A Rare Presentation of Ovarian Ectopic Pregnancy and Contralateral Ovarian Dermoid Cyst

Koegzistencija ovarijske trudnoće i dermoidne ciste na kontralateralnom jajniku

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SUMMARY Ovarian pregnancy, a rare form of ectopic pregnancy where the gestational sac implants within the ovary presents a diagnostic and management challenge. We report a case of a 35-year-old nulliparous woman presenting with lower abdominal pain and scant bleeding. Upon admission, an ultrasound revealed findings indicating an ectopic ovarian pregnancy and contralateral ovarian dermoid cyst. An urgent laparoscopy procedure confirmed the diagnoses, with subsequent histological analysis confirming pregnancy within the left ovary and a dermoid cyst in the right ovary. Simultaneous occurrence of an ovarian pregnancy and dermoid cyst on different ovaries is exceedingly rare. Early diagnosis and awareness of such coexisting pathologies are crucial for timely intervention and optimal patient outcomes. This case highlights the importance of considering diverse etiologies in reproductive-aged women presenting with pelvic masses and pregnancy-related symptoms.

KEY WORDS: dermoid cyst, ectopic pregnancy, laparoscopy, ovarian pregnancy

SAŽETAK Ovarijalna trudnoća, rijedak oblik izvanmaternične trudnoće, u kojoj se gestacijska vrećica usadi unutar jajnika, predstavlja dijagnostički i zdravstveni izazov. Predstavlja se slučaj tridesetpetogodišnje nulipare koja se javila s bolovima u donjem dijelu trbuha i oskudnim krvarenjem. Pri prijemu nalaz ultrazvuka otkriva izvanmaternicnu trudnoću na jajniku i kontralateralnu dermoidnu cistu jajnika. Hitna laparoskopija potvrđuje dijagnozu, a naknadna histološka analiza potkrjepljuje da je trudnoća unutar lijevog jajnika, dok je dermoidna cista u desnom. Istovremena pojava ovarijalne trudnoće i dermoidne ciste na različitim jajnicima izuzetno je rijetka. Rana dijagnoza i svijest o takvim istodobnim patologijama ključne su za pravovremene zahvate i povoljne ishode za pacijenticu. Ovaj slučaj naglašava važnost proučavanja različitih etiologija kod žena reproduktivne dobi sa zdjeličnim masama i simptomima povezanim s trudnoćom.

KLJUČNE RIJEČI: dermoidna cista, izvanmaternična trudnoća, laparoskopija, ovarijska trudnoća

INTRODUCTION

Ectopic pregnancies occur in about 2% of pregnancies and are the leading cause of pregnancy-related deaths in the first trimester. Ovarian pregnancies, accounting for 3% of ectopic pregnancies, are rare, but a significant form of this condition (1). Mature cystic teratomas are the most common benign ovarian tumors and most frequent adnexal mass in pregnant women, making the combination of an ovarian dermoid cyst and ovarian pregnancy particularly rare (2).

CASE REPORT

A 35-year-old nulliparous woman is admitted to the gynecology service in the 6th week of amenorrhea. The patient reports cramping pains in the lower abdomen and scant bloody discharge over the past 2 weeks. She denied nausea and vomiting; bowel movements and urination were normal. The patient reported a regular menstrual cycle of 27/5. Upon admission, the patient was normotensive with a pulse of 121/min. Physical examination revealed diffuse abdominal tenderness on palpation. Speculum examination in the vagina showed scant brown discharge; the cervix was extremely painful on movement. Bimanual palpation was difficult due to severe pain and tension across the entire anterior abdominal wall. An emergency and department ultrasound showed the uterus in AVF size 64x39 mm, endometrium thickness 6 mm, empty cavity (Figure 1). The left ovary was enlarged to 52x35 mm and a gestational sac without embryonic echo was seen inside it, with a visible yolk sac (Figure 2). The ovary was displayed in a conglomerate

with the fallopian tube. In the area of the right ovary, a tumor formation of mixed echogenicity measuring 8 cm was seen, which was suspected to be a dermoid cyst (Figure 3). Free fluid and coagula with hyperechoic inclusions were observed in the Douglas pouch, measuring 3.4 cm (Figure 4). Laboratory findings did not indicate anemia, but leukocytosis was found (leukocytes 15x10^9/L; non-segmented granulocytes 4%; segmented granulocytes 81%; lymphocytes 9%). HCG was 2433.6 IU/L.

