



Guidelines for Ultrasound Examination in Gynecological Diseases

1. Khamidov Obid

Abdurakhmanovich

2. Ametova Alie Servetovna

Received 24th Jan 2022,
Accepted 10th Feb 2022,
Online 4th Mar 2022

Abstract: The ultrasound method of research is currently one of the leading in the diagnosis of diseases of the female genital area, since it is highly informative and has no contraindications. Regular examinations by a gynecologist, as well as ultrasound of the pelvic organs, will help to recognize the problem in time if it occurs and take appropriate measures to eliminate it.

Keywords: ultrasound methods, pelvic organs, gynecology, pregnant women.

^{1,2} Samarkand State Medical Institute,
Department of Medical Radiology,
Republic of Uzbekistan, Samarkand

Ultrasound is generally considered a safe way to obtain information. Fetal diagnostic ultrasound is also generally regarded as a safe method for use during pregnancy. This diagnostic procedure should be used only if there is a compelling medical indication, with the shortest possible duration of ultrasound exposure that will provide the necessary diagnostic information, that is, according to the principle of the minimum acceptable.

Every woman, regardless of age, should visit a gynecologist every six months, even in the absence of any problems and concerns, because many gynecological diseases are not accompanied by painful symptoms, especially at the initial stage. Regular examinations by a gynecologist, as well as ultrasound of the pelvic organs, will help to recognize the problem in time if it occurs and take appropriate measures to eliminate it. A routine ultrasound examination of the pelvic organs for women should be carried out at least once a year. When conducting such a study, the body of the uterus, the endometrium, the cervix, the posterior space and the bladder are usually studied. If necessary, a scan of the vessels of the small pelvis, lymph nodes and an overview scan of the abdominal and retroperitoneal organs are performed.

For the first time, ultrasound of the pelvic organs can be performed on any day of the menstrual cycle, excluding the days of menstruation. Optimally, the study is carried out in phase I of the cycle (5-7th day from 1 day of menstruation). If the diagnosis is unclear or needs to be clarified, it will be necessary to re-conduct the study on a specific day appointed by the doctor. Ultrasound of the pelvic organs is performed using two complementary techniques - transabdominal - TA (external) and transvaginal - TV (internal) access. The study begins with TA echography, which allows you to determine the correct location of the pelvic organs, the size and structure of the identified pathological formations, and, if necessary, assess the condition of the abdominal and retroperitoneal organs. The

image quality during TA scanning is greatly influenced by the thickness of the anterior abdominal wall, intestinal motility and the presence of adhesions. TV examination is carried out with a special vaginal sensor, as close as possible to the organs under study. TV echography gives a better image, allows you to evaluate fine details. However, with TV scanning, an overview picture of the entire volume of the small pelvis is not obtained, which can lead to diagnostic errors: large or far-located formations do not fall into the field of view of the specialist conducting the study. It is the combination of TA and TV echography that makes it possible to most accurately assess the state of the pelvic organs and identify the existing pathology. Indications for gynecological ultrasound examination.

- Preventive examinations of internal genital organs to identify pathology;
- Pathology of the uterus: myoma (fibroids) of the uterus, adenomyosis (endometriosis of the body of the uterus);
- Endometrial pathology: endometrial hyperplasia, polyps;
- Inflammatory diseases of the pelvic organs: hydrosalpinx, pyosalpinx, endometritis;
- Ovarian pathology: ovarian cysts and tumors, polycystic;
- Formations of the small pelvis: tumors of the intestines, bladder, ovaries, uterus;
- Diagnosis of anomalies in the development of the uterus: saddle, two-horned uterus, uterus with a vertical septum, etc.;
- Assessment of the location of the intrauterine device (IUD) in the uterine cavity;
- Ultrasound monitoring of ovulation;
- Diagnosis of early pregnancy and its complications: threatening miscarriage, detachment of the ovum, non-developing pregnancy, cystic drift, ectopic pregnancy; diagnosis of multiple pregnancies;
- Diagnostics of complications after abortion, childbirth, diagnostic manipulations.

