Uterine torsion with maternal death: Our experience and literature review

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Summary

Torsion of the gravid uterus around its cervical junction is a rare event especially in humans. In 1992, a literature review by Jensen, mentioned by Carbonne [1], showed 212 cases with different etiologies. Uterine torsion is more frequently dextrorotatory (2/3 of cases) [5]. The diagnosis is difficult and generally done during cesarean section because it is frequently not symptomatic. Uterine torsion signs, when present, are not specifics. Pain, nausea and vomiting [4] may present without any sign of shock, as in our patient. Sometimes ultrasonography can lead to a correct diagnosis, showing a modification of the placenta site during pregnancy [1, 2], or an abnormal positioning of the ovarian vessels which pass in front of the lower uterine segment [2]. Some authors report cardiotocographic abnormalities probably due to the reduction of blood flow caused by the torsion [2, 4]. Quickness of surgical treatment is fundamental for the reduction of fetal mortality which is very frequent in a large number of cases, while maternal mortality is not so frequent but possible. A diligent anamnesis and ultrasonographic examination are surely useful to single out the rare cases of uterine torsion in pregnancy.

Key words: Uterine torsion; Fetal prognosis; Maternal death.

Introduction

Torsion of the gravid uterus around the cervical junction is a rare event especially in humans. In 1992, a literature review showed 212 cases [1] with different etiologies: abnormal fetal presentation, uterine fibroid, uterine malformation, ovarian cancer and pelvic adherences [2]. Fetal prognosis is generally adverse, while maternal prognosis is frequently good.

A case of uterine torsion (180°) in a 37-week-pregnant woman followed by maternal death is analyzed.

Clinical Case

The patient (G.A.), pregnant with her third child, aged 34, Ivorian, was followed from the beginning of her pregnancy in one of the obstetric centers of Abidjan, where she had six obstetric check-ups.

During the last check-up she was at 37 weeks' (18/04/2005). She weighed 115 kg, was 177 cm in height and her blood pressure was 130/90 mmHg. There were fetal movements and a regular fetal heart beat. The uterine end was 37 cm from the pubic symphysis and vaginal examination showed a soft, shortened, 1-cm open uterine cervix; fetal presentation was unreachable.

The day after, the woman came to the CHU Obstetric and Gynecologic Service of Treichville, because of the too high uterine end level and low blood pressure. Clinical examination showed a conscious and aware patient with blood pressure of 120/80 mmHg, 108 bpm, no fever and no icterus.

The patient referred pelvic-abdominal pain and absence of fetal movements. Obstetric examination showed low uterine activity, the uterine end at 40 cm, no fetal heart beat, a soft, posterior, shortened and closed uterine cervix and unreachable fetal presentation. The pelvis was normal.

Fetal death, irregular fetal presentation and maternal hypoglycemia were suspected. Therefore, a 10% glucose infusion was given to the patient, and exams showed a 11.2 g/dl hemoglobin, 34,5% hematocrit, 12,300/mm^3 white globulins, 232,000/mm^3 platelets, 1.10 g/l glycemia, 100% PT, 1.94 g/l fibrin.

On the same day, the patient had bloody vomiting (gastric ulcer was present in the anamnesis) so she was given IV ranitidine.

Twelve hours after recovery the patient had epigastric pain. After another two hours she underwent an ultrasonographic exam which confirmed fetal death and transverse presentation with the cephalic pole in correspondence with the right maternal side. It was impossible to carry out ultrasonography sooner because the ultrasonographic service was not available during the night. It was decided that a cesarean section should be performed.

Anesthesiologists agreed with the cesarean section giving an anesthesiologic risk of ASA II-III.

One hour and a half later, awaiting the cesarean section (the operating room was occupied by another surgical team), the woman showed a sudden worsening of her systemic health with loss of consciousness (Glasgow 5/15). She died after a long but useless reanimation attempt.

Post-mortem cesarean section was useful to take out a soaked male fetus, 50 cm long, 3,600 g in weight, in a transverse presentation with the cephalic pole in correspondence to the right maternal side.

Abdominal exploration showed uterine torsion of 180° (Figure).

Uterine manual detorsion, in fact, allowed verification of hysterotomy which had been done on the posterior uterine wall. No sign of placental hematoma was found. The uterus was violaceous, flabby, with bloody stuffed and necrotic areas, especially in correspondence with the left ovary.

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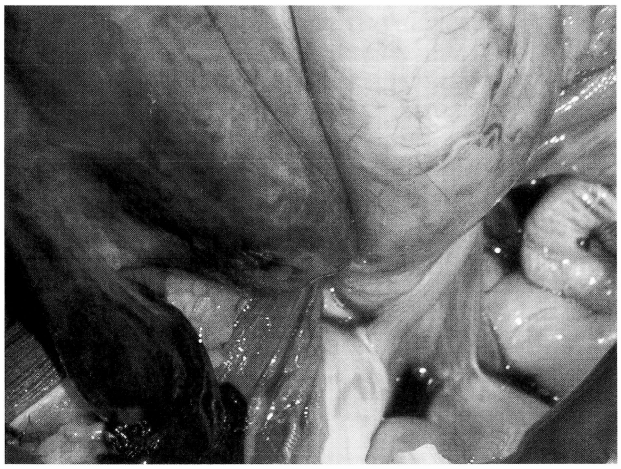

Figure — Torsion of gravid uterus diagnosed after fetal extraction.

Discussion

Torsion of the gravid uterus around its cervical junction is a rare event. In 1992, a literature review by Jensen, mentioned by Carbonne [1], showed 212 cases with different etiologies. The majority of authors report on only one case [1-5].

Uterine torsion is defined as a > 45° rotation on its major axis [2]. There are very rare cases of 720° uterine rotations. The most frequent uterine rotation is 180°, as the one observed in our patient. Uterine torsion is more frequently dextrorotatory (2/3 of cases) [5].

Its diagnosis is difficult and generally done during cesarean section because it is frequently not symptomatic. Uterine torsion signs, when present, are not specific. Pain, nausea and vomiting [4] may present without any signs of shock, as was the case in our patient. Sometimes ultrasonography can lead to a correct diagnosis, showing a modification of the placenta site during pregnancy [1, 2], or an abnormal positioning of the ovarian vessels which pass in front of the lower uterine segment [2]. Some authors report cardiotocographic abnormalities probably due to a reduction in blood flow caused by the torsion [2, 4].

In 180° uterine torsions, hysterotomy is more frequently performed on the posterior wall of the uterus [4], which has to be recognized because of bladder absence and the presence of the large ligament crossing the lower uterine segment [5].

Uterine detorsion is technically delicate before fetal extraction [5]. Perinatal mortality is important and is about 12% [1]. No maternal death has been indicated in uterine torsion cases in works published after 1960 [1]. In our case, maternal death probably was due to sudden shock due to the delay in surgical treatment.

Conclusions

Torsion of the gravid uterus is a rare event with a difficult diagnosis. Signs and symptoms are not specific and generally backward, justifying a late diagnosis or a lack of one.

Quickness of surgical treatment is fundamental for the reduction of fetal mortality, which is very frequent in a large number of cases, while maternal mortality is not so frequent but possible. A diligent anamnesis and ultrasonographic examination are surely useful to single out the rare cases of uterine torsion in pregnancy.

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