

CASE REPORT

OBSTETRICAL HEMORRHAGES, A REALITY THAT ENDANGERS THE PATIENT'S LIFE

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SUMMARY

The chosen case is not one of the few uterine ruptures cases, however it is rare through the cause of appearance, uterine scar post laparoscopic myomectomy (0.75%) and the moment of appearance in the second pregnancy trimester (1). This is the case of a 43 years old woman, 21 weeks pregnant obtained through IVF, brought to the Emergency Room manifesting faintness, abdominal pain, nausea and vomiting. The diagnosis was: acute abdomen, haemoperitoneum, hemorrhagic shock, suspicious of uterine rupture, 21 weeks old pregnancy obtained through FIV, antepartum stillbirth, uterine scar postlaparoscopic myomectomy 2013. Presumptive diagnosis was supported by patient history, clinical examination, ultra-sound and laboratory explorations. The patient was immediately admitted to hospital, the first steps of volume replacement have been made, emergency exploratory laparotomy has been performed, intraoperative intervention certifies the diagnosis of complete uterine rupture, stillbirth antepartum, haemoperitoneum; dual-layer uterine suture is tried but without success; continued with subtotal inter-adnexal hysterectomy for hemostasis. Postoperative patient evolution was favorable. The uterus rupture is an obstetric emergency, threatening the patient's live through high bleeding possibility, which can occur on normal, scarred or malformed uterus. Moreover, a scarred uterus post caesarean surgery, segment-transversal, middle-corporeal, on scarred uterus post myomectomy with various anatomical location, malformed uterus represent a great responsibility and challenge for the obstetrician MD who cares for such a patient.

Key words: rupture, uterine, bleeding, obstetric, laparoscopic myomectomy

RÉSUMÉ

Les hémorragies obstétricales, une réalité qui met en danger la vie du patient

Le cas choisi ne se situe pas parmi les quelques cas de rupture utérine, néanmoins il est rare par la cause de son apparition, la cicatrice utérine après la myomectomie laparoscopique (0,75%) et le moment de son apparition dans le deuxième trimestre de la grossesse (1). C'est le cas d'une femme âgée de 43 ans, 21 semaines de grossesse obtenue par fécondation in vitro (FIV), transportée en ambulance au Service d'Urgence de l'Hôpital, présentant de la lipotimie, douleur abdominale, nausée et vomissement. Le diagnostic était: abdomen aigu, hémopéritoine, choc hémorragique, soupçon de rupture utérine, grossesse de 21 semaines obtenue par FIV avec fœtus mort avant l'accouchement, utérus cicatriciel après la myomectomie laparoscopique. Le diagnostic présomptif a été basé sur l'anamnèse, l'examen clinique, l'échographie et les explorations de laboratoire. La patiente a été hospitalisée d'urgence, on a pris les premières mesures de réanimation volémique, on a pratiqué la laparotomie exploratoire d'urgence; l'intervention intra-opératoire confirme le diagnostic de rupture utérine complète et du bord droit de l'utérus, le fœtus mort ante-partum, l'hémopéritoine; on essaye la suture utérine en double couche, mais sans succès; on continue avec l'hystérectomie subtotale pour l'hémostase. L'évolution post-opératoire de la patiente est favorable. La rupture utérine de l'utérus cicatriciel représente une urgence obstétricale maximale menaçant la vie de la patiente par la possibilité d'un saignement massif qui peut se produire sur un utérus normal, cicatriciel ou malformé. De plus, un utérus cicatriciel suite à l'opération césarienne segmento-transversale, médio-corporelle, un utérus

