



New Day in Medicine
Новый День в Медицине

NDM



TIBBIYOTDA YANGI KUN

Ilmiy referativ, marifiy-ma'naviy jurnal



AVICENNA-MED.UZ



ISSN 2181-712X.
EiSSN 2181-2187

12 (74) 2024

Сопредседатели редакционной коллегии:

**Ш. Ж. ТЕШАЕВ,
А. Ш. РЕВИШВИЛИ**

Ред. коллегия:

М.И. АБДУЛЛАЕВ
А.А. АБДУМАЖИДОВ
Р.Б. АБДУЛЛАЕВ
Л.М. АБДУЛЛАЕВА
А.Ш. АБДУМАЖИДОВ
М.А. АБДУЛЛАЕВА
Х.А. АБДУМАДЖИДОВ
Б.З. АБДУСАМАТОВ
М.М. АКБАРОВ
Х.А. АКИЛОВ
М.М. АЛИЕВ
С.Ж. АМИНОВ
Ш.Э. АМОНОВ
Ш.М. АХМЕДОВ
Ю.М. АХМЕДОВ
С.М. АХМЕДОВА
Т.А. АСКАРОВ
М.А. АРТИКОВА
Ж.Б. БЕКНАЗАРОВ (главный редактор)
Е.А. БЕРДИЕВ
Б.Т. БУЗРУКОВ
Р.К. ДАДАБАЕВА
М.Н. ДАМИНОВА
К.А. ДЕХКОНОВ
Э.С. ДЖУМАБАЕВ
А.А. ДЖАЛИЛОВ
Н.Н. ЗОЛотова
А.Ш. ИНОЯТОВ
С. ИНДАМИНОВ
А.И. ИСКАНДАРОВ
А.С. ИЛЪЯСОВ
Э.Э. КОБИЛОВ
А.М. МАННАНОВ
Д.М. МУСАЕВА
Т.С. МУСАЕВ
М.Р. МИРЗОЕВА
Ф.Г. НАЗИРОВ
Н.А. НУРАЛИЕВА
Ф.С. ОРИПОВ
Б.Т. РАХИМОВ
Х.А. РАСУЛОВ
Ш.И. РУЗИЕВ
С.А. РУЗИБОВ
С.А. ГАФФОРОВ
С.Т. ШАТМАНОВ (Кыргызстан)
Ж.Б. САТТАРОВ
Б.Б. САФОВ (отв. редактор)
И.А. САТИВАЛДИЕВА
Ш.Т. САЛИМОВ
Д.И. ТУКСАНОВА
М.М. ТАДЖИЕВ
А.Ж. ХАМРАЕВ
Д.А. ХАСАНОВА
А.М. ШАМСИЕВ
А.К. ШАДМАНОВ
Н.Ж. ЭРМАТОВ
Б.Б. ЕРГАШЕВ
Н.Ш. ЕРГАШЕВ
И.Р. ЮЛДАШЕВ
Д.Х. ЮЛДАШЕВА
А.С. ЮСУПОВ
Ш.Ш. ЯРИКУЛОВ
М.Ш. ХАКИМОВ
Д.О. ИВАНОВ (Россия)
К.А. ЕГЕЗАРЯН (Россия)
DONG JINCHENG (Китай)
КУЗАКОВ В.Е. (Россия)
Я. МЕЙЕРНИК (Словакия)
В.А. МИТИШ (Россия)
В.И. ПРИМАКОВ (Беларусь)
О.В. ПЕШИКОВ (Россия)
А.А. ПОТАПОВ (Россия)
А.А. ТЕПЛОВ (Россия)
Т.Ш. ШАРМАНОВ (Казахстан)
А.А. ЩЕГОЛОВ (Россия)
С.Н. ГУСЕЙНОВА (Азербайджан)
Prof. Dr. KURBANHAN MUSLUMOV (Azerbaijan)
Prof. Dr. DENIZ UYAK (Germany)

ТИББИЁТДА ЯНГИ КУН НОВЫЙ ДЕНЬ В МЕДИЦИНЕ NEW DAY IN MEDICINE

*Илмий-рефератив, маънавий-маърифий журнал
Научно-реферативный,
духовно-просветительский журнал*

УЧРЕДИТЕЛИ:

**БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ
МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»**

Национальный медицинский
исследовательский центр хирургии имени
А.В. Вишневского является генеральным
научно-практическим
консультантом редакции

Журнал был включен в список журнальных
изданий, рецензируемых Высшей
Аттестационной Комиссией
Республики Узбекистан
(Протокол № 201/03 от 30.12.2013 г.)