Based on the clinical presentation, ultrasound findings, and laboratory results, suspicion of an ectopic pregnancy with a bleeding corpus luteum was raised, prompting urgent laparoscopy. Intraoperative exploration showed the abdomen filled with blood and clots from which 1000 ml of blood was aspirated. The uterus was in AVF, of normal size and morphology with two smaller subserosal fibroids at the corners. The right ovary was consumed by a dermoid cyst measuring 8 cm, and the right fallopian tube was described as of normal appearance. On the left ovary, several follicles of different sizes and a shallow bleeding crater were seen. The operating surgeon excised the margin of the bleeding crater from the left ovary and removed the dermoid cyst from the right ovary. Histological analysis of excised tissue from the left ovary confirmed pregnancy with chorionic villi and syncytiotrophoblasts along with a large portion of blood clots, while the excised tissue of the right ovary showed histological features consistent with fatty tissue, epithelium, and cutaneous adnexa, indicative of a dermoid cyst. The patient was discharged in good general condition four days after the procedure.

DISCUSSION

Pain in the lower abdomen with adnexal masses on ultrasound and positive β-hCG in women of reproductive age is considered an ectopic pregnancy until proven otherwise (3). Ovarian pregnancy arises from the fertilization of an ovum retained in the peritoneal cavity or reflux from the fallopian tube, leading to implantation on the surface of the ovary (4). Early diagnosis and treatment are of the utmost importance, particularly due to the difficulty of making an accurate preoperative diagnosis. The diagnosis is most often based on the pathohistological findings, which include Spiegelberg's criteria: a gestational sac on the ovary, an ovary with a gestational sac connected to the uterus via the ovarian ligament, histologically proven ovarian tissue at the edge of the gestational sac, and a fallopian tube on the side of the ovarian pregnancy that is intact (5). A ruptured ovarian pregnancy can lead to massive intra-abdominal bleeding accompanied by sudden and life-threatening hemodynamic instability (6). Mature cystic teratoma is the most common ovarian tumor, containing at least two well-differentiated tissue types from the ectoderm, mesoderm or endoderm. It primarily affects women of reproductive age, with a median onset of 30 years, which aligns with our 35-year-old patient. Most cases are unilateral, with a strong preference for the right ovary (72.7%) (7). Patients typically present with abdominal distention, discomfort, swelling, and a palpable mass in the abdomen or pelvis, while ovarian torsion, a common and serious complication of MCTs, can cause sudden abdominal pain, nausea, and vomiting, often leading to acute abdominal pain (8).

Few studies report ectopic ovarian pregnancies occurring alongside dermoid cysts, as most cases are tubal or cornual (9). Feltingoff published a case similar to ours, but in their patient, the ovarian pregnancy and cystic dermoid were located on the ipsilateral ovary which is more common (10).

In conclusion, dermoid cyst along with corpus luteum cysts are the most common ovarian tumors found in pregnant

FIGURE 1 Ultrasound image of uterus without gestational sac.

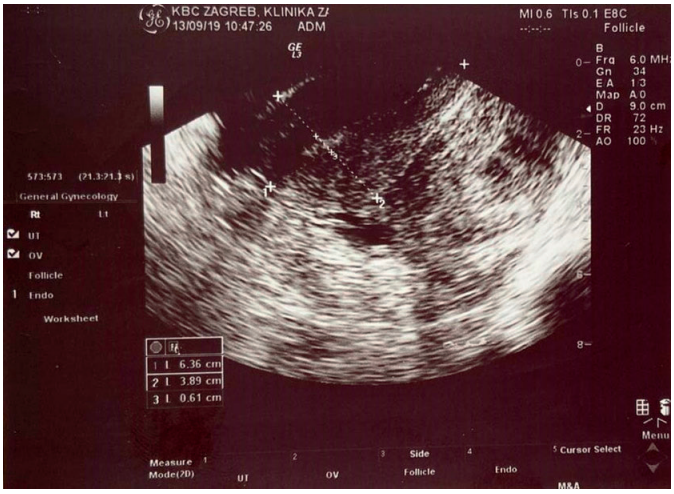


FIGURE 2 Ultrasonography image shows gestational and yolk sac inside the left ovary

