International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

Thrombophlebia and Pregnancy, Predicting Perinatal Complications and Optimizing Administration Tactics

Khafizova Dilnoza Bakhodirovna
Bukhara State Medical Institute, Bukhara, Uzbekistan

ABSTRACT: Women with a predisposition to thrombosis (with thrombophilia) develop abnormal hypercoagulation during pregnancy, which can lead to early and late reproductive losses. The most significant polymorphisms of thrombophilia genes include antithrombin III deficiency, protein C, Leiden mutation, hereditary hyperhomocysteinemia, and mutations of some other clotting factors. In addition, there is a group of thrombophiliacaused by hyperaggregation. Currently, heparin and its derivatives are considered the safest and most effective drugs for the prevention and treatment of thrombotic complications. However, it is impossible to evaluate the effectiveness of heparins using only standard methods for studying hemostasis (activated partial thromboplastin time, thrombin time, prothrombin time) and markers of intravascular coagulation activation (soluble fibrin monomer complexes, D-dimer) due to their insufficient sensitivity. One of the new tests for qualitative and quantitative assessment of the coagulation state of plasma, which can detect even minimal shifts in the equilibrium of the coagulation system, is considered to be the study of thrombodynamics. Goal. To evaluate the feasibility of using the thrombodynamics test in women with pregnancy pathology in the first trimester. To prove the possibility of its application as the most sensitive method of monitoring therapy with low-molecular-weight heparins (LMWH). Methods. The study included 23 pregnant women with obstetric and gynecological pathology and / or a history of thrombotic complications and the risk of termination of pregnancy in the first trimester. The women were aged 22-38 years (median 30 years). An integral assessment of the hemostatic system was performed using the thrombodynamicstest. Results. LMWH therapy under the control of thrombodynamicswas performed in 20 out of 23 women. As a result, only thrombodynamic parameters were statistically significantly changed ($p < 0.05$). In 14 women, pregnancy ended with delivery of healthy children at 38-40weeks. (all patients in the first trimester received LMWH). Conclusion. The thrombodynamic test is the most reliable method for monitoring the treatment of LMWH, since it allows you to record even minimal shifts in the balance of the coagulation system. Changes in the hemostatic system occur in a variety of physiological and pathological conditions. Such a physiological process for a woman's body as pregnancy is accompanied by a shift in the balance of hemostasis towards hypercoagulation, which is considered a natural reaction of the body to the expected physiological blood loss during childbirth and in the postpartum period. This is manifested by activation of clotting, mainly due to an increase in the level of clotting factors, a decrease in the activity of protein S and simultaneously a decrease in the activity of fibrinolysis, due to a significant increase in the inhibitor of plasminogen activator types 1 and 2 (PAI-1 and PAI-2) [1-3]. Thrombophilia is a hereditary or acquired predisposition to thrombosis. It should be noted that thrombophilia — this is only a predisposition, but not a disease as such. Usually, thrombophilia becomes clinically significant in the presence of risk factors (cancer, oral contraceptive use, pregnancy, the postpartum period, etc.) [4]. It is customary to distinguish

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

between hereditary and acquired thrombophilia. The most common form of acquired thrombophilia is antiphospholipid syndrome. Another form of acquired thrombophilia may be caused by HIV. In this case, both the disease itself (HIV infection) and antiviral pharmacotherapy contribute to the development of thrombosis [5]. In hereditary thrombophilia, the predisposition to the formation of blood clots is due to genetic mutations. This article will focus mainly on hereditary thrombophilia in pregnant women, the possibilities of anticoagulant therapy, methods of coagulological control and correction of therapy. Carriage of thrombophilia gene polymorphisms can increase hypercoagulation during pregnancy and cause complications. Thrombophilia, according to the literature, has a high degree of correlation with pregnancy complications: spontaneous abortions, habitual miscarriagesuturing, placental abruption, non-developing pregnancy, preterm birth, intrauterine growth retardation, preeclampsia [6-9].

KEYWORDS: thrombophilia, pregnancy, thrombodynamics.

