INFORMATIVE VALUE OF VARIOUS DIAGNOSTIC METHODS FOR ECTOPIC PREGNANCY IN IMPROVING EARLY DIAGNOSIS AND OPTIMIZING THERAPY

[1]Sayyora Mukimjanovna Nazarova.
E-mail: nazarovasajera625@gmail.com ORCID: 0009-0004-8115-5879
[2]Oltinoy Abduganievna Yakubova.
E-mail: oltinoy62@mail.ru ORCID: 0000-0003-1316-1359
[3]Dilfuzahon Zakirjanovna Mamarasulova.
E-mail: dilya2580559@gmail.com ORCID: 0000-0002-0631-5594
Republican Scientific Center for
Emergency Medical Care, Andijan Branch,
Andijan State Medical Institute

Relevance: Ectopic pregnancy remains a pressing issue in obstetrics and gynecology, characterized by vague clinical manifestations, frequent complications, and diagnostic challenges. In recent decades, its prevalence (ranging from 1 to 6% of all pregnancies) has increased 2–4 times.

The greatest danger of a ruptured ectopic pregnancy is internal bleeding, which can lead to hypovolemic shock and, in some cases, death. Therefore, early detection of this pathology is of significant practical importance.

Timely diagnosis of ectopic pregnancy enables conservative treatment or organ-preserving surgical interventions.

Objective:

To study the informative value of various diagnostic methods in ectopic pregnancy to improve early diagnosis and optimize treatment.

Materials and Methods:

The study included 83 women hospitalized in the gynecology department with a diagnosis of ectopic pregnancy, with a mean age of 31.7 ± 3.6 years. The

patients were divided into two groups:

• Group I – without pronounced clinical signs of ectopic pregnancy (85.5%, n=71)

• Group II – admitted urgently with acute abdomen (14.45%, n=12)

As most signs of ectopic pregnancy are extremely nonspecific, they should be evaluated comprehensively. The most informative method is transvaginal ultrasound (TVUS) in combination with serum β-hCG measurement. The study also analyzed the role of novel biomarkers – vascular endothelial growth factor (VEGF) and interleukin-33 (IL-33) – in patients with ectopic pregnancy.

Results:

Since most signs of ectopic pregnancy are nonspecific, their assessment in combination is crucial. The highest informative value was demonstrated by the combination of TVUS and β-hCG levels. Novel biomarkers VEGF and IL-33 also played an important role.

All patients underwent ultrasound examination, primarily transvaginal with color Doppler imaging:

• Group I – 67 patients (94.3%)

• Group II – 10 patients (83.3%)

No cases of heterotopic, ovarian, cervical, or intramural pregnancy were identified in the study.

Diagnosing ectopic pregnancy was more challenging in Group I compared to Group II. Dynamic β-hCG measurements were performed every 48 hours. Levels ranged from 35 to 2000 IU/L, but in most cases (51 patients, 71.8%), the levels varied from 250 to 530 IU/L, which did not correspond to normal intrauterine pregnancy terms. In 11 patients (15.4%), doubling of β-hCG levels was observed, characteristic of progressing pregnancy of any localization.

Additionally, progesterone levels in serum were assessed in 15 women (21.1%). The average progesterone concentration was 13 ± 7.04 ng/mL. According to the literature, a progesterone level >25 ng/mL usually excludes ectopic pregnancy and confirms normal intrauterine pregnancy (in 98% of cases). A concentration <5 ng/mL indicates a non-viable pregnancy but does not determine its location with certainty [15].

Conclusions:

The use of dynamic monitoring with β-hCG determination every 48 hours combined with transvaginal ultrasound, along with the identification of VEGF and IL-33 biomarkers, allows for the diagnosis or exclusion of ectopic pregnancy in 97.6% of cases.