

Ovarian Ectopic Pregnancy Managed Laparoscopically

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Ovarian pregnancy is a rare type of ectopic pregnancy. We report an ovarian ectopic pregnancy at the right ovary. A thirty-eight year old woman presented with amenorrhea for six weeks and lower abdominal pain. Beta-human chorionic gonadotropin (BHCG) was 2290 IU. Imaging revealed a mass at the right adnexa about 3x2.5 cm and blood clots were adherent to the uterus. The mass was removed through emergency laparoscopy. Pathology revealed ovarian pregnancy. Serial monitoring of BHCG level to confirm the complete removal of placental tissue was done.

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Ectopic pregnancy is a cause of significant maternal mortality¹. While the exact incidence remains unknown, reported figures range from 0.25 to 1.5 of all pregnancies². The incidence is probably higher as a significant number of such pregnancies remain undetected. While more than 98% of ectopic pregnancies are in the Fallopian tube, a small number are in extra tubal sites; the abdomen, the cervix and the ovary. Ovarian pregnancy is rare representing 0.2% of all ectopic pregnancies². However, ovarian pregnancy could be a life-threatening condition if it ruptures, leading to hemoperitoneum and hypovolemic shock. The diagnosis depends on the physicians' suspicion, experience and is made with high-resolution transvaginal ultrasonography and laparoscopic treatment. Preservation of ovarian tissue during surgery is important to preserve fertility.

The aim of this presentation is to report a case of a ruptured ovarian pregnancy, which was managed laparoscopically.

THE CASE

A thirty-eight-year old gravida two, para one with six weeks amenorrhea attended the emergency department with a history of lower abdominal pain for two days which was increasing in severity. She had no other symptoms and had not bled vaginally. She had respiratory arrest following an appendectomy 10 years ago. She made full recovery. She had a term baby normally delivered 12 years ago. She had been investigated in the past for secondary infertility and no cause was found. She did not have a laparoscopy and was not on any fertility treatment. The current pregnancy was a spontaneous conception.

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On examination, her general condition was satisfactory. The abdomen was extremely tender in the suprapubic region and had marked rebound tenderness. Pelvic examination was not performed. Transvaginal ultrasound examination demonstrated an empty uterine cavity with an endometrial thickness of 1.2 cm. In the right adnexal region there was a mass 3x2.5 cm. There was free fluid in the pouch of Douglas and the appearance of blood clot was adherent to the uterus. The ovaries were not clearly visualized.

Hemoglobin level was 10.8 g/dl; the white blood cell count was 9.1×10^9 and normal platelets count. The BHCG was 2290 IU. Our provisional diagnosis was an ectopic pregnancy and the patient was taken for an emergency laparoscopy.

At laparoscopy, there was about 500 ml of free blood in the peritoneal cavity. The uterus was bulky with blood clots adherent to the fundus but was otherwise unremarkable. Both Fallopian tubes looked normal with no evidence of an ectopic pregnancy. The left ovary looked normal. On the right ovary there was a ruptured Corpus luteal cyst surrounded by what looked like blood clots and decidual tissue. There was active bleeding from the base of the cyst which had ruptured, see figures 1, 2 and 3.



Figure 1: The Fallopian Tube on the Same Side Is Intact

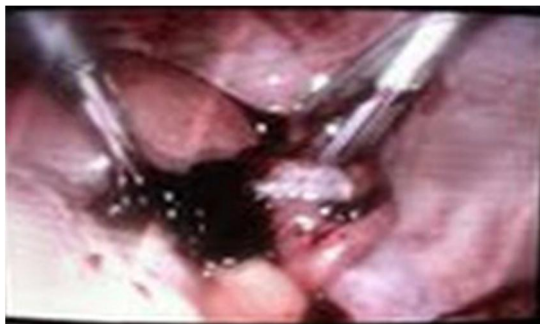


Figure 2: Part of the Uterus with the Tube and Blood Clot



Figure 3: The Fallopian Tube and the Ovary with Clots and Chorionic Tissue

The blood clot and cystic tissue were aspirated; the site of bleeding was identified and diathermised. Hemostasis was satisfactory and peritoneal lavage was performed. All the clots and tissue were sent for histopathological examination. The diagnosis at the time of surgery was an ovarian ectopic pregnancy.

The patient had an uneventful recovery. A postoperative transvaginal scan showed no abnormality. Twenty-four hours following surgery, the BHCG had dropped down to 1273 IU and a week later it was 229 IU.

Macroscopic examination showed a piece of soft brownish tissue measuring 4x2x1 cm, the cut surface is brownish. Most of tissue was studied at multiple levels showed hemorrhagic decidua and Chorionic villi confirming ectopic ovarian pregnancy. No gestational trophoblastic disease is seen.

DISCUSSION

The most common site for non-tubal ectopic pregnancy is the ovary, though it is very rare representing 0.2% to 1% of all ectopic pregnancies, the reported incidence ranges from one in 4000 to one in 7000 deliveries². Ovarian pregnancy has been reported following Clomifene Citrate ovulation induction and following IVF³⁻⁵. The only reported risk factor associated with ovarian pregnancy is the use of IUCD^{6,7}. Our patient had spontaneous pregnancy not following clomiphene citrate neither IVF and she did not use IUCD before.

In 1878, there was a high maternal mortality associated with ectopic pregnancy; Spiegelberg described the classical criteria for the diagnosis of ovarian pregnancy, see figures 1, 2 and 3⁸. These criteria were as follow: the gestational sac must occupy a portion of the ovary, the gestational sac must be connected to the uterus by the ovarian ligament, ovarian tissue must be identified in the wall of the sac and the Fallopian tube on the affected side must be intact⁸. Our case fulfills all these criteria.

Ultrasound is useful in the diagnosis of an ovarian pregnancy which usually appears as a cystic structure⁹. A yolk sac or embryos are rarely seen. It can be mistaken for a corpus luteum cyst. The treatment involves resecting the trophoblast while retaining as much ovarian tissue as possible; in our case the resection was done through laparoscopy¹⁰. Follow-up with BHCG levels is important,

the same as we have done in our case. Persistent trophoblastic activity can be successfully treated with Methotrexate^{11,12}. The fertility prognosis is regarded as good.

CONCLUSION

Ectopic pregnancy is a serious complication of pregnancy accounting for 0.25 to 1.5 of all pregnancies. Early diagnosis and treatment is absolutely necessary to ensure a successful outcome.

Our findings suggest that ovarian electro-cauterization, resection of the ectopic pregnancy and retaining as much ovarian tissue as possible is an appropriate method with good efficacy and low complication rate for infertility.

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