Implantation of the fetal egg, invasion of the trophoblast (the surface layer of blastocyst cells) and placentation are the main stages that the maternal body undergoes in the first and beginning of the second trimester of pregnancy. The embryo, when implanted, "breaks" through the epithelial layer of the endometrium of the uterus, damaging the endothelium, the smooth muscle layer of the mother's vessels, and also changes blood flow [10]. The mother's body is forced to adapt through various rearrangements, primarily in the endocrine system and in the complement system. Vascular tone changes by changing the secretion of vasodilators and vasoconstrictors (prostaglandin/ thromboxane), the hemostatic system. For example, activated protein C, in addition to its anticoagulant effect, facilitates trophoblastinvasion, since it has cytoprotective properties [11, 12]. Moderate hypofibrinolysis in a physiologically occurring pregnancy is necessary to prevent hemorrhages during trophoblastinvasion. Therefore, extra-and intravascular fibrin deposition is part of the physiological process. This explains the increased endometrial secretion of PAI-1, a tissue factor, and a decrease in the level of tissue and urokinase plasminogen activators. According to the T study. Asahina a sufficient level of maternal factor XIII is necessary for the formation of cytotrophoblastic a shield that plays an important role for adequate trophoblast invasion [13]. It is obvious that the presence of thrombophilia can lead to both thrombotic disorders and changes in trophoblastinvasion. For example, the carriage of the PAI-1 4G/4G gene polymorphism under conditions of physiological (gestational) hypofibrinolysis leads to excessive fibrin deposition and, as a consequence, to a violation of fetal egg implantation. Protein C and/or protein S deficiency reduces cytoprotective effects by enhancing apoptosis trophoblast cells, which also leads to an implantation defect. Thus, genetic thrombophilia in the first trimester causes a defect in the depth of trophoblastinvasion, which later leads to endotheliopathy and can be clinically manifested by preeclampsia. In the later stages of pregnancy, thrombophilia causes thrombosis of the placental microcirculatory bed and often-thrombosis of the umbilical cord vessels. Clinically, this is manifested by late reproductive losses: primary detachment of the normally located placenta, antenatal fetal death, fetal developmental delay syndrome [10]. This is confirmed by study A. Many etal., which included 68 women with pregnancy complications: intrauterine fetal death, placental abruption, intrauterine fetal growth retardation. All women underwent a study of polymorphisms of thrombophilia genes. Histologically уносительницгенов, placental infarction, spiral artery thrombosis, fibrinoid necrosis, and decidual membrane vascular

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

thrombosis were statistically significantly more common in carriers of thrombophilia genes [14]. The most significant polymorphisms of thrombophilia genes include deficiency of antithrombin III, protein C, resistance to protein C (Leiden mutation), mutation FII (G20210), genetically determined increase in factors VII, VIII, IX, XI, XIII, and mutation of the methylenetetrahydrofolate reductase gene (hereditary hyperhomocysteinemia) [15]. There is a link between thrombophilia, "frozen" pregnancy and spontaneous abortions. The study by B. J. Sansonetal. [16] included 129 women with at least one pregnancy history. The total number of pregnancies in women with detected anticoagulant deficiency was 188 cases. 60 of them were found to be deficient in one of the natural anticoagulants (protein C, protein S, antithrombin III), 42 (22.3 %) had a "frozen pregnancy" or spontaneous abortions. In Study B. Lenz etal. present a much broader spectrum of pregnancy complications and markers of thrombophilia [17]. A total of 203 pregnant women were included. The first group included 101 women with a history of venous thromboembolic events (VTE) and / or pregnancy complications (mean age 30 years). The control group consisted of 102 healthy pregnant women (mean age 28 years). The first place among pregnancy complications was taken by spontaneous abortions (48.5 %), the second place was shared by preeclampsia, eclampsia, HELLP syndrome (Hemolysis, Elevated Liver enzymes and Low Platelets-hemolysis, increased activity of liver enzymes and thrombocytopenia), the third — fetal loss for a period of more than 20 weeks(33.7%). Laboratory tests included genetic polymorphisms (FVL 1691GA, FII G20210A, MTHFR 677C/T, PAI-1 4G/4G), protein C and S, antithrombin III, lupus anticoagulant, anti-cardiolipin antibodies, and anti-β2-glycoprotein-1. The results of the study showed that complications of pregnancy and a history of WTO are 10 times more associated with hereditary and acquired thrombophilia compared to the control group [17]. According to P. M. Manuccio and M. Franchini, Leiden and prothrombin mutations are the main genetic determinants of thrombophilia [18]. Substitution of adenine for guanine at position 1691 of exon 10 of the F5 gene results in substitution of arginine for glutamine at position 506 of the amino acid sequence and is called the Leiden mutation (FVL). This mutation is localized in a region of the gene encoding the cleavage site of plasma coagulation factor V, which determines its ability to cleave or degrade under the action of activated protein C. As a result of the mutation, coagulation factor V becomes resistant to activated protein C, while its procoagulant activity is preserved [19, 20]. Prothrombin mutation (G20210A) is a consequence of the replacement of guanine with adenine in position 20210 of the untranslated region of the prothrombin gene and leads to an increase in the level of prothrombin in plasma [21]. Many studies have demonstrated a high detection rate of FVL mutation and prothrombin G20210A mutation in various pregnancy complications. For example, O. Kocher etal. A study of 5,000 women with a history of various pregnancy complications (habitual miscarriage, preeclampsia, fetal growth retardation, placental abruption, preterm birth) revealed a significant association between the carrier of the FVL mutation and "frozen pregnancy" [22]. According to a meta-analysis by S. Sergietal., women with two or more spontaneous abortions in the anamnesis are more likely to be carriers of the FVL mutation in comparison with the control group of women (the criterion for inclusion in the control group is at least one normal birth in the anamnesis) [23]. 37 studies (5,400 women with two or more spontaneous abortions for unknown reasons in the anamnesis and 4,640 healthy women) included in the meta-analysis of H. Gao etal. showed a significantly high risk of habitual miscarriage in patients with heterozygous and homozygous mutations of prothrombin G20210A [24]. According to study D. Mierlaetal., habitual miscarriage is

