cm to complete dilatation over one hour, and the breech presentation rapidly engaged. After ten minutes of expulsive efforts, the breech presentation had not progressed, and the patient suddenly started to complain of intense pelvic pain as her heart rate rapidly increased to 150/minute. The fetal heart rate presented repeated variable decelerations. No vaginal bleeding was assessed at any time during the expulsive phase, and no obstetrical maneuver was attempted. We decided to perform an emergency cesarean section that revealed a major hemoperitoneum in which the breech presentation was drowned. A 3545-gram newborn with APGAR scores of 3, 6, and 9 (1, 5 and 10 minutes) and an umbilical artery pH = 7.05 was extracted. All vital parameters evolved favorably within four hours. Peritoneal exploration revealed a complete hemicircumferential rupture of the anterior vaginal wall close to the anterior vaginal fornix. The vaginal suture was carefully performed after identification of the ureters. The postoperative follow-up was unremarkable, and the patient was discharged at day 5.

Uterine ruptures on the unscarred uterus are extremely rare (0.38 per 10,000 according to a large population-based study by Al-Zirqi *et al*) [1]. Vaginal ruptures are even less frequent. Searching the literature, we found only four other reports, and this is the first report of a vaginal rupture in the context of a breech delivery [2–4]. Each reported case is singular, and no recommendation can be drawn from the current scientific literature. Urgent complications of

such rare occurrences are never expected, and it is likely that obstetricians would find themselves distraught when confronted with them. In the present report, the ultimately favorable outcome is mainly due to chance. Indeed, the obstetrician was present since the beginning of expulsive efforts as recommended for breech presentations, and the cesarean section was presumably decided before the vaginal rupture was complete since no vaginal bleeding was assessed before the transportation of the patient to the operating room. Although the impact of unexpected events has never been studied in the medical framework, in other contexts, they are known to lead to motor slowing and cognitive distraction [5]. Thus, these events often result in behavioral alterations and impairment in the appropriate decision process, leading to errors that can further aggravate the situation. Although it is unclear how obstetricians should prepare themselves, we deem that sharing these experiences when they occur is part of the collective responsibility of physicians.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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