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INTRODUCTION

Obstetric hemorrhage is the leading cause of maternal mortality worldwide. There are different classifications depending on the time and cause of appearance, with different pathological implications. Depending on the time of their appearance they can be classified in: bleedings occurring early during pregnancy (before 20 weeks), antepartum obstetric hemorrhages (after 20 weeks), intrapartum and immediate postpartum obstetrical bleedings and delayed postpartum bleeding (2). Uterine rupture (rupture corporis uteri) is one of the major obstetric complications with a high rate of patient death and stillbirth. Be it on normal uterus or scarred uterus, complete or incomplete rupture, it is the cause of obstetric hemorrhage that falls into the antepartum, intrapartum and postpartum obstetrical hemorrhages category (3). Complete rupture is the one that intercepts all layers of the uterus while the incomplete one partially affects the uterine wall layers, in which case the commonly used terminology is 'dehiscence'. The main causes of uterine rupture are represented by two big classification: uterine injury or anomaly sustained before current pregnancy: cesarean delivery or hysterotomy, myomectomy incision through or to the endometrium, previously repaired rupture, metroplasty, deep cornual resection of interstitial oviduct, abortion with instrumentation, sharp or blunt trauma, silent rupture in previous pregnancy, congenital uterine anomaly; uterine injury or abnormality during current pregnancy: before pregnancy: precipitate labor, labor stimulation- oxytocin or prostaglandins, intra-amniotic instillation, external version, external trauma, uterine overdistension - hydramnios, multifetal pregnancy; during delivery: internal version, difficult forceps delivery, breech extraction, fetal anomaly distending lower segment, difficult manual removal placenta; abnormal placental insertion, adenomyosis, gestational trophoblastic neoplasia, uterine retroversion (2).

CASE REPORT

The 41-year-old patient, caucasian race, from an urban environment, with high socio-economic status, with 21 weeks pregnant, was hospitalized at the Obstetrics and Gynecology Clinic, Clinical Emergency Hospital "St. Pantelimon", Bucharest, for a faintness with a progressive evolution, general abdominal pain, nausea and vomiting. The patient's personal history shows that the patient had no other birth, had two abortions without incident. Medical history reveals

cicatriciel après la myomectomie aux différents emplacements, un utérus malformé représentent une grande provocation et une responsabilité pour le médecin obstétricien qui soigne une telle patiente.

Mots clefs: rupture utérine, hémorragie obstétricale, myomectomie, laparoscopique

chronologically ascending the following: multiple uterine synechiae for which 4 diagnostic and therapeutic hysteroscopy are done throughout 7 years; right ectopic pregnancy surgery that was solved with right salpingectomy; subserous uterine fibroids, located on the posterior wall, uterine right cant, with dimensions 3/3/2 cm, for which was performed laparoscopic myomectomy (05/16/2014), before 2 years and 8 months getting current pregnancy, endometrial polyp for which therapeutic and diagnostic hysteroscopy was performed. Known with infertility, patient with multiple uterine synechiae, with uterine myoma excised laparoscopic, partner with azoospermia, achieving pregnancy through in-vitro fertilization, the embryo transfer taking place on 09.11.2015. The pregnancy, which until 13 weeks seems to proceed normally, needs cervical cerclage for cervico-isthmic incontinence. She is diagnosed with thrombophilia, homozygous mutation gene PAI-1, and two hetero-zygote MTHFR mutations, harmless, for which she undergoes treatment with Clexane 0.4 ml subcutaneously from preconception period until now. The patient presents during pregnancy only one hospitalization for symptoms of biliary colic: right upper quadrant pain, nausea, vomiting about 3 weeks before, without painful uterine contractions, with antacid therapy, antiemetic, antispasmodic, symptoms remitted. The patient has normal weight, normotensive throughout pregnancy, without family history, is nonsmoking and not drinking alcohol.

On 01/19/2016 the patient was transported to the Emergency Hospital 'St. Pantelimon' with faintness, generalized abdominal pain, nausea, vomiting; symptoms had started 2 hours earlier, having a progressive evolution. On examination it is found that: the patient is conscious, cooperative, hemodynamically unstable with blood pressure 70/45 mmHg, ventricular allure 120 beats per minute, imperceptible pulse in the periphery, pale skin and mucosae, cold extremities marbled, distended abdomen volume by gravid uterus, difficult to palpate because of generalized muscular defense, spontaneous pain and on palpation, fixed with breathing movements, no active fetal movements, nausea and vomiting. On gynecological examination with valves it is stated that there is no blood or amniotic fluid loss, cervical cerclage wired present. On vaginal touch examination it is found: wire cervical cerclage, difficult to palpate uterus due to abdominal distended and intense and generalized muscular defense, vaginal bag bottoms intensely painful. The diagnostic methods were: abdominal ultrasound, laboratory tests: CBC, coagulation, transaminase, glucose, urea, creatinine, uric acid, LDH, sodium, potassium. Ultrasound examination revealed the following: abdominal cavity

