CEOG Clinical and Experimental Obstetrics & Gynecology

Spontaneous vital heterotopic pregnancy at 12 weeks' gestational age

A. Jurisic[1], A. Dobrosavljevic[2], S. Dragojevic-Dikic[1], L.Tasic[1], V. Mihailovic[2]

[1]University of Belgrade Medical School, Narodni Front Unversity Hospital, Belgrade
[2]Narodni Front Unversity Hospital, Belgrade (Serbia)

Summary

Heterotopic pregnancy (HP) is the existence of both intrauterine and ectopic pregnancy simultaneously. The incidence of spontaneous heterotopic pregnancy is about 1: 30,000 of pregnancies. In this paper the authors presented the case of heterotopic pregnancy, detected at 12 weeks of gestation. Pregnancy was spontaneous and patient was referred to the present hospital due to pelvic pain. After thorough examination, including transvaginal and transabdominal ultrasound, a 12-week heterotopic pregnancy was confirmed. Both fetuses were alive with regular fetal heart rate. Due to possible risk of placental bowel infiltration, laparotomy was performed and right salpingectomy with vital ectopic pregnancy was done. On the left ovary a 2-cm tumor was detected and also removed during operation. Patent was followed up until delivery and was delivered transvaginally at term.

Key words: Heterotopic pregnancy; Intrauterine pregnancy; Ectopic pregnancy.

Introduction

Heterotopic pregnancy (HP) is the existence of both intrauterine and ectopic pregnancy simultaneously. The incidence of spontaneous heterotopic pregnancy is about 1: 30,000 of pregnancies. In a group of patients with a pregnancy achieved with some of assisted reproductive technology (ART), the incidence of heterotopic pregnancy is much higher and it ranges from 1: 500 to 1: 100, which increases total incidence to 1: 7,000. As for location, the most common ectopic pregnancy is of a tubal type, but cornual, cervical, abdominal, and ovarian may occur as well [1]. Simultaneous existence of intra- and extrauterine pregnancy makes diagnosing procedure considerably difficult. Intrauterine pregnancy most often diverts from pathological finding. For this reason, diagnosis is most frequently confirmed late and in about 50% of patients it is made when intra-abdominal bleeding already occurred [2, 3].

Case Report

A 31-year-old gravid 0 para 0 was referred to the present hospital due to pelvic pain at 12 gestational weeks of spontaneous pregnancy. Previous examinations revealed vital intrauterine pregnancy which corresponded to amenorrhea by ultrasonographic view (US). There was no etiological factors significant for ectopic pregnancy, such as pelvic inflammatory disease (PID), miscarriage, infertility or abdominal surgical procedures. The patient reported that, in the past ten days, she had felt painful sensations within pelvis, in its right part, which became more intense during a day. At examination, the abdomen was in the thoracic plane, soft, insensitive during physical examination. The patient did not have ex utero bleeding. During bimanual vaginal examination, the uterus was soft, enlarged, and corresponded to 12 weeks'gestational age. The left adnexa was without tenderness and sensitivity, while the tumour of approximately 5-6 cm, sensitive to pain was palpated in retrouterine space on the right side. Ultrasonographic evaluation verified vital intrauterine pregnancy with embryo size CRL=46.1 mm, which corresponded to 11.3 weeks' gestational age. The ectopic pregnancy was noticed in the area of the right adnexa with CRL=42.6 mm that corresponded to 11.1 weeks' gestational age with a heart rate normal for gestational age (Figure 1A). There were no free fluids in the pouch of Douglas and Morison's pouch. Patient's vital parameters and laboratory results were within normal ranges. Considering clinical and ultrasonography finding. it was decided to perform emergency laparotomy. During the surgery, intact ectopic pregnancy in the right oviduct was found, and right salpingectomy was performed (Figure 1B). A tumour of approximately 2 cm was noticed on the left ovary and it was removed and afterwards fibroma of the ovary was confirmed by the histopathological finding. The patient was discharged from the hospital on the ninth day after the operation in stable general condition, with regular obstetrical finding, and with vital intrauterine ongoing pregnancy. She was advised to continue with regular follow-ups. Patient was delivered at term (40,.3 weeks). She had normal transvaginal delivery and baby was 3,400 grams, with normal Apgar score 9/10.

Discussion

Overall incidence of HP has considerably increased over the past years due to more frequent occurrence of HP in patients after ART. Except for ART as a leading etiological factor, other usually mentioned etiological factors of ectopic pregnancy are PID and pelvic surgery. Localisation of ectopic pregnancy is most often of a tubal type, but it also occurs in a form of cornual (i.e. interstitial), cervical,

Revised manuscript accepted for publication January 10, 2017

Clin. Exp. Obstet. Gynecol. - ISSN: 0390-6663
XLV, n. 3, 2018
doi: 10.12891/ceog4070.2018

