

Interstitial ectopic pregnancy in a 41-year-old woman: a case report

Ciąża ektopowa śródścienna u 41-letniej pacjentki – opis przypadku

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Summary

Cornual pregnancy is a rarely occurring variant of ectopic pregnancy with often unspecific symptoms, what makes the diagnosis very difficult. Its early detection is a key factor for using less invasive treatment and preserving fertility.

The article presents a case of a 41-year-old nullipara in her fourth pregnancy, after unilateral resection of adnexa because of the tubal pregnancy, with the diagnosis of the cornual pregnancy. She was treated laparoscopically, i.e. the cornual resection was performed. The postoperative period was uneventful.

Early diagnosis and treatment made it possible to minimize the risk connected with this life-threatening entity.

Key words: ectopic pregnancy, cornual pregnancy, interstitial pregnancy.

Streszczenie

Ciąża rogowa jest rzadko występującym wariantem ciąży ektopowej, dającym często niespecyficzne objawy, co znacznie utrudnia diagnostykę. Jej wczesne wykrycie jest kluczowe dla wdrożenia małoinwazyjnego leczenia, które pozwala na zachowanie płodności.

W pracy prezentowany jest przypadek 41-letniej nieródki w ciąży czwartej, po jednostronnym usunięciu przydatków z powodu ciąży jajowodowej, u której zdiagnozowano ciążę rogową. Przeprowadzono leczenie laparoskopowe – usunięto róg macicy z ciążą pozamaciczną. Okres pooperacyjny przebiegał bez powikłań.

Wczesna diagnoza oraz szybkie leczenie pozwoliły zminimalizować ryzyko związane z tą zagrażającą życiu jednostką chorobową.

Słowa kluczowe: ciąża pozamaciczna, ciąża rogowa, ciąża śródścienna.

Introduction

Cornual (interstitial) pregnancy is a variant of ectopic pregnancy located in the proximal part of the fallopian tube running within the muscle of the uterus. It accounts for 2-4% of all ectopic pregnancies, therefore it is a relatively rare location. However, the mortality rate in this medical entity stays within the range of 2.0-2.5% [1].

Factors predisposing to pregnancy in this position are as for other types of ectopic pregnancy [2] and include the history of pelvic inflammatory disease, previous salpingectomy, residual horn, proximal intratubal adhesions or previous ectopic pregnancy [3, 4].

Manifestation of cornual (interstitial) pregnancy may be the same as in other types of ectopic pregnancies or

in a threatening miscarriage. The most common symptoms are abdominal pain and vaginal bleeding in the first trimester of pregnancy, but there may also occur tachycardia, hypotension or even shock as the first manifestation of this medical problem [5].

Cornual pregnancy may proceed with high levels of beta-human chorionic gonadotropin and progesterone and the transvaginal USG may be the only method to identify this variant of ectopic pregnancy. Routine transvaginal USG at 9 to 12 weeks makes it possible to diagnose the ectopic pregnancy early, even if it is uneventful. It makes it possible to avoid its rupture and manage it easily with methotrexate or laparoscopic surgery. Otherwise, the missed diagnosis may result in life-threatening internal hemorrhage [6].

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Case report

A 41-year-old female patient was admitted to the hospital with a history of vaginal spotting and 6 weeks of amenorrhea. Her medical history included two early miscarriages at 8 and 10 week of pregnancy and ectopic (tubal) pregnancy treated by laparotomy and right fallopian tube amputation. The patient denied other operations, chronic diseases or any drugs intake.

On physical assessment, the patient was in good condition, hemodynamically stable and not in distress. Abdominal palpation did not reveal any tenderness or pain. Blumberg's sign was negative. During bimanual examination, a mobile, non-tender mass was detected in the right lower abdominal region. Uterus was slightly enlarged. Cervix was closed without motion tenderness. Spotting from vagina was confirmed.

Transvaginal ultrasound examination revealed an empty endometrial cavity (endometrial thickness of 14 mm) with high levels of beta human chorionic gonadotropin (β -hCG) – 9054 mIU/ml, growing systematically (460 mIU/ml two weeks earlier and 3800 mIU/ml three days before). TV USG also showed the sac-like structure of 16 x 18 mm in the region of the right tube's stump and left adnexa without visible pathology. No free fluid in the pelvis was detected.

