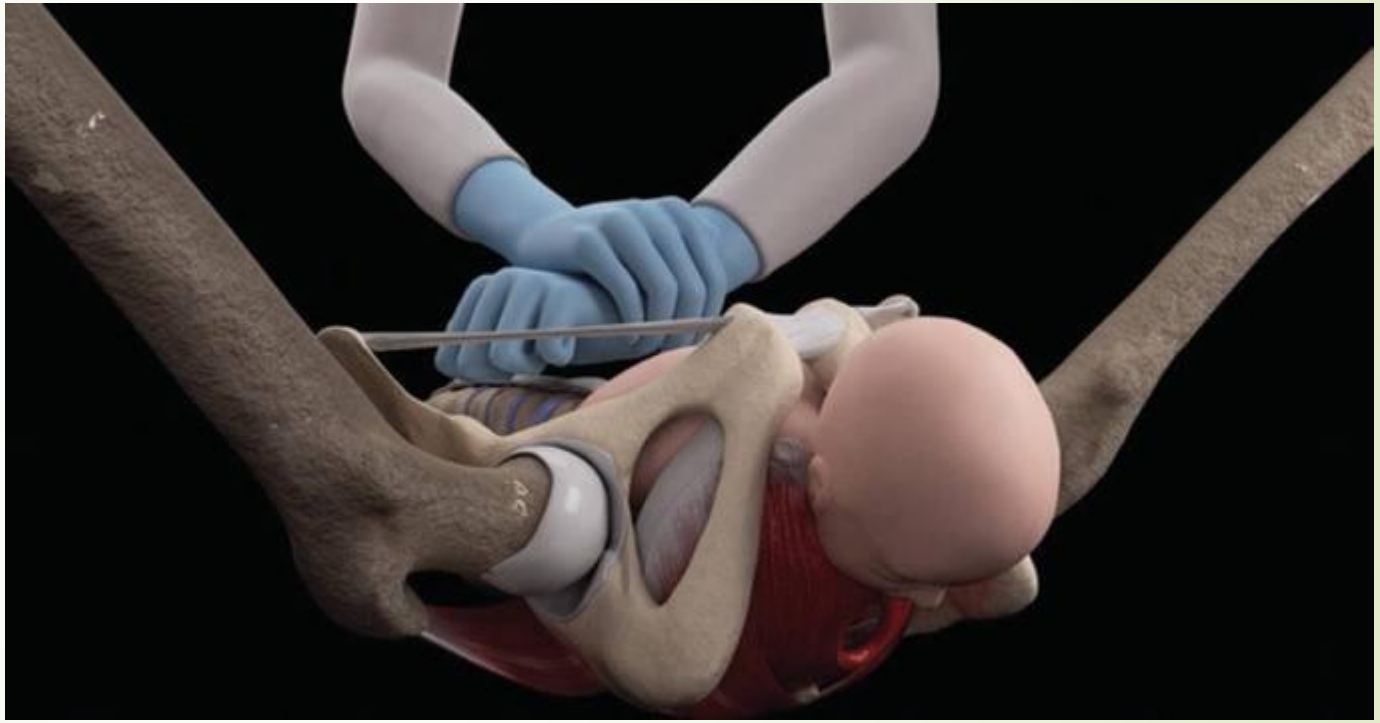
Case report: Intra-partum utero-ovarian vessels rupture



تقديم :

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بإشراف رئيس القسم :

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- A 39-year-old Caucasian pregnant woman was admitted to hospital, at 40 weeks gestation. She was in labour and her membranes had ruptured 1 h prior to admission. The patient was healthy, gravida 3, para 2 and had an uneventful ante- natal period. Her relevant past medical history was of bilat eral inguinal hernias, which had been surgically corrected.