stillbirth, fetal heart rate absent, active fetal movements absent, biparietal diameter 5, 14 cm, corresponding to 21 weeks and 1 day, that seems not to be located in the uterine cavity, found among the intestines, large amounts of fluid in the bottom of the Douglas bag, into the peritoneal cavity: space Morisson, left and right parietal side colic, splenic box. Blood tests show the following changes: leukocytes 16,061 / microliter; hemoglobin 6, 42 g / dl, platelets 188 000 / microliter; neutrophils 12,301 / microliter; APTT 1.24 ratio, fibrinogen 179 mg / dl, 57% PT, INR 1.39. After history, clinical examination and paraclinical exploration the diagnosis was: acute surgical abdomen, haemoperitoneum, hemorrhagic shock, suspect uterine rupture, 21 weeks of IVF pregnancy, antepartum stillbirth, uterine scar post laparoscopic myomectomy 2013. In the Emergency Room the differential diagnosis was made primarily to premature departure from normal inserted placenta and haemoperitoneum of other causes such as traumatic injury on spleen or liver. In this situation positive diagnosis was supported by ultrasound exam and history. The patient was hospitalized in the department of Obstetrics and Gynecology and after the first measures of hemodynamic balance, under general anesthesia, oro-tracheal intubation, an exploratory laparotomy is done; intraoperatively about 1500 ml free blood and clots are found around the peritoneal cavity (bottom of bag Douglas, right and left colic side, Morisson space, splenic lodge, liver lodge, underdiaphragm). Was found also between intestines a dead fetus, male, weighing 400 g, along with placenta, 150 g, with a retroplacental hematoma of about 100 ml (Fig. 1). The uterus is enlarged by 15/12 / 10 cm, with continuity solution, complete uterine rupture of about 10 cm, with irregular edges, located to the posterior uterus, with starting point from the right uterine horn, down to the isthmic zone with active bleeding from it (Fig. 2). Following the inspection of the peritoneal cavity both ovaries are found as being normal, absence of right fallopian tube due to surgical removal, the other intraperitoneal organs have a normal aspect. Uterine suture is performed with double layer Biocril thread, number 2. The uterus retracts ineffectively, remains flaccid, with bleeding suture tissue, under intraoperative management Ergomet 0.2 mg, 2 phials 2, Oxytocin 5 IU, 3 phials, on 500 ml saline infusion, Pabal administration, 100 mcg / ml, one phial, intravenous bolus, slow. It was decided and performed a subtotal inter-adnexal hysterectomy for hemostasis, toilet peritoneal cavity. Surgeon intraoperative consultation is required. He finds no other damage to the abdominal organs, continuing with hemostasis control and pelvic drainage. The pieces that have been extracted: the uterus, the fetus and annexes are sent for a histopathology exam. Intraoperatively and immediately postoperatively, the patient received three isoizogrup - UI Rh Red Cells and 2 I.U. of Fresh Frozen Plasma. Post surgery, the patient is transferred for 1 day in Intensive Care Unit. The patient evolution is favorable with no complications, under antibiotic treatment (Cefort 1g / 12 hours, Gentamicin 1g/12 hours), iron medication (Venofer, Maltofer), inflammatory (Ketoprofen), anticoagulant, slightly resuming intestinal transit third day postoperatively, drainage tube removed fourth postoperative day. After this subtotal inter-adnexal hysterectomy intervention the patient can lead a

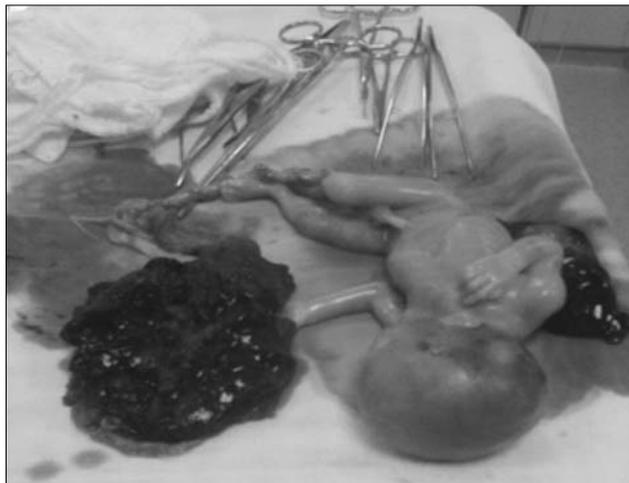


Figure 1



Figure 2



Figure 3



Figure 4

normal life without complications, but never can become pregnant. Knowing the condition of the patient, consent for hysterectomy was given by the patient's husband.