РЕДАКЦИОННЫЙ СОВЕТ:

М.М. АБДУРАХМАНОВ (Бухара)
Г.Ж. ЖАРЫЛКАСЫНОВА (Бухара)
А.Ш. ИНОЯТОВ (Ташкент)
Г.А. ИХТИЁРОВА (Бухара)
Ш.И. КАРИМОВ (Ташкент)
У.К. КАЮМОВ (Тошкент)
Ш.И. НАВРУЗОВА (Бухара)
А.А. НОСИРОВ (Ташкент)
А.Р. ОБЛОКУЛОВ (Бухара)
Б.Т. ОДИЛОВА (Ташкент)
Ш.Т. УРАКОВ (Бухара)

12 (74)

2024

ноябрь

www.bsmi.uz

<https://newdaymedicine.com> E:

ndmuz@mail.ru

Тел: +99890 8061882

Received: 20.11.2024, Accepted: 03.12.2024, Published: 10.12.2024

UDC 618.14–002–02:618.7–073.43

ULTRASOUND DIAGNOSTICS OF POSYPARTUM ENDOMETRITIS

Nazarova Z.Yu. <https://orcid.org/0009-0000-5917-4775>

Karimova N.N. <https://orcid.org/0009-0007-9349-8029>

Bukhara State Medical Institute named after Abu Ali ibn Sina, Uzbekistan, Bukhara,
st. A. Navoi. 1 Tel: +998 (65) 223-00-50 e-mail: info@bsmi.uz

✓ Resume

The purpose of the article is to present data on diagnostics of postpartum infectious diseases in women in childbirth. The aim of the conducted survey is to study modern ultrasound diagnostic methods of the given pathology.

Key words: endometritis, ultrasound diagnostics.

УЛЬТРАЗВУКОВАЯ ДИАГНОСТИКА ПОСЛЕРОДОВОГО ЭНДОМЕТРИТА

Назарова З.Я. <https://orcid.org/0009-0000-5917-4775>

Каримова Н.Н. <https://orcid.org/0009-0007-9349-8029>

Бухарский государственный медицинский институт имени Абу Али ибн Сины, Узбекистан,
г. Бухара, ул. А. Навои. 1 Тел: +998 (65) 223-00-50 e-mail: info@bsmi.uz

✓ Резюме

Представлены данные о диагностике послеродовых инфекционных заболеваний у родильниц. Акцентируется внимание на современных ультразвуковых методах диагностики данной патологии.

Ключевые слова: эндометрит, ультразвуковая диагностика.

ТУЗРУҚДАН КЕЙИНГИ ЭНДОМЕТРИТНИНГ УЛЬТРАТОВУШ ТАҲЛИЛИ

Назарова З.Я. <https://orcid.org/0009-0000-5917-4775>

Каримова Н.Н. <https://orcid.org/0009-0007-9349-8029>

Абу али ибн Сино номидаги Бухоро давлат тиббиёт институти Ўзбекистон, Бухоро ш.,
А.Навоий кўчаси. 1 Тел: +998 (65) 223-00-50 e-mail: info@bsmi.uz

✓ Резюме

Тузрукдан кейинги аёлларда тузрукдан кейинги юқумли касалликлар диагностикаси бўйича маълумотлар келтирилган. Ушбу патологияни таъхислаш учун замонавий ультратовуш усулларига эътибор қаратилган.

Калит сўзлари: эндометрит, ультразвуковая диагностика.

Relevance

Postpartum infectious and inflammatory diseases are an important medical and social problem and are one of the main causes of maternal morbidity and mortality. The most common manifestation of postpartum infection is endometritis, its frequency in the general population is 3-8%, after pathological births it reaches 18-20%, and after cesarean section 25-34.4% [1-7].

In recent decades, ultrasound examination has been widely used to assess the condition of the postpartum uterus, diagnose and predict complications of the postpartum period. One of the advantages of this examination is its absolute harmlessness and the possibility of repeated use. Echography allows us to detect certain changes characteristic of postpartum endometritis, which helps to confirm the clinical diagnosis.