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

associated with the carrier of two polymorphisms (homo-and heterozygous mutations FVL and FII G20210A) [25]. According to the data of E. A. Kalashnikova and S. N.Thestudy of the Russian population of women with habitual miscarriage and pregnancy pathology in the second and third trimesters revealed a statistically significant relationship between the FVL mutation and the above pathology [26]. Among the polymorphisms of thrombophilia genesinvolved in the pathogenesis of pregnancy pathology, a mutation of the methylenetetrahydrofolate reductase (MTHFR) gene plays an important role. Normally, MTHFR catalyzes the conversion of 5,10-methylenetetrahydrofolate to 5-methyltetrahydrofolate, which is the main form of folate and a donor of carboxyl groups necessary for remethylation of homocysteine to methionine. Substitution of cytosine for thymine at position 677 or substitution of cytosine for adenine at position 1298 of the MTHFR gene leads to the synthesis of defective thermolabile 5,10-methylenetetrahydrofolate reductase, whose enzymatic activity is significantly lower than normal. As a result, the folate-dependent cycle of homocysteine methylation is disrupted, which causes hyperhomocysteinemia, hyperhomocysteinuria, and hypomethioninemia. In addition to MTHFr methionine synthase (MTR), methionine synthase reductase (MTRR), Thus, it can be concluded that fibrinolysis in a physiologically occurring pregnancy is blocked from the endothelium and from the placenta. The PAI-1 gene mutation consists in the loss of the fifth guanine nucleotide from the promoter part of the gene (4G allele) encoding PAI-1, which increases the synthesis of this protein in homozygous carriers (4G/4G) by 30 % compared to the norm (5G/5G) [33, 35]. Based on this, in the presence of already weak fibrinolytic activity during pregnancy, the carrier of the mutant PAI-1 gene significantly increases the chances of thrombosis during pregnancy. A meta-analysis of 40 studies on thrombophilia gene mutations considers PAI - 1 mutation, namely 4G/4G and 4G/5G polymorphisms, as one of the risk factors for habitual miscarriage [29]. Of particular interest is the group of thrombophiliacaused by hyperaggregation. As is known, a platelet has a two-layer phospholipid membrane, which is embedded with glycoprotein receptors that interact with stimulators of adhesion and aggregation. Platelet glycoprotein receptors belong to various families: integrins, selectins, quadraspadins, glycoproteins, and cell immunoglobulin adhesion molecules. Among glycoprotein receptors, the most important are the fibrinogen receptor, which includes the α-and β-chains (GPIIb/IIIa, αIIbβ3), and the factor receptorVon Willebrand (GPIb-complex),or collagen recipe (GPIa/ IIa, α2, β1, VLA-2) [21-23]. Mutations in the genes encoding the alpha and beta chains фибриногеновогоof the platelet fibrinogen receptor can lead to increased sensitivity of the latter to specific ligands, which is accompanied by increased platelet aggregation and, consequently, an increased risk of thrombosis [23]. The most studied mutation of the gene encoding the β3 subunit of the fibrinogen receptor (integrin β3, or ITGB3). Mutation describedby P. J. Newman. [14]. At position 1565 of exon 2 of this gene, thymine is replaced by cytosine, which, in turn, leads to the replacement of leucine with proline in the 33rd region of the amino acid sequence. As a result, the ITGB3 mutation causes an increase inADPa-induced platelet in aggregation in vitro [2-5]. A mutation of the platelet integrin— a2 (ITGa2) collagen receptor is widely known. It is a heterodimerconsisting of two non-covalently bound subunits (α2 and β1). When cytosine is replaced by thymine at exon position 807 of the gene encoding the a2 subunit, the density of collagen receptors on the platelet surface increases, which increases their adhesion,while the receptor structure does not change [23,2-6]. Carriers of the TT polymorphism have a 10-fold increase in the expression of collagen receptors compared to