With the help of ultrasound, you can see and evaluate the condition of the body of the uterus, cervix, ovaries, fallopian tubes (with their pathology) and the surrounding organs. During an ultrasound scan, the sizes of all organs available for examination are measured, their structure and compliance with the phase of the menstrual cycle are assessed.

In the presence of uterine fibroids, it is preferable to perform ultrasound in the first phase of the menstrual cycle, immediately after the end of menstruation. This is especially true for control ultrasound, which will need to be done 1-2 times a year. This is due to the fact that in the first phase, the size of myoma nodes is much smaller than in the second, when their swelling is possible due to specific the digital action of the hormone progesterone. That is, if you do an ultrasound scan twice in one month, the sizes of the same nodes will differ significantly depending on the phase of the menstrual cycle. Moreover, the sizes of the nodes in the first phase of the cycle will be considered true. Ultrasound helps to reliably assess the number of nodes, their size, structure, location in relation to the walls of the uterus and the uterine cavity, which is very important for making a decision on further treatment. With endometriosis, ultrasound can be used to diagnose the location of endometriotic foci in the muscle of the uterus (myometrium). This is the so-called internal endometriosis or adenomyosis. In this disease, in contrast to uterine fibroids, it is better to conduct a study in the second phase of the menstrual cycle, when the lesions are "swollen", and they are better determined during ultrasound. Also, with ultrasound, you can determine the presence of endometrioid ovarian cysts - they have a characteristic structure. With other localization, the foci of endometriosis are practically inaccessible for visualization using ultrasound. With inflammation of the uterine appendages (adnexitis, salpingo-

oophoritis), ultrasound can be done on any day of the menstrual cycle. However, if there is an expansion of the fallopian tubes (hydrosalpinx, sactosalpinx), the study must be repeated immediately after the end of menstruation to determine if there is an additional reflux of menstrual blood into the fallopian tubes. With inflammation of the uterine lining (endometritis), it is important to assess the structure of the endometrium, therefore, an ultrasound scan must be done in both the first and second phases of the cycle.

Condition after abortion and other intrauterine interventions. It is mandatory to conduct an ultrasound scan immediately after the end of the next menstruation, as well as in the presence of additional indications or with the development of complications (bleeding, endometritis, suspicion of residues of the ovum, etc.)

With ovarian dysfunction, ultrasound can help in clarifying the diagnosis, assessing the condition of the ovaries and endometrium. To do this, it is necessary to perform an ultrasound scan at least twice during one menstrual cycle. This is especially important when assessing the effectiveness of treatment, when it is necessary to track whether there is a growing follicle, whether ovulation has occurred, and how the endometrium changes under the influence of hormones produced by the ovaries.

If, with endometrial hyperplasia during ultrasound, this diagnosis was suspected in the second phase of the cycle, it is necessary to re-examine immediately after the end of the next menstruation to see if the thickened endometrium and / or polyps have spontaneously rejected or if this requires medical attention.

You can diagnose ovarian tumors and cysts with an ultrasound scan performed immediately after the next menstruation. In the middle and in the second phase of the menstrual cycle, rather large (about 2 cm in diameter) additional inclusions are normally determined in the ovaries - a growing follicle or corpus luteum, which, in the absence of the doctor's experience, can be mistaken for a tumor.

Pregnancy is suspected when the next menstruation is delayed. With the help of ultrasound, you can reliably see the ovum in the uterine cavity for about 5-7 days of delay. If a woman is practically healthy, as a preventive measure for the early detection of various gynecological diseases, it is necessary to do an ultrasound of the pelvic organs once every 1 to 2 years, and at the age after 40 years - once a year.

Preparation for transvaginal ultrasound of the pelvic organs - two days before the study, plant foods (fruits, vegetables, juices, legumes), carbonated drinks, meat and dairy products in large quantities should be excluded from the diet. The goal of this diet is to prevent flatulence in the intestines. Gas bubbles can seriously interfere with testing and lead to diagnostic errors. If there is no stool the day before, a cleansing enema should be given. The study is carried out with a moderate filling of the bladder, so the last urination should be 1 - 1.5 hours before the study. A full bladder is a guide for determining the location of the internal genital organs.