To characterize the size of the postpartum uterus, in most cases, its linear parameters are used: length, width, anteroposterior size. The assessment of postpartum uterine involution is based on the dynamics of its size reduction. In this case, the involution of the uterus is most objectively reflected by a decrease in its length. This parameter changes by an average of 30% during the first seven days, while the dynamics of other linear indicators are less pronounced (2-6 times less). The uterine cavity maintains a stable size (less than 1 cm) in the anteroposterior direction during the normal postpartum period. Often, a small amount of fluid is visualized in its lumen. The contour can be smooth and clearly defined or uneven and blurry [8-10].

In most cases, the linear parameters of the postpartum uterus are used to characterize its size: length, width, anteroposterior size. The assessment of postpartum uterine involution is based on the dynamics of its size reduction. In this case, uterine involution is most objectively reflected by a decrease in its length. This parameter changes by an average of 30% during the first seven days, while the dynamics of other linear indicators are less pronounced (2-6 times less). The uterine cavity during a normal postpartum period maintains a stable size (less than 1 cm) in the anteroposterior direction. A small amount of fluid is often visualized in its lumen. The contour can be smooth and clearly defined or uneven and blurry [8-10].

Ultrasound examination, usually performed on the 4th-5th day of the complicated postpartum period, allows to detect uterine subinvolution, which is characterized by an increase in the length, width, anterior-posterior size and volume of the uterus in comparison with the data typical for the physiological course of the postpartum period. Some researchers have proposed using the uterine involution coefficient (UIC) and the endovolumometry reduction coefficient (ERC) to assess the involution of the postpartum uterus. The uterine involution coefficient is equal to the ratio of the uterine muscle volume on the 2nd day of puerperium to the uterine muscle volume on the 5th day of the postpartum period. The endovolumometry reduction coefficient is equal to the ratio of the relative volume of the uterine cavity on the 2nd day of the postpartum period to the relative volume of the uterine cavity on the 5th day. If $IMC > 1.5$, then the process of reverse development of the postpartum uterus should be recognized as adequate. If $IMC < 1.5$, then one should think about subinvolution of the uterus. If $CRE > 1.9$, the process of involution of the postpartum uterus should be recognized as adequate. The closer the indicators are to 1, the more clinically significant they are [13].

Some studies have shown that during the first week after birth, the length of the uterus shortens by an average of 27% of the initial value, while the width and anterior-posterior size only by 17 and 6%, respectively. The most pronounced and stable dynamics were found when determining the volume of the uterus, which during the first seven days of puerperium decreased by an average of 43.8% of the initial value [14].

During the three-dimensional ultrasound examination it was revealed that mothers after spontaneous labor with complicated puerperium had a reliable increase in the volume of the uterus compared to similar indicators of healthy mothers. The most pronounced increase in volume was found in subinvolution of the uterus (by 42%), less pronounced in hematolochiometra (by 25%) and endometritis (by 29.5%). In complications after cesarean section, an increase in the volume of the uterus was also found by 54% in subinvolution, by 16% in hematolochiometra and by 25.5% in endometritis. In women in labor after both spontaneous labor and cesarean section with complicated puerperium, a decrease in the volume of the cervix was also noted in all subgroups, which was less pronounced with subinvolution of the uterus (by 12%), the most significant decrease occurred with hematolochiometra (by 16-20%) and endometritis (by 21-24%). In women in labor with subinvolution of the uterus, the values of the uterine cavity volume did not differ significantly from similar indicators in healthy women in labor, while with hematolochiometritis and postpartum endometritis, this indicator was higher than the standard values by 3.3 and 5.5% times, and after cesarean section - by 2.3 and 2.4 times.

Thus, the analysis of three-dimensional echography parameters revealed the greatest increase in the volume of the uterine body in mothers with subinvolution, the maximum increase in the volume of the uterine cavity with hematolochiometra and endometritis. The smallest volume of the cervix was observed with postpartum endometritis, which was associated with its slow formation in the presence of an inflammatory process. In mothers after cesarean section, the volume of the body, cervix and cavity of the uterus changes depending on the complications of the puerperium, similar to the data after spontaneous labor. The highest values of the myometrium volume in the area of the suture on the uterus

in postpartum endometritis were associated with a more pronounced edema of this zone in the presence of an inflammatory process [15].

According to various data, the ultrasound picture in endometritis is characterized by an expansion of the uterine cavity by more than 15 mm due to structures of heterogeneous echodensity, with a parietal echo-negative zone and the morphological substrate of this echo-negative zone is an inflammatory infiltrate with perifocal edema [16].

