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CASE REPORT

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Post Traumatic Uterine Rupture

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ABSTRACT

The rupture of gravid uterus is a rare complication concerning less than one percent of the pregnant women involved in a motor vehicle accident. The authors report the case of a 38-year woman, referred for a uterine rupture with intrauterine fetal death at 20 weeks' gestation, following a car crash. The surgical laparotomy exploration in emergency showed a wide isthmic uterine tear with placental abruption. Abdominal lesion of the fetus was found. A conservative surgical treatment could be realized. Principles of management, which must be quick and coordinated, are reminded.

Background: Uterine rupture is a very serious obstetrical complication with various etiologies: fetopelvic disproportion, dystocic presentations and misuse of oxytocics, but the rarest and most serious etiology is posttraumatic rupture which represents 1% of these etiologies. We report a case of uterine rupture by direct abdominal trauma during a road traffic accident (MVA). This is an obstetrical emergency with a vital maternal and fetal prognosis, requiring rapid intervention and multidisciplinary management.

ARTICLE HISTORY

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Case Presentation

34-year-old patient, without any notable pathological history, it is a fourth gesture with 3 deliveries by vaginal route, G4 is the current pregnancy estimated at 20 weeks of amenorrhea according to an early ultrasound, victim of a serious public road accident as a front passenger of a car, belted, whose shock was at the level of the small pelvis by a sharp metal end having crossed the abdominal wall and caused a frank eventration.

On admission the patient had a blood pressure of 100/50 mm Hg, with a heart rate of 115 beats/min, SPO2 100%; GCS 14, large ecchymosis in the hypogastrium, an open wound in the right iliac fossa. Abdominal palpation shows generalized defensiveness, without any notable motor or sensory deficit. The ultrasound scan shows a medium-sized hemoperitoneum, a fetus with negative cardiac activity and whose biometry corresponds to the theoretical gestational age, a rapid scan does not show any hepatic or splenic lesions.

The patient was taken directly to the operating room for exploratory laparotomy where a complete workup was performed, blood was requested and she was conditioned (2 good caliber venous lines, filling, oxygen therapy). (Figure 1)

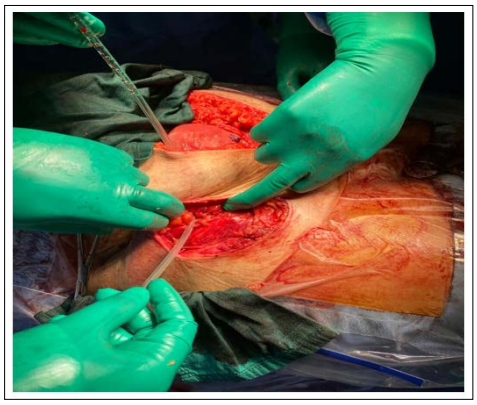

Figure 1: Penetrating Abdominal Wound Through the Right Iliac Fossa

On exploration, we found a contused abdominal lesion leading to a frank evisceration with isthmic uterine continuity solution caused by the metal cutting edge which was blocked by the fetus in back to back breech presentation in whom we objectified an open abdominal wound. A retro placental hematoma was found. (Figure2)

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Figure 2: Abdominal Injury of the Fetus by the Cutting Edge

A conservative treatment was possible with uterine suture in 3 planes after uterine revision with placement of an aspiration drain, the gesture completed by the exploration of the whole abdominal cavity by the visceral surgeons without revealing an associated lesion, suture by simple stitches of the lesion of the inguinal groin, the blood loss evaluated at 1.5L Patient transfused in 3 packed red blood cells, (Figure 3).

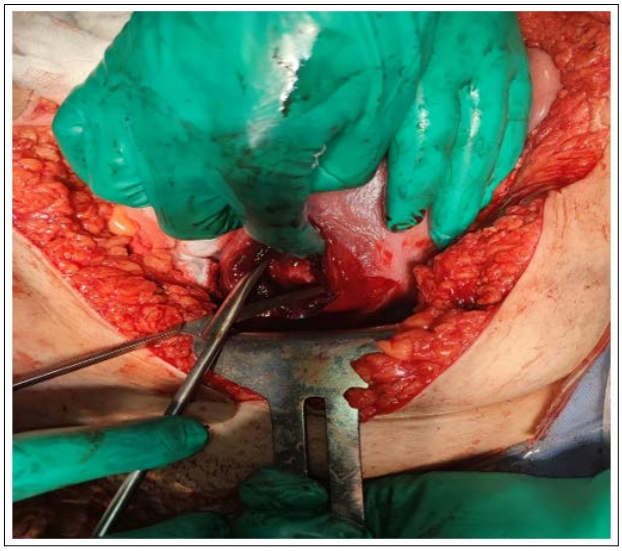

Figure 3: Abdominal Eventration at the Peritoneal Opening with Fetus Clogging the Uterine Rupture

The patient was admitted to the intensive care unit for monitoring and then transferred to the gynecology department.

Discussion

Public road accidents concern 55% of the causes of non-penetrating abdominal trauma in pregnant women, they concern pregnant women in 0.3 to 7% of cases, The consequences in this field are multiple for both the mother and the fetus [1,2].

Among the disorders of the pregnant uterus, placental abruption and uterine rupture are the most serious complications that can be life-threatening, as well as miscarriage, premature labor, and premature rupture of the membranes [3].

The uterine rupture would be related to its abdominal position due to the pregnancy. Most uterine ruptures by AVP occur mainly in the 2nd and 3rd trimester, they are generally fundial location.

Among the factors favoring uterine rupture, we note the safety belt as suggested by some authors, but other authors encourage its use because it reduces the severity of maternal trauma, the risk of ejection and the risk of maternal death, the sudden increase in abdominal pressure and the phenomena of deceleration [4].

Fetal death following post-traumatic uterine rupture is a constant which can be explained by maternal tentional collapse, HRP, uterine rupture, acute fetal anemia [5].

The prehospital management is identical to that of a severe trauma, requiring a release of the upper airway, good ventilation, lateral decubitus of safety [6]. An adequate vascular filling even in case of hemodynamic stability by recommending crystalloids in case of moderate hypovolemia and albumin in case of severe hypovolemia [7].

Abdominal-pelvic ultrasound is indicated in first intention, a rapid non-invasive examination for a first assessment of the lesion, an abdominopelvic scanner comes in second intention for a better assessment of the lesion without delaying the management in case of maternal hemodynamic instability [8].

The choice of the type of intervention depends on the type and extent of the rupture; conservative treatment is always favored, but hysterectomy for hemostasis is sometimes mandatory [9,10].

Declarations

Guarantor of Submission

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Availability of Data and Materials

Supporting material is available if further analysis is needed.

Competing Interests

The authors declare that they have no competing interests.

Consent for Publication

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

Ethics Approval and Consent to Participate

Ethics approval has been obtained to proceed with the current study. Written informed consent was obtained from the patient for participation in this publication.

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