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

carriersof the physiological homozygote [17,1-8].

Little is known about the effect of platelet receptor mutations on pregnancy. For example, a mutation of the ITGB3 gene is often found in patients with fetal loss in early pregnancy. However, this statement is based on a single study [29]. There is no information about other polymorphisms of platelet receptor genes in relation to pathologically occurring pregnancy. Thrombophiliacaused by a lack of physiological anticoagulants is rare. They are accompanied by severe coagulation disorders. The effect of a lack of physiological anticoagulants on the course of pregnancy is presented below. Antithrombin III is a glycoprotein belonging to the group of serine protease inhibitors. Antithrombin III is synthesized by liver cells, and its activation occurs without the participation of vitamin K, in contrast to the activation of protein C [10]. Antithrombin III has two key functions. First of all, it is the inactivation of thrombin, clotting factors IXa, Xa, XIa and XII. It should be noted that heparin is able to change the spatial shape of the antithrombin III molecule, thereby increasing the activity of the latter hundreds of times. The second function follows from the first. Since thrombin and factor Xa are activators of the acute inflammatory response, activated antithrombin III is also an anti-inflammatory agent. In particular, thrombin induces the release of interleukins (IL-6 and IL-8) from endothelial cells and monocytes. Xa-factor interacts with endothelial cells and stimulates the release of cytokines. Thus, activated antithrombin III is also an anti-inflammatory agent [21]. Antithrombin III deficiency can be hereditary or acquired. There are two types of hereditary antithrombin deficiency: type I (quantitative) and type II (qualitative). In the first case, it is the complete absence of antithrombin III. In the population, it occurs only in a heterozygous state, since the carrier of type Ideficiency .

Aanticoagulant therapy during pregnancy Previously , anticoagulant therapy was performed in pregnant women with artificial heart valves and / or previous thrombosis in order to prevent WTO. Anticoagulant therapy as a method of treating fetal loss syndrome became relevant in the last decade of the XX century [5]. However, the range of drugs that are relatively safe for use during pregnancy is very narrow. The use of vitamin K antagonists, in particular coumarin derivatives, during pregnancy is unacceptable due to the proven risk of developing "warfarin embryopathy". Currently, heparin and its derivatives (unfractionated heparins [UFH] and low-molecular-weight heparins [LMWH]) are considered the safest and most effective group of drugs that are successfully used in pregnant women. Neither UFH nor LMWH have a teratogenic effect on the fetus. Due to some pharmacological features, LMWH is used more often. Unlike UFH, LMWH have a lower affinity for binding to plasma proteins, endothelial cells, and macrophages, which significantly increases their bioavailability. The bioavailability of NMH after IV or subcutaneous administration is 87-98 %, while the bioavailability of UFH after subcutaneous administration is 15-25 %, the biological half-life of NMH is 2 times longer than that of UFH. When administered subcutaneously, LMWH has a more predictable dose-dependent response, and LMWH is less likely to cause heparin-induced thrombocytopenia. It is possible to administer drugs once or twice a day [28, 29]. The range of possibilities of NMH is not limited to anticoagulant properties. NMH facilitates implantation of the fetal egg into the endometrium due to its cytoprotective effect on trophoblast cells, stimulation of its proliferation and differentiation, and increased secretion of chorionic gonadotropin [20]. However, despite the clear benefits, LMWH has been shown by some multicenter randomized trials to be ineffective in fetal loss syndrome. One of the first such studies is TIPPS. According to the results, the use of LMWH (dalteparin) does not reduce the frequency of pregnancy complications associated with

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

placental insufficiency, the frequency of fetal loss and OBE in women with hereditary thrombophilia [11]. The SPIN (Scottish Pregnancy Intervention) study included a total of 294 women, 147 of whom received enoxaparin sodium 40 mg subcutaneous injection and 75 mg aspirin, the rest were actively followed up without therapy. Fetal loss was similar in the groups of women with and without therapy (22% and 20%, respectively). It is important to note that the protocol specified strict inclusion criteria, namely pregnant women without antiphospholipid syndrome, with two or more episodes of fetal loss for up to 24 weeks. in the anamnesis, without endocrine, chromosomal, anatomical and immunological causes of miscarriage [19]. The same results were obtained in 2 other randomized multicenter trials.

