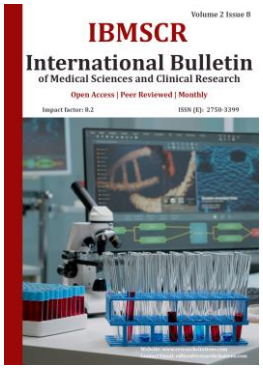

THE IMPORTANCE OF ULTRASOUND IN THE DIAGNOSIS OF ENDOMETRIAL HYPERPLASIA

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Resume. The complex application of screening and clarifying techniques contributes to the early detection of precancerous conditions of the endometrium, makes it possible to make a final diagnosis in polyclinic conditions and determine further tactics of observation and treatment.

Keywords. Echohysteroscopy, women, endometrium, reproductive, hyperplasia,adenomyos.

Timely diagnosis of endometrial hyperplastic processes is of great importance in the prevention and reduction of cancer morbidity and mortality. Malignant tumors of the reproductive system are the most frequent in the structure of oncological morbidity of women, and their total number exceeds 35%, and endometrial cancer ranks second in number [1,3,5,7,9,27,29,31]. According to the literature data, the frequency of malignancy of hyperplastic processes of the endometrium varies quite widely (0.3-51%) and is determined by the morphological features of the disease, the duration of its recurrence, as well as the age of patients [2, 4, 6.8,10,33].

In this regard, special attention should be paid to the problem of early detection of precancerous diseases, which include atypical endometrial hyperplasia, adenomatous polyps, glandular-cystic hyperplasia in menopause [26, 28, 30,32,34]. There is no doubt that the decisive method of differential diagnosis of pathological conditions of the endometrium is a histological examination of the scraping obtained after separate diagnostic curettage of the uterine cavity. At the same time, it is relevant to search for the optimal combination of non-invasive and minimally invasive techniques to obtain maximum information about the state of the endometrium, to determine its initial changes at the outpatient stage of examination. The number of non-invasive diagnostic approaches should primarily include ultrasound. Moreover, transvaginal echography is certainly more informative for assessing the state of the endometrium, which allows visualizing even minimal structural disorders.

According to current data, its use improves the quality of diagnosis, leads to an increase in the detection rate of stage I cancer by 45% and a decrease in the incidence of stage III-IV cancer by 1.8 times [12, 14, 16,18, 20,22,24].

According to a number of authors, the use of complex ultrasound with analysis of blood flow velocity curves is an effective method for diagnosing endometrial carcinoma [11, 13, 15,17,19,21,23,25].

The purpose of this study is to determine the informative value of the methods used in the complex diagnosis of endometrial pathological processes, their role and place at the stage of diagnostic search in outpatient settings.

Materials and methods. The analysis of the results of a comprehensive clinical and instrumental examination of 117 women (aged 28 to 51 years, average age 49.5 ± 2.5 years) was carried out. There were 94 patients in the reproductive period, 18 premenopausal and 5

postmenopausal. Abdominal pain (55%) of women with preserved menstrual function were concerned about prolonged, copious menstruation, 5 (4.3%) of postmenopausal patients complained of episodes of bloody discharge, 53 (45.3%) had endometrial pathology it was asymptomatic. In 1/2 of the examined patients, the hyperplastic process was combined with uterine fibroids (more often multiple), every 6th patient had a history of endometrial hyperplasia or polyps. In 65% of cases, urogenital infection was detected in women in the age group up to 40 years.

All patients underwent a complex instrumental examination after a standard clinical examination. At the first stage, ultrasound examination of the pelvic organs was performed: first, transabdominal scanning according to the generally accepted technique with a filled bladder, then transvaginal echography was performed with a convexic sensor with a frequency of 6.5 and 7.5 MHz on modern high-end ultrasound devices using color, energy mapping and pulse Dopplerography modes. Sonography in women of reproductive age was performed in the early proliferative phase of the menstrual cycle (day 5-6).

Echography assessed the size, structure, and condition of the uterus and ovaries. The Doppler analysis included determining the nature of blood flow, the number of color signals from vessels in the study area, the main Dopplerometric indicators, in particular, the resistance index and the maximum systolic blood flow rate. In 12 cases, echohysteroscopy was performed to determine the state of the uterine cavity.

Cytological examination of the aspirate from the uterine cavity, taken with a thin curette "Pipel", was carried out in 82 patients, all the rest - separate diagnostic curettage of the uterine cavity followed by histological examination of the scraping.

Results and discussion. The most frequent pathological condition - 22 (18.8%) cases and in all age groups were glandular fibrous polyps. Glandular hyperplasia was found in 2.5% of women of reproductive and premenopausal age. 53 (45.3%) patients had cases of combined pathology: endometrial hyperplasia and polyp, the presence of polyps of various histological structures, polyp and focal adenomatosis, polyp and submucous fibroids, polyp and adenocarcinoma.

In 5 (4.3%) cases with a normal ultrasound picture of the endometrium, hyperplastic processes were detected during aspiration biopsy, confirmed by separate diagnostic curettage (RDV).

One of the criteria for the presence of endometrial hyperplastic process is an increase in the thickness of the endometrium on certain days of the menstrual cycle. The analysis of the revealed thickness of the endometrium was carried out in accordance with morphological groups.