Preparation for transabdominal ultrasound of the pelvic organs - two days before the study, plant foods (fruits, vegetables, juices, legumes), carbonated drinks, meat and dairy products in large quantities should be excluded from the diet. The purpose of this diet is prevent gas formation in the intestines. Gas bubbles can seriously interfere with testing and lead to diagnostic errors. If there is no stool the day before, a cleansing enema should be given. The examination is performed with a full bladder. A moderate urge to urinate indicates a full bladder.

Ultrasound during pregnancy is performed in the first trimester (the first three months of pregnancy or up to 12 weeks), the study is carried out by the transvaginal method. In the second and third trimesters, the study is carried out using the transabdominal method. For women who have given birth before by caesarean section, the study is carried out with a filled bladder, who did not give birth and who gave

birth on their own, filling the bladder did not fundamentally. Echohysterosalpingoscopy (ECHS), the study is carried out up to 10 days of the menstrual cycle (at 28 daily cycle). An outpatient procedure, used mainly to clarify the patency of the fallopian tubes. Liquid is injected into the uterine cavity under slight pressure. If the pipes are passable, the liquid passes freely through them and enters the retinal space. Based on this fact, a conclusion is made on the patency of the fallopian tubes. Ultrasound of the mammary glands - the study is carried out before the 5th day of the menstrual cycle and does not require special preparation.

The latest report from the World Health Organization reflects support for the view that ultrasound is harmless: "Fetal diagnostic ultrasound is recognized as a safe, effective and highly flexible imaging technique that can reveal clinically relevant information about most parts of the body in a fast and cost-effective manner."

LITERATURE

1. Akhmedov Y.A., Ataeva S.Kh., Ametova A.S., Bazarova S.A., Isakov H.Kh. THE HISTORY OF THE DEVELOPMENT OF RADIATION DIAGNOSTICS. Web of scientist: International scientific research journal, volume 2 issue 8 August 2021 P.34-42
2. Akhmedov Y.A., Rustamov U.Kh., Shodieva N.E., Alieva U.Z., Bobomurodov B.M. Modern Application of Computer Tomography in Urology. Central Asian journal of medical end natural sciences, volume 2 issue 4 Jul-Aug 2021 P.121-125
3. Ataeva S.Kh., Ravshanov Z.Kh., Ametova A.S., Yakubov D.Zh. Radiation visualization of chronic joint diseases. Central Asian journal of medical end natural sciences, volume 2 issue 2 March-april 2021 P.12-17
4. B. Breyer, C. A. Bruguera, H. A. Ghaarbi, B. B. Goldberg, F. E. H. Tan, M. W. Wachira, F.S. Weill. Diagnostic Ultrasound Guidelines. // World Health Organization. World Federation of Ultrasound in Medicine and Biology.
5. Bulanov M.N. Ultrasound gynecology. / A course of lectures in 2 parts. - M.: VIDAR, 2014. -- 568 p.
6. E.I.Blute. Ultrasound diagnostics. // Practical solution to clinical problems. Ultrasound in obstetrics .. - M.: Medical literature, 2014. - V.3. - 192 p.
7. Hamidov O.A., Diagnostics of injuries of the soft tissue structures of the knee joint and their complications. European research. Moscow. October 2020. № 1 (37). P. 33-36.
8. Khamidov O. A., Khodzhanov I. Yu., Mamasoliev B.M., Mansurov D.Sh., Davronov A.A., Rakhimov A.M. The Role of Vascular Pathology in the Development and Progression of Deforming Osteoarthritis of the Joints of the Lower Extremities (Literature Review). Annals of the Romanian Society for Cell Biology, Romania, Vol. 25, Issue 1, 2021, Pages. 214 – 225
9. Khamidov O.A., Akhmedov Y.A., Ataeva S.Kh., Ametova A.S., Karshiev B.O. Role of Kidney Ultrasound in the Choice of Tactics for Treatment of Acute Renal Failure. Central Asian journal of medical end natural sciences, volume 2 issue 4 Jul-Aug 2021 P.132-134
10. Khamidov O.A., Akhmedov Y.A., Yakubov D.Zh., Shodieva N.E., Tukhtaev T.I. DIAGNOSTIC POSSIBILITIES OF USES IN POLYCYSTOSIS OF KIDNEYS. Web of scientist: International scientific research journal, volume 2 issue 8 August 2021 P.27-33
11. Khamidov O.A., Ataeva S.Kh., Ametova A.S., Yakubov D.Zh., Khaydarov S.S. A Case of Ultrasound Diagnosis of Necrotizing Papillitis. Central Asian journal of medical end natural sciences, volume 2 issue 4 Jul-Aug 2021 P.103-107