- On admission, vaginal examination revealed a 2 cm. dilated cervix and a normal amniotic fluid. Epidural anal- gesia was given on request by the parturient. Five hours later, a female baby who weighed 3,680 g was delivered vaginally with the aid of a vacuum extractor and episiot- omy. A Mytivac vacuum extractor was used due to non- reassuring fetal well-being. The vacuum extractor was applied for 1 min at the III Hodge level of fetal descent (3), and on a right occipito-posterior cephalic presenta- tion. Before the vacuum extractor application, some uter- ine fundal pressure had been applied, during two or three uterine contractions

- During the expulsive efforts, the patient repeatedly complained of bilateral shoulder discomfort and some respiratory difficulty. While repair- ing the episiotomy the patient kept complaining and slight than normal vaginal bleeding was observed with hemodynamic compromise (blood pressure was 70/ 25 mmHg).
- The uterus was well contracted. Careful inspection of the vagina and cervix revealed a cervical tear of 1 cm at 12 o'clock. After repair of the tear, the vaginal bleeding normal although her bilateral shoulder discomfort continued. Full blood count revealed haemoglobin level of 9.1 g/dl with a hematocrit of 26.4%.
- The abdomino-pelvic ultrasound revealed an empty uterine cavity and minimal fluid within the pouch of Douglas.
- After asking for a second opinion, an expec- tant approach was decided. Eight hours after delivery, the patient started complaining of an increasing abdominal pain.
- On physical examination, the abdomen was distended and painful.
- The blood pressure was 101/ 60 mmHg.
- Then the **abdomino-pelvic ultrasound** revealed a large amount of free fluid within the peritoneal cavity and the haemoglobin level was 8.7 g/dl with a hematocrit of 25.2%.