Histopathological result of the specimen at one month after surgery revealed the following result: pregnancy uterus with scar and focal placenta accretion, deciduous hematoma, small uterine leiomyoma and adenomyosis of myometrium.

DISCUSSIONS

Uterine fibroids are those benign tumors that appear especially during the late reproductive period in women, with a percentage of 20% in the general female population (4). It has also been found an increased number of multiple and small fibroids on infertile patients (5-10%), but the close connection between uterine fibroids and pregnancy remains controversial. Only 2.4% of these fibroids appear to represent the only cause of infertility in patients. Of course that it must be taken into account the size, number and location in the anatomy of the uterus, be it in the uterine wall – which can have a submucosal, intramural or subserous localization - or located in front of the important anatomical landmarks in fertility, especially the tubal ostia (5). A fibroid size over 4 cm seems to have a greater implication in infertility than smaller ones. From the size and location, the fibroids may determine miscarriages, premature births, fetal malposition, abnormal placental insertion (6). Their submucosa location represents a greater negative effect on fertility than the intramural and subserous location (7).

If a negative effect on fertility found is caused by the presence of fibroids, in most cases it is necessary to perform myomectomy. There is controversy and discussion regarding laparoscopic myomectomy or laparotomy procedure, given the risk of uterine rupture appearances during pregnancy or labor. The decision unanimously accepted by laparoscopic myomectomy is applied to subserous and intramural fibroids which mark the uterine cavity, or a unique fibroid with a size

of at least 3 cm, or multiple fibroids, not excising more than 4 fibroids, laparoscopic techniques are not applied if fibroids exceed 8-10 cm, these conditions being imposed by necessity as much as possible to preserve the uterus and avoid performing multiple repairs on it. (8).

Performing myomectomy through laparotomy surgery allows the surgeon to finalize a suture through myometrium in monolayer or bilayer in what appears to offer a high quality to subsequent scar. An experienced surgeon who uses advanced laparoscopy techniques, at present, after laparoscopic enucleation, can practice monolayer or bilayer suturing to the remaining myometrium. Studies have concluded that performing myomectomy just by using electrocautery in laparoscopic enucleation techniques, or pedicle dissection and hemostasis shows a higher risk in the appearance of uterine rupture (9, 10). A risk in causing uterine rupture is the failure of certain surgical principles that lead to shoddy uterine scarring: excessive use of electrocautery, run in the endometrial cavity when it is not needed, and the occurrence of complications such as uterine hematoma and thereof infection. Although rare, these cases are cited as being directly involved in the development of subsequent obstetric complications (11). The advantages of laparoscopic surgery in general applies also to laparoscopic myomectomy techniques: reduced peritoneal adherents syndrome, significantly better postoperative recovery, reduced pain intensity after surgery, reduced bleeding, reduced number of hospitalization days.

There are discussions in terms of the moment the uterine rupture appears on uterus scar. It is an obstetrical incident which most commonly occurs in the third trimester of pregnancy, especially during labor, and can occur post-traumatically. It was found that uterine rupture in the second trimester of a woman's pregnancy presenting a myomectomy scar is very rare outside a therapeutic abortion (6). Spontaneous birth or abortion in the second trimester are not recommended if more than 50% of the thickness of the uterus is impaired as a uterine rupture can occur during labor (12).

CONCLUSION

Uterine fibroids are among the many causes of infertility, but the implication is quite low. The decision of laparoscopic or laparotomy myomectomy is very important when a pregnancy is desired. Myomectomy, either performed laparoscopy or laparotomy by applying the appropriate / technique can lead to a more reduced risk of uterine rupture. To prevent this kind of incident it is very important to know these important elements: the optimal time for conception after surgery on the uterus, the type of intervention to myomectomy: laparoscopy or laparotomy, if there was a suture, quality suture, what kind of hemostasis methods were used intraoperatively, avoiding excessive use of electrocautery. Although, not commonly found in the literature, there are ruptures in a scarred uterus in the second trimester, outside labor. The cause of occurrence in this stage of pregnancy can be represented by inadequate surgical techniques. It can be

concluded that laparoscopic myomectomy techniques performed by an experienced surgeon can be considered a safe technique, with an extremely low failure rate in obtaining a pregnancy.

Uterus with myomectomy scar associated with an abnormal inserted placenta, accretion, definitely increase the chances of uterine rupture in pregnancy.

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