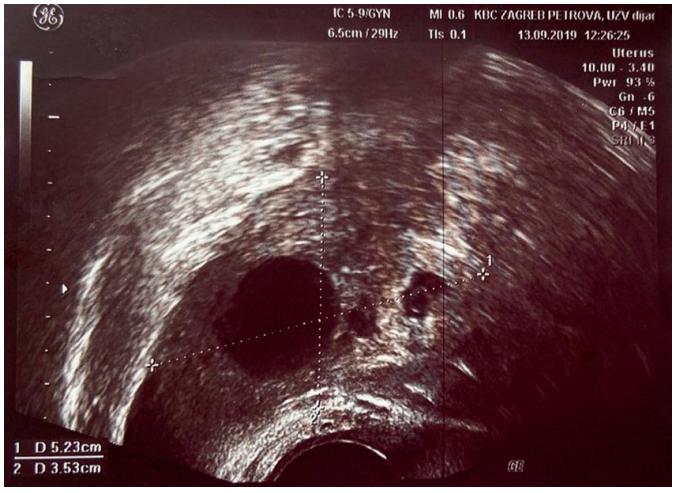


FIGURE 3 Ultrasound imaging shows dermoid cyst inside the right ovary

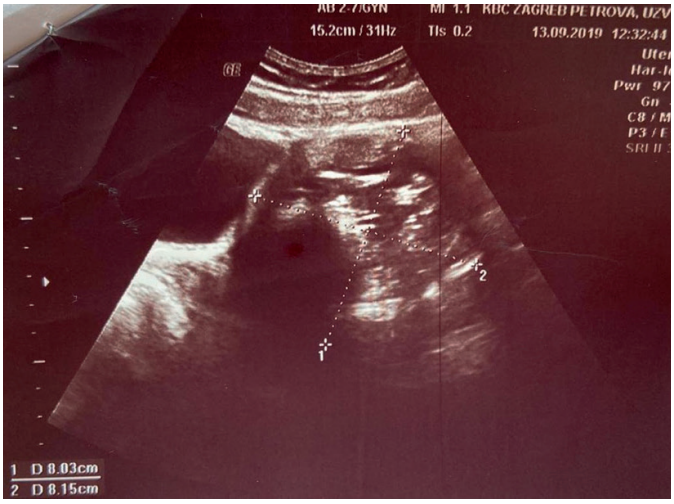
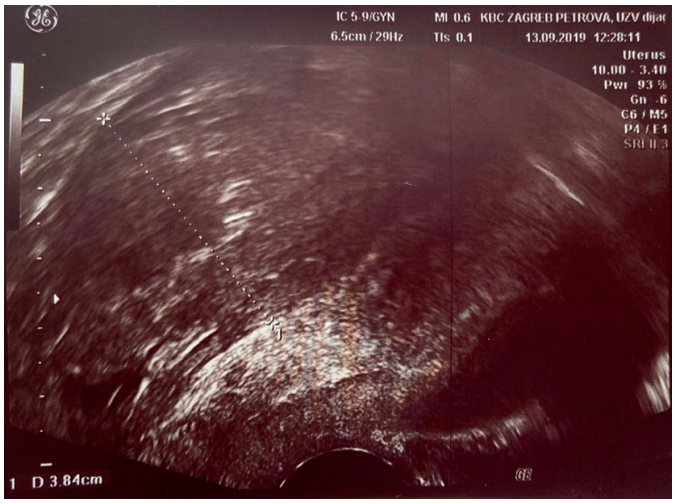


FIGURE 4 Ultrasound image of free fluid and clots in the Douglas pouch



women. Ovarian pregnancy itself is one of the rarest ectopic pregnancies, and the occurrence of a simultaneous ovarian pregnancy with a dermoid cyst on two different ovaries is an extremely rare phenomenon. For these reasons, we believe it is of great benefit and importance to make a timely diagnosis and critically think about the coexistence of other, less frequent pathologies.

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