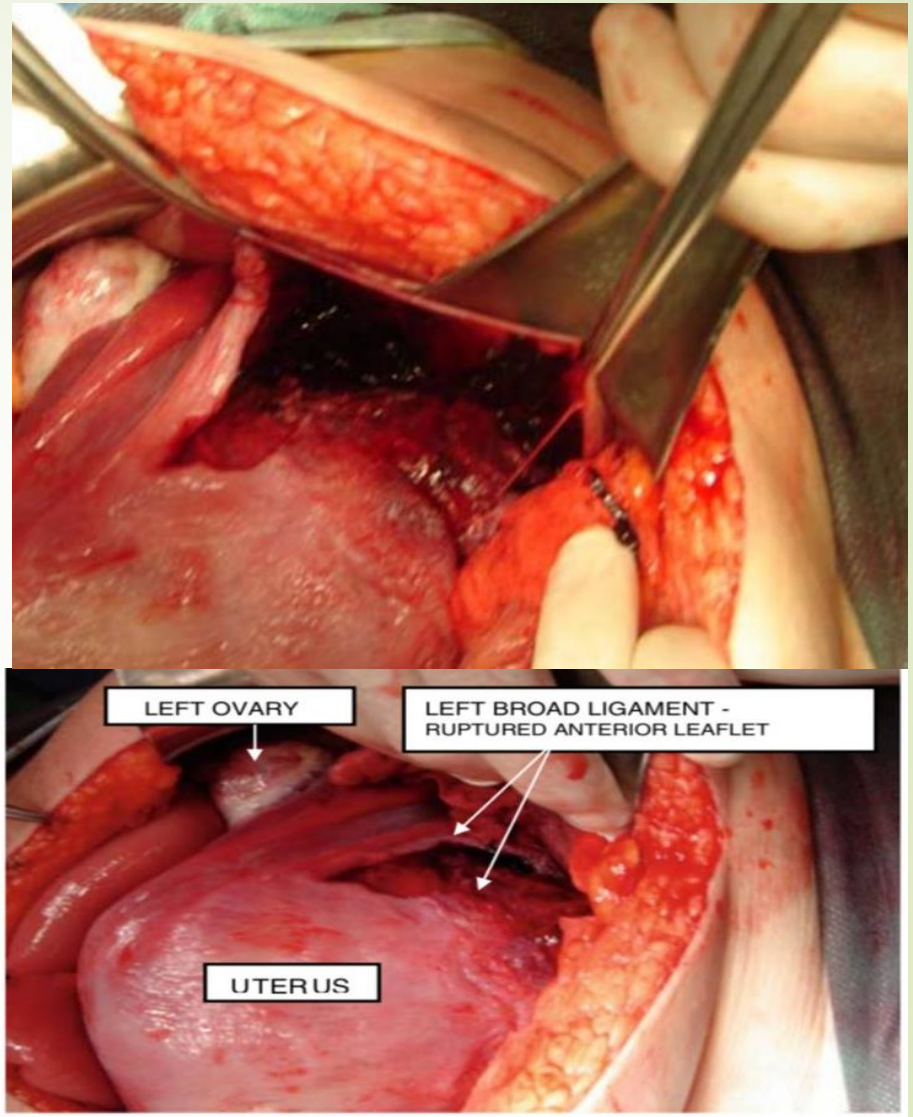

Fig. 1 Abdomino-pelvic cavity during laparotomy (*superior view*). An extensive laceration of the anterior leaflet of the left broad ligament and vesico-uterine peritoneum can be observed

- The patient subsequently underwent for an exploratory laparotomy. During the surgical procedure, about 3,000 ml of blood (including clots) had been. removed from the abdomino-pelvic cavity.
- An extensive laceration on the anterior leaf of the left broad ligament and vesico-uterine peritoneum with active bleeding from the utero-ovarian vessel was detected .
- There was no evidence of uterine rupture. The procedure. consisted of careful cleaning followed by utero-ovarian vessels ligation and peritoneal closure. An abdomino- pelvic drain was left in place.
- During the laparotomy, a unit of blood was transfused. Post-operative recovery was uneventful.

- During puerperal recovery, the reproductive plan was discussed with the patient and permanent birth control was required. Hysteroscopic tubal sterilisation was performed, without complications, 6 months after delivery

Discussion

- The main causes of post-partum
- haemorrhage are :
- uterine atony or rupture,
- retention of placental fragments
- and birth canal or perineal lacerations. Other, less common,
- causes include rupture of a splenic artery or
- hepatic artery aneu- rism

- Post-partum haemorrhage can vary clinically, depending on the cause and blood deposition. Blood can be expelled through the vagina, it can remain concealed or a haemoperi- toneum can develop., with small drops in haemoglobin and blood pressure.
- These can be explained because profuse vaginal haemorrhage was not observed and the patient was under epidural analgesia causing a painless abdomen. Epidural analgesia can also be associated with hypotension .

- Moreover, rupture of blood vessels might have happened with concealed haem- orrhage, between the leaves of the broad ligaments, with a subsequent rupture of the peritoneum, because the first abd- omino-pelvic ultrasound revealed only minimal fluid within the pouch of Douglas. Obstetricians should entertain the possibility of utero-

- ovarian vessels rupture a differential diagnosis of haemoperitoneum, particularly in a parturient with epidural analgesia. Obvious aetiological causes such as endometri- osis or vascular malformation not found for this case. However,

- one may speculate that the patient's multiparity and tissue fragility background (history of bilateral inguinal hernia) associated with uterine contractions and external fundal pressure in the minutes preceding the delivery can be a plausible explanation.
- Indeed, there are no medically validated indications for the application of fundal pressure with the intention of shortening the duration of the second stage of labour. This maneuver is controversial results from an empirical practice and although very rarely recorded, serious related complications such as rupture of the uterus have been described.

- The treatment of this obstetrical emergency is the rapid administration of fluids and blood and prompt surgical intervention. A hysterectomy may be needed to control haemorrhage when the bleeding points are obscure .

- The patient was submitted to an exploratory laparotomy and conservative management-vessels ligation-was undertaken. Arterial embolisation was not considered at first, because other causes of haemoperitoneum than utero- ovarian vessels rupture were considered.