LITERATURE

1. Lipets EN, Ataullakhanov FI. Global assays of hemostasis in the diagnostics of hypercoagulation and evaluation of thrombosis Risk. Thrombosis J. 2015;13(1):4. doi: 10.1186/s12959-015-0038-0.
2. Hellgren M. Hemostasis during normal pregnancy and puerperium. SemThrombHemost. 2003;29(2):125–30. doi: 10.1055/s-2003-38897.
3. Kozlov A. A., Natrus L. V., Chernovol P. A.et al. Laboratory diagnostics системы of the hemostatic system. Moscow: Litterra, 2011. 136 p.[Kozlov AA, Natrus LV, Chernovol PA, et al. Laboratornayadiagnostikasistemygemostaza. (Laboratory diagnostics of hemostasis system.) Moscow: Litterra Publ.; 2011. 136 p. (In Russ)] 4. Heit JA. Thrombophilia: Common Questions on Laboratory Assessment and Management Hematology. Hematology. 2007(1):127–35. doi: 10.1182/asheducation-2007.1.127.
4. Armstrong EM, Bellone JM, Hornsby LB, et al. Acquired Thrombophilia. J Pharm Pract. 2014;27(3):234–42. doi: 10.1177/0897190014530424.
5. Kupferminc MJ, Eldor A, Steinman N, et al. Increased frequency of genetic thrombophilia in women with complication of pregnancy. N Engl J Med. 1999;340(1):9–13. doi: 10.1056/NEJM199901073400102.
6. Khalafallah AA, Ibraheem AR, Teo QY, et al. Review of management and outcomes in women with thrombophilia risk during pregnancy at a single institution. Obstet Gynecol. 2014;2014:1–6. doi: 10.1155/2014/381826.
7. Patel EM, Goodnight WH, James AH, Grotegut CA. Temporal trends in maternal medical conditions and stillbirth. Am J Obstet Gynecol. 2015;212(5):673, e1–11. doi: 10.1016/j.ajog.2014.12.021.
8. Nutfilloevich K. O. LIPID METABOLISM DISORDERS IN CHRONIC ALCOHOL INTOXICATION //Ижтимоий Фанларда Инновация онлайн илмий журнали. – 2022. – Т. 2. – №. 1. – С. 187-190.
9. Nutfilloevich K. O. ALCOHOL ABUSE AMONG GASTROENTEROLOGICAL PATIENTS PROFILE INFORMATION // Ижтимоий Фанларда Инновация онлайн илмий журнали – 2022. – Т. 2. – №. 1. – С. 94-100.
10. Navruzov R. R. Morphofunctional Forms of Lymphoid Structures the Index of the Colon is Normal and When Exposed to A Biostimulator Against the Background of Radiation Sickness //Middle European Scientific Bulletin. – 2021. – Т. 16.

