



Ultrasound diagnostics of ectopic pregnancy

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ABSTRACT: In recent years, the problem of ectopic pregnancy has become very urgent. This is due to the fact that recently the number of women suffering from this type of pregnancy pathologies has been increasing. 98.7% of ectopic pregnancy is tubal.

Key words: ectopic pregnancy, ultrasound diagnostics, echography

Introduction

An ectopic pregnancy is a pregnancy in which the ovum is implanted outside the uterine cavity. There are four options for the clinical course of tubal pregnancy:

- progressive tubal pregnancy;
- pregnancy terminated by the type of tubal abortion;
- pregnancy terminated by a ruptured tube;
- non-developing tubal pregnancy.

The purpose of the work is ultrasound capabilities in the detection of an ectopic pregnancy.

Materials and methods. Ultrasound was performed on a Siemens Sonoline G40 scanner (Korea) with a convex probe 5-3.5 MHz and a transvaginal probe 9-4.5 MHz.

For the period from March 2019 to March 2020 there were 120 cases with suspected ectopic pregnancy.

Echographic signs of ectopic pregnancy:

Reliable signs: detection outside the uterine cavity of the ovum with a living embryo (fetus);

Indirect signs:

- Visualization in the projection of the uterine appendages of a heterogeneous formation, which has various shapes and sizes;
- Lack of uterine pregnancy;
- An increase in the size of the uterus in the absence of organic changes in the myometrium or uterine pregnancy;
- Thickening of the median M-echo as a result of stimulation of the endometrium with progesterone (decidual reaction);
- Detection of a false ovum in the uterine cavity;
- Identification of free fluid in the recesses of the small pelvis;
- Detection of corpus luteum cysts;

Zone of hypervascularization in the epididymis.

The detection of a pathological formation in the projection of the appendages is the most accurate of the indirect signs. This formation is a pipe with a fruit receptacle. With progressive tubal pregnancy, the amnion cavity is determined in the lumen of the fallopian tube, rounded-oval, inside which the yolk sac is visualized in the form of a ring-shaped structure. A feature of the visualization of the ovum in the fallopian tube is a well-defined chorion that surrounds the amnion cavity along the periphery in the form of a tissue of a solid structure. An increase in the size of the uterus during ectopic pregnancy occurs in 20-30% of cases.

The decidual reaction of the endometrium is an endometrium of increased echogenicity, which is 12-24 mm. and is clearly delimited from the myometrium.

A false ovum is a rare sign, visualized as an anechoic inclusion in the uterine cavity, stimulating the amnion cavity. The appearance of a false ovum is associated with hypersecretion of the tubular glands of the endometrium or a local accumulation of blood in the uterine cavity.

In practical work, you often have to deal with an interrupted pregnancy. If there is a rupture of the tube, then a conglomerate is formed, adjacent to the posterolateral surface of the uterus, consisting of a ruptured tube, fetal receptacle, blood clots and hemorrhagic contents. A tubal abortion is not sonographically different from a tube rupture.

An interrupted tubal pregnancy in 60% of cases leads to the appearance of free fluid in the small pelvis.

The combination of all indirect ultrasound signs significantly increases the probability of a correct diagnosis in 97-99% of cases. However, in practical work, it is not always possible to find enough echographic data, therefore, a qualitative (pregnancy test) or quantitative (laboratory) determination of chorionic gonadotropin is necessary, after which the question of the expediency of dynamic ultrasound observation should be decided.

Results and discussion. Any patient with abdominal or pelvic pain or with abnormal uterine bleeding must be considered for an ectopic pregnancy. Ultrasound examination of the pelvic organs in women who applied with suspected ectopic pregnancy (120 patients), in 64 patients (53%), the diagnosis of ectopic pregnancy was excluded, ultrasound revealed early uterine pregnancy, acute salpingo-oophoritis, condition after spontaneous miscarriage (hematometer, hematocervix), multifollicular ovarian cysts. In 56 (47%) patients, a tubal pregnancy was detected, of which in 105 (87.5%) cases the extra-epa echographically looked as follows: the presence of free fluid in the small pelvis with a layer height of 1.7 to 3.0 cm.; in some cases, blood clots were visualized in the form of irregular formations of increased or medium echogenicity. In case of a disturbed tubal pregnancy, a formation with fuzzy, uneven contours and a heterogeneous, cystic-solid structure is found in the projection of the fallopian tube, which was regarded as signs of an ectopic pregnancy of the type of tubal abortion, and did not exclude a pregnancy that was interrupted by a ruptured tube. U 10 (8.4%) b In patients, a non-developing tubal pregnancy was revealed, in which there was a depletion of the vascular pattern in the chorionic region in the form of single color loci. In 8 (6.7%) women, progressive tubal pregnancy was visualized by ultrasound. A fetal egg with a living embryo was visualized in the projection of the fallopian tube.

Conclusions. Ultrasound examination of the pelvic organs using a transvaginal probe is highly effective in detecting ectopic pregnancy. In practical work, of all the options for tubal pregnancy, the most common pregnancy terminated as a tubal abortion and a pregnancy terminated as a tubal rupture.

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