At the reproductive age, the thickness of the endometrium was very variable. The largest (more than 15 mm) was determined in endometrial glandular hyperplasia and adenocarcinoma. At the same time, with malignant lesions of the uterus in patients with preserved menstrual function, the thickness of the endometrium was maximal.

According to our data, the maximum thickness of the endometrium (more than 13 mm) in menopausal women was observed with glandular fibrous endometrial polyps and uterine adenocarcinoma. Moreover, a greater number (4.5%) of hyperplastic processes were observed with an endometrial thickness of more than 9 mm.

An important diagnostic criterion in the detection of hyperplastic processes is the assessment of structural changes in the endometrium. The analysis of the echographic picture of the

endometrium in the study group of patients showed that the ultrasound picture of hyperplastic processes in all age groups was characterized by pronounced polymorphism, but more often than other variants there was heterogeneity of the endometrial structure and the presence of polypoid growths in the uterine cavity.

With transvaginal echography, the endometrium is glandular.cystic hyperplasia had increased echogenicity and heterogeneous spongy echostructure with multiple small anechoic inclusions and the effect of acoustic amplification. The thickness of the endometrium was on average 19.0 ± 0.5 mm. Polyps were visualized as oval or rounded formations with increased echogenicity, homogeneous echostructure, clear, even contours.

Cases of endometrial cancer deserve special attention: in 3 patients with preserved menstrual function, in 1 - in premenopause and in 2 - in postmenopause lasting 3, 7, 9 years or more. In all women, the endometrium had increased echogenicity, heterogeneous structure with hypoechoic inclusions, in 3 cases, the indistinctness of its contour made it possible to suspect invasive growth and malignant nature of the lesion already at the stage of ultrasound examination. The indistinctness and unevenness of the contour of the endometrium, which reflect the invasion of the tumor into the myometrium, are not specific signs, since they can also be observed in endometriosis. In 8 patients, the ultrasound pattern corresponded to endometrial hyperplasia and polyposis. All analyzed observations and adenocarcinomas had stages 1A and 1B. It should be noted that only in 1 case of malignant endometrial lesion in postmenopausal women, spotting was noted. A common finding in menopause (1.9%) was a serosometer, in a number of observations formed with atresia of the internal pharynx. According to the literature, with serosometers up to 7 mm in size with no tendency to increase and no signs of endometrial change, dynamic ultrasound monitoring is recommended without the use of additional diagnostic techniques.

The use of Doppler techniques provides valuable information about the state of the endometrium. Blood flow in spiral arteries was visualized in 35% of women of reproductive age with endometrial hyperplastic processes. At the same time, low blood flow rates were noted (the maximum blood flow rate was 6.3 cm /s), the resistance index was 0.5 ± 0.1. With polyps of different histological structure, single arteries were determined in 26 (22.2%) women, the speed indicators and the resistance index in which did not differ from those in endometrial hyperplasia. A distinctive feature of endometrial carcinoma was the presence of hypervascularization of the subendometrial zone and multi-vascular blood flow in the affected area. The resistance index in our observations ranged from 0.3 to 0.5.

Particular difficulties arise in the differential diagnosis of endometrial polyps and small submucous myomatous nodes, the ultrasound picture of which is often similar. In such cases, additional information can be provided by the method of echohysteroscopy, in which, after contrasting the uterine cavity with liquid (in our series of studies with sterile saline solution), all intrauterine structures are well visualized during a control ultrasound examination.

It should be remembered that the ultrasound method does not allow to make a morphological diagnosis, and its purpose is not in this. Echography only reveals the presence of a hyperplastic process of the endometrium and allows you to make a preliminary conclusion about the nature of the lesion. According to our data, the sensitivity of the ultrasound method in detecting endometrial pathology was 98%. The specificity of echography in determining the nature of the pathological process was quite low and corresponded to 74%, accuracy - 85%.

According to the results of aspiration biopsy with a thin curette "Pipel" and RDV, there was a high degree of correlation between cytological and histological data. In 3 patients with a normal echographic picture, aspiration biopsy and DDV revealed hyperplasia and fibroglandular polyp of the endometrium. In 2 women, glandular-cystic hyperplasia was detected instead of the suspected glandular polyp. Attention should be paid to the fairly complete coincidence of cytological and histological data in the diagnosis of glandular fibrotic polyps (96%), as well as the normal structure of the endometrium (the picture of the normal endometrium was revealed in all cases).

False negative results of the diagnosis of polyps were most often observed in 5 (4.3%) cases with aspiration biopsy with concomitant endometrial hyperplasia. But at the same time, the cytological picture could be used to judge the severity of proliferative processes in the endometrium.

The totality of the results obtained gave reason to conclude that the combined use of echography and aspirated biopsy can improve the accuracy of diagnosis of endometrial hyperplastic processes up to 93%.

Conclusions. 1.The use of modern ultrasound techniques, including ultrasound angiography, echohysteroscopy in combination with cytological examination of aspirate from the uterine cavity, increase the accuracy of diagnosis of endometrial hyperplastic processes up to 92%.

2. The complex application of screening and clarifying techniques contributes to the early detection of precancerous conditions of the endometrium, makes it possible to make a final diagnosis in polyclinic conditions and determine further tactics of observation and treatment.

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