12. Khamidov O.A., Ataeva S.Kh., Yakubov D.Zh., Ametova A.S., Saytkulova Sh.R. ULTRASOUND EXAMINATION IN THE DIAGNOSIS OF FETAL MACROSOMIA. Web of scientist: International scientific research journal, volume 2 issue 8 August 2021 P.49-54
13. Khamidov O.A., Mirzakulov M.M., Ametova A.S., Alieva U.Z. Multispiral computed tomography for prostate diseases. Central Asian journal of medical end natural sciences, volume 2 issue 2 March-april 2021 P.9-11
14. Khamidov O.A., Normamatov A.F., Yakubov D.Zh., Bazarova S.A. Respiratory computed tomography. Central Asian journal of medical end natural sciences, volume 2 issue 2 March-april 2021 P.1-8
15. Khamidov O.A., Urozov U.B., Shodieva N.E., Akhmedov Y.A. Ultrasound diagnosis of urolithiasis. Central Asian journal of medical end natural sciences, volume 2 issue 2 March-april 2021 P.18-24
16. Khamidov O.A., Yakubov D.Zh., Alieva U.Z., Bazarova S.A., Mamaruziev Sh.R. Possibilities of Sonography in Differential Diagnostics of Hematuria. Central Asian journal of medical end natural sciences, volume 2 issue 4 Jul-Aug 2021 P.126-131
17. Khamidov O.A., Yakubov D.Zh., Ametova A.S., Bazarova S.A., Mamatova Sh.T. Application of the Ultrasound Research Method in Otorhinolaryngology and Diseases of the Head and Neck Organs. International Journal of Development and Public Policy, volume 1 issue 3 August 2021 P.33-37
18. Khamidov O.A., Yakubov D.Zh., Ametova A.S., Turdumatov Zh.A., Mamatov R.M. Magnetic Resonance Tomography in Diagnostics and Differential Diagnostics of Focal Liver Lesions. Central Asian journal of medical end natural sciences, volume 2 issue 4 Jul-Aug 2021 P.115-120
19. Khodzhibekov M.X., Khamidov O.A., Mardieva G.M. Verification of radiation methods in diagnostics of injuries of the knee joint intra-articular structures. International Journal of Pharmaceutical Research. 2020:13(1), p. 302-308.
20. Mitkova V.V. A practical guide to ultrasound diagnostics. - M.: VIDAR, 2011. -- 720 p.
21. Rustamov U.Kh., Shodieva N.E., Ametova A.S., Alieva U.Z., Rabbimova M.U. US-DIAGNOSTICS FOR INFERTILITY. Web of scientist: International scientific research journal, volume 2 issue 8 August 2021 P.55-61
22. Rustamov U.Kh., Urinboev Sh.B., Ametova A.S. Ultrasound diagnostics of ectopic pregnancy. Central Asian journal of medical end natural sciences, volume 2 issue 2 March-april 2021 P.25-28
23. Хамидов О.А. Оптимизация лучевой диагностики повреждений мягкотканых структур коленного сустава и их осложнений Американский журнал медицины и медицинских наук, Америка, 2020, 10 (11) - С. 881-884
24. Ходжибеков М.Х., Хамидов О.А. Обоснование ультразвуковой диагностики повреждений внутрисуставных структур коленного сустава и их осложнений. №3 (31), 2020. С.526-529.