

## INTERSTITIAL PREGNANCY AFTER IPSILATERAL SALPINGECTOMY - CASE REPORT

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Interstitial pregnancy is ectopic pregnancy which occurs within the intramural (interstitial) part of the uterine tube. The frequency of its occurrence is 3-4% of all ectopic pregnancies. It is also significant because of a long asymptomatic period and common ending with the rupture of the uterine horn as a serious complication. Mortality after this type of ectopic pregnancy is about 2,5%. This paper presents a case of a 29-year-old patient hospitalized for suspected ectopic interstitial pregnancy in the left uterine horn. Her anamnesis showed the left tube pregnancy ended with salpingectomy after the rupture of the uterine tube. The patient was examined both clinically and by ultrasound, her  $\beta$ -HCG level was being monitored, and after an adequate preoperative preparation, she underwent a surgery. Surgical intervention consisted of the incision of pregnancy-altered uterine horn, curettage and evacuation of ovulatory tissue, which saved the uterine horn. Timely diagnosis of interstitial pregnancy can prevent its possible serious complications. *Acta Medica Medianae 2015;54(2):52-55.*

**Key words:** *interstitial pregnancy, ectopic pregnancy, salpingectomy*

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### Introduction

Interstitial pregnancy is ectopic pregnancy (EP) which occurs within the intramural (interstitial) part of the uterine tube (1). The frequency of its occurrence is estimated to 3-4% of all ectopic pregnancies (2), or 2-4% of tubal pregnancies (3). Interstitial part of uterine tube is approximately 1-2cm long and its average diameter is 0,7mm, but in spite of a small diameter, it has a great ability of expansion before the rupture of the uterine horn. Pregnancy within that part can develop asymptotically until the period between the 7<sup>th</sup> and 16<sup>th</sup> week, when it ends with the rupture of the uterine horn followed by hemoperitoneum and hemorrhagic shock (1,3). Mortality in interstitial pregnancy is about 2,5% which is 7 times higher compared to other localizations of EP (3). Risk factors for the occurrence of interstitial pregnancy, beside those applicable to all other EPs, are also tube damage caused by previous tubal pregnancy, previous ipsilateral or bilateral salpyngectomy, conception after in-vitro fertilization and anamnesis of previous sexually transmitted disease (3,4).

### Case report

The patient M.J., 29 years old, was admitted to the Department of Gynecology and Obstetrics of the Health Center Zaječar, due to the absence of menstruation and pain in the lower abdomen, with suspected ectopic pregnancy, on November 5, 2012. Her last regular period was on September 27, 2012. Two years earlier she had ectopic pregnancy in the left fallopian tube which was terminated with salpingectomy. She had one vaginal delivery and one miscarriage at two lunar months of pregnancy in 2011.

Upon admission, she was examined both clinically and by ultrasound, and samples were taken for laboratory analysis. Softened uterus, slightly sensitive to pain, in AVF, and painful sensitivity in the area of the left adnexa were found clinically. There was no bleeding from the uterus.

The following laboratory testing was done: blood count, biochemical analysis, general urine analysis, coagulation factors and  $\beta$ -HCG. The value of  $\beta$ -HCG was 1735,32 mIU/ml. All other mentioned analyses were within the referential values except for general urine analysis. It showed the following: a lot of epithelial cells and bacteria, little mucus. Blood type B, RhD „+“ (positive).

Transvaginal ultrasound examination (TVUS): Uterus in AVF, dimensions 80x58x30mm, endometrium with a thickness of 15mm, secretory type, empty cavum. In the texture of the uterine wall, in the area of the left horn, there is a presence of gestational sac with a diameter of



**Figure 1:** Gestational sac in the interstitial part of the uterine tube

5,43mm, with a clearly visible yolk bag of the diameter of 1,96mm which equals to 4 weeks and 2 days old pregnancy. The right ovary of normal size and echo texture. The left ovary of normal size with corpus luteum. In the area of the left adnexa, there is the presence of irregular hypoechogenic formation with dimensions of 29x21mm.

Based on performed examinations, the patient was diagnosed with interstitial pregnancy of the left uterine horn.

Hospitalized patient was monitored clinically, by ultrasound examinations and laboratory tests. Her  $\beta$ -HCG findings from November 7, 2012 showed tripled increase and amounted to 5891,63 mIU/ml. Ultrasound examination dating November 8, 2012 showed the growth of described gestational follicle in the left uterine horn, which size was 7,34mm, which was equal to the pregnancy of 4 weeks and 5 days. The size of the yolk bag was 2,59mm, the echo of the embryo not clearly visualized. Having taken into consideration the increased pain intensity, growth of gestational follicle verified by ultrasound and increase of  $\beta$ -HCG level, surgical treatment was decided.