7847050 Canada Inc.
www.irog.net

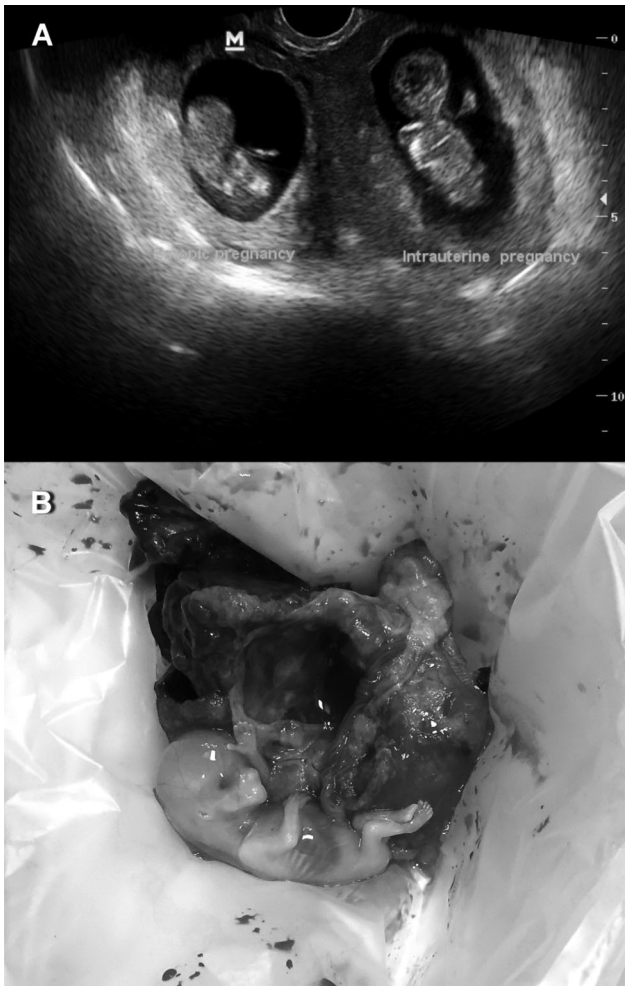

Figure 1A. — Transvaginal ultrasonography view of simultaneous intra and extra uterine vital pregnancy at week 12.
Figure 1B. — Ectopic pregnancy immediately after salpingectomy. The fetus of 12 weeks' gestational age and the stretched right tube can be seen in the figure.

abdominal, and ovarian. [4] Simultaneous existence of intrauterine pregnancy makes early diagnosis difficult as well as use of β-hCG finding as a parameter in diagnosis of ectopic pregnancy. Expectative approach is not recommended since serial monitoring of β-hCG values does not have any diagnostic significance. Diagnosis is most often accidental when it is intact pregnancy or if there is tubal rupture with sings of intra-abdominal bleeding [3, 5]. Most common gestational age when diagnosis is made is between five and eight weeks' gestational age in 70% of cases, then between nine and ten weeks' gestational age in 20%, and after week 11 in 10%. [6] It is difficult to identify an embryonic gestation sac and differentiate it in relation to corpus luteum in case when we already have intrauterine pregnancy. Ultrasound visualisation of the embryo and heart rate in ectopic pregnancy is rare, but confident in making diagnosis, as it was in the present case. A standard treatment approach implies laparoscopy or laparotomy, provided that laparotomy is more often performed if ruptured ectopic pregnancy is detected or it is suspected [7, 8]. Alternative treatments imply local administration of potassium chloride in case of intact ectopic pregnancy. Systematic administration of methotrexate is contraindicated due to possible negative effects on intrauterine pregnancy, while successful local methotrexate administration is reported in individual cases [9]. Most intrauterine pregnancies have a good outcome after the treatment of ectopic pregnancy [7, 8].

The authors reported a rare case of intact vital heterotopic pregnancy, occurring in spontaneous cycle without known etiological factors, in 12 weeks' gestational age, and it was resolved by laparotomy. This case suggests that it is always necessary to perform ultrasonographic examination of adnexa in spite of the fact that a vital intrauterine pregnancy is confirmed.

References

[1] Bharadwaj P., Erskine K.: "Heterotopic pregnancy: still a diagnostic dilemma". *J. Obstet. Gynaecol.*, 2005, *25*, 720.
[2] Thomas J.S, Shanu N.K.: "Heterotopic pregnancy: a rare cause of hemoperitoneum and the acute abdomen". *Arch. Gynecol. Obstet.*, 2006, *274*, 138.
[3] Siraj S.H.M., Wee-Stekly W.W., Chern B.S.M.: "Heterotopic pregnancy in a natural conception cycle presenting as acute abdomen: A case report and literature review". *Gynecol. Minim. Invasive Ther.*, 2014, *3*, 100.
[4] Malak M., Tawfeeq T., Holzer H., Tulandi T.: :"Risk factors for ectopic pregnancy after in vitro fertilization treatment". *J. Obstet. Gynaecol. Can.*, 2011, *33*, 617.
[5] Simsek T., Dogan A., Simsek M., Pestereli E.: "Heterotopic triplet pregnancy (twin tubal) in a natural cycle with tubal rupture: Case report and review of the literature". *J. Obstet. Gynaecol. Res.*, 2008, *34*, 759.
[6] Tal J., Haddad S., Gordon N., Timor-Tritsch I.: "Heterotopic pregnancy after ovulation induction and assisted reproductive technologies: a literature review from 1971 to 1993". *Fertil. Steril.*, 1996, *66*, 1.
[7] Yu Y., Xu W., Xie Z. Huang Q., Li S.: "Management and outcome of 25 heterotopic pregnancies in Zhejiang, China". *Eur. J. Obstet. Gynecol. Reprod. Biol.*, 2014, *180*, 157.
[8] Ko J.K.Y., Cheung V.Y.T.: "A 12-year experience of the management and outcome of heterotopic pregnancy at Queen Mary Hospital, Hong Kong, China". *Int. J. Gynecol. Obstet.*, 2012, *119*, 194.
[9] Fernandez H., Lelaidier C., Doumerc S., Fournet P., Olivennes F., Frydman R.: "Nonsurgical treatment of heterotopic pregnancy: a report of six cases". *Fertil Steril.*, 1993, *60*, 428.

Corresponding Author:
A. DOBROSAVLJEVIC, M.D.
Maksima Gorkog 50
Belgrtade, 11000 (Serbia)
e-mail: dobrosavljevical@gmail.com