However, the ultrasound picture of endometritis is not always informative. Often, with pronounced clinical symptoms, the echographic picture does not have specific signs. In some cases, it is possible to identify a thin, weakly echogenic endometrium and a slightly (only 2-4 mm) expanded cavity. In addition, a fibrin plaque is determined, which has increased echogenicity, thin hyperechoic stripes along the walls of the uterus. A decrease in the tone of the uterus is noted, liquid contents, gas in the form of hyperechoic inclusions, blood clots larger than 5 mm are determined in the cavity. Fluid in the small pelvis on the 6-8th day is also a sign of endometritis. Hypoechogenicity of the uterine walls is due to edema of the myometrium layers adjacent to the endometrium [17].

Studies have shown that the reduction in the length of the uterus after a cesarean section occurs significantly more slowly than after a vaginal birth, which is due to a violation of the contractile ability of the muscle fibers intersected in the lower segment. It was found that after a cesarean section, the processes of formation of the anterior wall of the uterus are disrupted, and the formation of the posterior wall of the uterus is slowed down. A significant increase in the thickness of the myometrium of the anterior wall of the uterus in its lower third is associated with deformation and edema of the tissues in the area of the postoperative suture. Violation of the contractile ability of the uterus and narrowing of the lumen of its cavity at the level of the suture determine the difficulty in the outflow of lochia and predispose to the development of endometritis [17]. According to some data, hematomas in the area of the uterine suture, reaching 2 cm in diameter or more, pose a high risk of purulent-inflammatory complications, since even with a clinically uncomplicated postoperative period, such hematomas do not undergo complete regression for a long time, which requires clinical and ultrasound monitoring [14].

A blood flow study for a more accurate assessment of uterine hemodynamics should be performed not only in the arcuate arteries, but also in other uterine arteries. Ultrasound scanning with Doppler is the most informative diagnostic method, which has no contraindications even in the presence of a generalized infection in the patient. Blood flow indicators in the branches of the uterine artery in the area of the anterior wall of the uterus, in the fundus and in the area of the posterior wall of the uterus and obtained the following data. In patients with purulent complications after cesarean section, who were successfully treated with conservative surgical (endoscopic) treatment, local circulatory disorder in the scar area was expressed in a decrease in volumetric blood flow and an increase in vascular resistance indices: an increase in the S / D indicator to 3.5-4.0; IR up to 0.7-0.85 (signs of local ischemia); with S/D values of 2.2-2.8; IR 0.34-0.44 in the area of the upper half of the anterior and posterior walls of the uterus. In local panmetritis, signs of local circulatory disorder were detected: absence of the diastolic component of blood flow in the area of the scar on the uterus, which indicated a sharp disruption of the blood supply to the tissue, leading to its focal necrosis. In total panmetritis, a sharp decrease in the blood supply to the anterior wall of the uterus and an increase in blood flow in the area of the posterior wall were detected: S/D < 2.2 and IR < 0.3 [12].

A predisposing factor for the development of endometritis in women in labor with gestosis is an increase in IR in the arcuate arteries up to 0.69-0.73, in the radial arteries up to 0.66-0.72 on the 2nd day of the postpartum period. An early diagnostic criterion for the development of endometritis in women in labor with gestosis is a decrease in IR and S/D (in the uterine arteries IR below 0.58 and S/D below 2.45, in the arcuate IR 0.49, S/D 1.91 and in the radial IR 0.44, IR 1.61) [18].

According to some studies conducted on Dopplerograms of women in labor with uncomplicated puerperium, positive end-diastolic blood flow velocity is always observed. A decrease in end-diastolic blood flow velocity in the dynamics of the postpartum period is noted due to good involution of the uterus, a decrease in blood filling of the myometrium tissues and an increase in peripheral resistance in the uterine arterioles. According to the author, quantitative indicators of vascular resistance indices in women in labor with physiological puerperium are close to the values corresponding to 18-20 weeks of normal pregnancy. In this case, in women with postpartum purulent-septic diseases, the indices of vascular resistance were lower than in women in labor with a normal course of puerperium; they were recorded before the clinical manifestations of the disease appeared and were persistent. The severity of

the disease is proportional to the change in hemodynamic indicators, which is why Doppler blood flow in the uterine vessels allows for preclinical diagnostics of the inflammatory process, serves as a criterion for the effectiveness of the treatment, and makes it possible to predict the recurrence of the disease [19].