On November 8, 2012, at 12:15, the patient underwent a suprapubic relaparotomy by Pfannenstiel under general endotracheal anesthesia. The uterus was slightly enlarged and softened, with a dominant softness of the left horn and accrued convolutes of intestines along the very horn and ligamentum rotundum, ligamentum ovarii proprium and the stump of the left tube. The area of left adnexa was completely blocked by the surrounding adhesions with intestines. Only after performed adhesiolysis did we reach the left ovary with a yellow-blue bean-sized structure. The entire surface of the left ovary was ribbed and with the remains of band adhesions. The right ovary was in a block with intestines, and reachable only after previous adhesiolysis. No macroscopic pathological changes were visible. There was no free fluid in the abdominal cavity. A thorough adhesiolysis of described adhesions and resection of the left ovary were performed. An incision along the left uterine horn in the largest softened area

was done. There was found a velvety tissue resembling decidual reaction, which was removed and sent to histo-pathological examination. The continuity of the made defect with uterine cavity was checked by a probe. The defect of the horn was sutured. An abundant lavage with a physiological solution and drainage of the pouch of Douglas were done. The abdomen was closed by anatomic layers. Explorative curettage of the uterine cavity was done and the content was sent to histopathological examination.

Postoperational course passed regularly. On the fifth postoperational day, the value of  $\beta$ -HCG was 214,29mIU/ml. Wound healed per primam intentionem. The patient was released home on the seventh postoperative day after removing the strings.

PH findings 2295/10 and 2296/10:

Macroscopic finding: 1. Three tissue samples, grey-whitish and grey-darkish in color, diameter of about 12mm. 2. Three tissue samples, grey-yellowish in color, of soft consistency, diameter of 13mm. 3. Several fragments of red-dark friable tissue, the volume of 1cm<sup>3</sup>.

Microscopic finding: 1. Cystis corporis lutei. Hydatida Morgagni. Cystis follicularis ovarii.

2. Samples of ovular tissue 3. Transformation decidualis endometrii; some glands with the signs of Arias-Stella reaction.

## Discussion

Repeated EPs after previous salpingectomy occur in 10% of cases, and after salpingectomy in 15% of cases (5).

Our patient had three out of five known risk factors for the occurrence of EP, which are: previous ectopic pregnancy, previous surgical intervention on tubes and proven tube pathology (3,4).

The mechanism of the occurrence of interstitial pregnancy after ipsilateral salpingectomy can be of a double nature. There is a possibility that there is a lumen in the interstitial part of the uterine tube enabling the communication between the uterine and peritoneal cavity, which would enable migration of sperm or fertilized ovum from the uterine cavity to the rest of the tube. The second possibility is that sperm passes through the intact uterine tube and reaches the opposite side transperitoneally (7). In our case, an ovulation sign was evidenced on the left ovary, so that the first possibility is more likely.

A typical triad of the symptoms of EP: amenorrhea, abdominal pain and vaginal bleeding exist in one half of the patients with ectopic pregnancy (6,7). Our patient lacked vaginal bleeding as a typical symptom.

TVUS enables early diagnosis of EP. Thus we are able to diagnose more than 80% of EPs before rupture and more than 50% of EPs in asymptomatic patients (8). TVUS examination indicating interstitial pregnancy reveals an empty uterine cavity, eccentrically or very laterally located

gestational follicle with a clear myometrium between the follicle and cavity (1,8,10)

Interstitial pregnancy treatment options include local or systematic application of methotrexate, local application of potassium-chloride, uterine embolization, and in emergencies, it is necessary to perform laparotomy with resection of the uterine horn or hysterectomy (1,10,11).

In certain cases it is possible to spare the uterine horn from resection. The curettage of intramural part of tube in uterine horn in heterotopic pregnancy was also described, which saved

uterine pregnancy (11). In our case, resection of the uterine horn was also avoided enabling more favorable condition for possible future pregnancy.

### Conclusion

By combining the ultrasound diagnostics and serum levels of  $\beta$ -HCG we can timely diagnose ectopic pregnancy, both interstitially or at other localizations, and prevent its serious complications.

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## INTERSTICIJALNA TRUDNOĆA NAKON ISTOSTRANE SALPINGEKTOMIJE - PRIKAZ BOLESNIKA

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Intersticijalna trudnoća predstavlja ektopičnu trudnoću koja se javlja u intramuralnom (intersticijalnom) delu tube uterine. Učestalost ektopičnih trudnoća je 3-4%. Značajna je zbog dugog asimptomatskog perioda i čestog završetka rupturom roga uterusa, kao teškom komplikacijom. Smrtnost nakon ovog vida ektopične trudnoće je oko 2,5%. U radu je prikazana bolesnica stara 29 godina, primljena zbog sumnje na ektopičnu intersticijalnu trudnoću u levom rogu uterusa. U anamnezi je imala levostranu tubarnu trudnoću završenu salpingektomijom nakon rupture tube uterine. Bolesnica je pregledana klinički i ultrazvukom, praćen je nivo  $\beta$ -HCG, te je nakon adekvatne preoperativne pripreme, operisana. Hirurška intervencija se sastojala u inciziji gravidno izmenjenog roga uterusa, kiretaži i evakuaciji ovularnog tkiva, čime je sačuvan rog uterusa. Pravovremenom dijagnozom intersticijalne trudnoće mogu se preduprediti njene moguće teške komplikacije. *Acta Medica Medianae 2015;54(2):52-55.*

**Ključne reči:** intersticijalna trudnoća, ektopična trudnoća, salpingektomija