The progesterone level at admission amounted to 40 ng/ml and was not helpful in detection of ectopic pregnancy.

Based on transvaginal ultrasound examination's findings and high levels of beta human chorionic gonadotropin, the tentative diagnosis of ectopic pregnancy was made.

The patient consented to surgical intervention and a decision about laparoscopy was taken.

Laparoscopy revealed a 4 cm subserous structure at the right cornua of uterus, in the region of the right tube's stump. There were no visible changes in the left adnexa. The cornual resection was performed. The myometrium proximal to the gestational sac was coagulated with bipolar diathermy and cut off circumferentially with monopolar diathermy and harmonic knife. The cut off structure was removed with an endoscopic retrieval bag. Bleeding in cornua area was stopped with the use of bipolar coagulation and one layer stitching. During the procedure, the endometrial cavity was not entered. The intraoperative blood loss was minimal. The postoperative period remained uneventful.

Discussion

Cornual (interstitial) pregnancy poses a significant diagnostic and therapeutic challenge. Although it occurs relatively rarely (2-4% of all ectopic pregnancies), it is associated with a high risk of serious and even life-threatening complications.

The myometrial wall of uterus is characterized by high stretchability and the cornual pregnancy may develop for a long time without any alarming symptoms. Its rupture occurs seldom before the 8th week of gestation [7]. Its uneventful course makes it impossible to detect this variant of ectopic pregnancy early. The ultrasound examination is the best method to make the right diagnosis early, but its effectiveness is only about 65.6-71.4% [2, 7]. Transvaginal sonography (TVS) is now the imaging modality of choice for the diagnosis of ectopic pregnancy [8].

Timor-Tritsch et al. worked out a method of cornual pregnancy diagnosing with the use of transabdominal or transvaginal ultrasound. Criteria of diagnosis include: an uterus without gestational sac, a distance between structure of ectopic pregnancy and lateral edge of the endometrial cavity less than 1 cm and a thin layer of myometrium enclosing the sac [9].

Because detection of all cases by ultrasound is not possible, if the suspicion of cornual pregnancy is strong, the laparoscopy may be decisive and should be performed.

The attitude to the treatment of interstitial pregnancy has changed dramatically during the last years. Traditionally, the only therapeutic method was laparotomy – cornual resection or even hysterectomy. Recently there have been trials to cure cornual pregnancy using methotrexate and the main method of its treatment became laparoscopy [10-12].

St. George's Hospital Medical School in London published a prospective observational study in which 17 out of 20 women with interstitial pregnancy were treated with single-dose intramuscular methotrexate. A dose was repeated when beta human chorionic gonadotropin (β -hCG) levels had not fallen by 15%. All women with initial β -hCG values of < 5000 mIU were treated successfully with single-dose methotrexate, but almost all patients with β -hCG of > 5000 mIU required the second dose [13].

However, medical treatment should be reserved for early diagnosed cases without rupture of the gestational sac in women with a high desire to preserve fertility.

The main advantage of medical therapy of interstitial pregnancy is the avoidance of a scar on the uterus and the complications that are associated with surgery. The risks of this treatment include cornual rupture and serious hemorrhage [5].

Laparoscopy remains the most recommendable method of the cornual pregnancy treatment. The laparoscopic techniques include cornual resection, cornuostomy and salpingectomy. The cornual resection, performed in the described case, is the most common form of interstitial pregnancy treatment. It is a laparoscopic version of the cornual wedge resection performed by laparotomy. Cornual excision is especially useful for pregnancies > 4 cm in diameter.

The two main complications of laparoscopic treatment of interstitial pregnancy are recurrence and uterine rupture in the future pregnancy [7]. Laparoscopic treatment is the most recommendable method of the cornual pregnancy treatment, but in most severe cases laparotomy may be necessary.

Conclusion

Cornual pregnancy is a life-threatening medical problem. It may often pose a serious diagnostic and therapeutic challenge. Early diagnosis is the key factor for minimizing morbidity and preserving fertility.

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