Conclusion

Thus, ultrasound examination is an informative, non-invasive method for diagnosing complications of puerperium, including endometritis. However, the problem of diagnosing postpartum complications using echography and Dopplerometry remains far from solved. The latent forms of endometritis are often characterized by a conditionally "clean" uterine cavity during ultrasound examination, which complicates the diagnosis of this pathology with a latent clinical picture. In this regard, it seems necessary to further study the possibilities of ultrasound diagnostics of complications of the postpartum period.

LIST OF REFERENCES:

1. Кулаков В.И., Чернуха Е.А., Комиссарова Л.М. Кесарево сечение. /М: Триада-Х, 2004;320с.
2. Серов В.Н. Пути снижения акушерской патологии. //Акушерство и гинекология 2007;(5):8–12.
3. Краснополяский В.И., Буянова С. Н., Щукина Н.А. Гнойно-септические осложнения в акушерстве и гинекологии: патогенез, диагностика и лечебная тактика. //Рос. вестн. акушера-гинеколога 2007;(5):76-81.
4. Краснополяский В.И., Буянова С. Н., Щукина Н.А. Акушерский сепсис как репродуктивная проблема. //Акушерство и гинекология 2007;(3):38-42.
5. Тютюник В.Л. Профилактика и лечение эндометрита после родов и кесарева сечения. //РМЖ 2002;(18):23-27.
6. Орджоникидзе Н.В., Данелян С.Ж. Анализ инфекционно-воспалительных осложнений после самопроизвольных родов. //Сб. матер. 36го Конгресса Международного общества по изучению патофизиологии беременности, гестоза. М., 2004; 34-38.
7. Акопян А.С., Лисичкина Е.Г., Харченко В.И. и др. Состояние репродуктивного здоровья и уровень материнской смертности в современной России. //Вестн. Рос. ассоциации акушеров-гинекологов 1998;(2):94-100.
8. Медведев М.В., Хохолин В.Л. Ультразвуковое исследование матки. В кн.: Клиническое руководство по ультразвуковой диагностике. Ч. 3. М.: Видар, 1997; 76-119.
9. Митьков В.В., Медведев М.В. Клиническое руководство по ультразвуковой диагностике. Ч. 2. М.: Видар, 2003; 133-142.
10. Стыгар А.М. Ультразвуковая диагностика поздних послеоперационных осложнений. В кн.: Ультразвуковая диагностика в перинатологии. М., 1991; 62 с.
11. Хохлова Д.П. Ультразвуковая оценка инволюции матки у рожениц с различным паритетом и массо-ростовым коэффициентом: автореф. дис. ... канд. мед. наук. Душанбе, 2009; 19 с.
12. Черемискин В.П. Гнойно-септические заболевания послеродового периода: комплексная диагностика, лечение и профилактика: автореф. дис. ... д-ра мед. наук. Челябинск, 2012; 46 с.
13. Вартанян С.М. Ранняя дифференциальная диагностика послеродового эндометрита и субинволюция матки в акушерском стационаре обсервационного профиля: автореф. дис. ... канд. мед. наук. Краснодар, 2007; 24 с.
14. Баев О.Р. Современные принципы комплексной профилактики, диагностики и дифференцированного лечения гнойно септических осложнений кесарева сечения: автореф. дис. ... д-ра мед. наук. М., 1998; 42 с.
15. Титченко Ю.П., Титченко Л.И., Новикова С. В. и др. Возможности использования трехмерных ультразвуковых технологий в диагностике послеродовых осложнений. SonoAce-Ultrasound 2008;(18):43-50.
16. Хачкуров С. Г. Ультразвуковое исследование в гинекологии. М., 2000.
17. Демидов В.Н., Стыгар А.М., Зыкин Б.И., Доронин Г.Я. Ультразвуковая диагностика в акушерстве. В кн.: Ультразвуковая диагностика. М., 1990; 401-418 с.
18. Стрижаков А.Н., Баев О.Р. Клинико-инструментальная оценка состояния шва на матке и выбор лечебной тактики при гнойно-септических осложнениях после кесарева сечения. //Акушерство и гинекология 1999;(5):21-27.
19. Сурсыков В.А., Панина О.Б., Олешкевич Л.Н. Физиологическое течение пуэрперия: эхографические и доплерометрические критерии. //Вопросы гинек., акуш. и перинатологии 2004;3(6):32-37.

Entered 20.11.2024