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

11. Navruzov R. R. Morphofunctional Lymphoid Structures of the Colon in Normal and Under the Influence of Radiation Sickness //" ONLINE-CONFERENCES" PLATFORM. – 2021. – С. 63-64.
12. Mashrabovna I. I. Relapses of Differentiated Thyroid Cancer //European Journal of Life Safety and Stability (2660-9630). – 2021. – Т. 7. – С. 70-75.
13. Искандарова И. М. и др. Рецидивы дифференцированного рака щитовидной железы //БарқарорликваЕтакчиТадқиқотлар онлайн илмий журнали. – 2021. – Т. 1. – №. 6. – С. 134-150.
14. Мелибоева Ш. Ш., БолтаевМ. М., Шарипова Э. М. Сравнительная Эффективность Препарата «Нодинорм» При Комплексном Лечении Фиброзно – Кистозной Мастопатии //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. – 2021. – С. 114-119.
15. Meliboyeva S. et al. Quantitative determination thymol in syrup" Kalinol plus" of the HPLC method. – 2016.
16. Мухаммедова З. Р., Болтаев М. М. «TINCTURAMORUS»-КЛАДЕЗЬ ВИТАМИНОВ И МИНЕРАЛЬНЫХ ВЕЩЕСТВ АКТУАЛЬНАЯ В ПЕРИОД ПАНДЕМИИ COVID-19 //Новый день в медицине. – 2020. – №. 4. – С. 726-730.
17. Бондарева И. В., Бондарєва І. В., Болтаев М. Исследование мотивации на эффективность работы специалистов фармации. – 2019.
18. Харибова Е. А., Тешаев Ш. Ж. Морфофункциональные особенности тканевой организации энтероэндокринных клеток в возрастном аспекте //Проблемы биологии и медицины. – 2020. – №. 2. – С. 168-173.
19. Харибова Е. А. Особенности морфологии нейрональных ансамблей в тройничном узле человека //Морфология. – 2011. – Т. 140. – №. 5. – С. 123-124.
20. Khodzhaeva D. I. Changes in the Vertebral Column and Thoracic Spinecells after Postponement of Mastoectomy //International Journal of Innovative Analyses and Emerging Technology. – 2021. – Т. 1. – №. 4. – С. 109-113.
21. Ilkhomovna K. D. Modern Look of Facial Skin Cancer //Барқарорликва Етакчи Тадқиқотлар онлайн илмий журнали. – 2021. – Т. 1. – №. 1. – С. 85-89.
22. Ilkhomovna K. D. Morphological Features of Tumor in Different Treatment Options for Patients with Locally Advanced Breast Cancer //International Journal of Innovative Analyses and Emerging Technology. – 2021. – Т. 1. – №. 2. – С. 4-5.
23. Khodjayeva D. I. MORPHOLOGY OF IDIOPATHIC SCOLIOSIS BASED ON SEGMENT BY SEGMENT ASSESSMENT OF SPINAL COLUMN DEFORMITY //Scientific progress. – 2022. – Т. 3. – №. 1. – С. 208-215.
24. Ходжаева Д. И. СОВРЕМЕННЫЕ ВОЗМОЖНОСТИ УЛЬТРАЗВУКОВОЙ ДИАГНОСТИКИ ПРИ РАКЕ КОЖИ ЛИЦА //Жизнеобеспечение при критических состояниях. – 2019. – С. 111-112.

International Journal of Culture and Modernity
ISSN 2697-2131, **Volume 13**
https://ijcm.academicjournal.io/index.php/ijcm

25. Aslonov S. G. et al. Modern Approaches to Oropharyngeal Cancer Therapy //International Journal of Discoveries and Innovations in Applied Sciences. – 2021. – Т. 1. – №. 3. – С. 38-39.
26. Khodjaeva D. I. MAGNETIC-RESONANCE IMAGING IN THE DIAGNOSIS OF BREAST CANCER AND ITS METASTASIS TO THE SPINAL COLUMN //Scientific progress. – 2021. – Т. 2. – №. 6. – С. 540-547.
27. Тиллоева Ш. Ш. и др. Estimation of the condition of the cardiorespiratory system of patients with the concilation of bronchial asthma and arterial hypertension, effects of complex therapy //Новыйдень в медицине. – 2020. – №. 2. – С. 227-230.
28. Tillaeva S. S. et al. Currency and diagnostic criteria of rheumatoid arthritis in patients of senior age groups //Asian Journal of Multidimensional Research (AJMR). – 2018. – Т. 7. – №. 11. – С. 184-188.
29. Тиллоева Ш. Ш. и др. Estimation of the condition of the cardiorespiratory system of patients with the concilation of bronchial asthma and arterial hypertension, effects of complex therapy //Новыйдень в медицине. – 2020. – №. 2. – С. 227-230.
30. Тиллоева Ш. Ш., Давлатов С. С. Эффективность И Переносимость Локсидола В Лечение Ревматоидного Артрита У Пациентов Старших Возрастных Групп //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. – 2021. – С. 432-436.
31. Тиллоева Ш. Ш., Бозоров А. С., Раджабов Р. К. Трансфузиологии. НовыеРекомендацииПоПереливаниюЭритроцитов //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. – 2021. – С. 418-422.
32. Султонова Н. А. ИНДИВИДУАЛЬНЫЙ ПОДХОД К ПРОГНОЗИРОВАНИИЮ САМОПРОИЗВОЛЬНЫХ ВЫКИДЫШЕЙ У ЖЕНЩИН ДО 24 НЕДЕЛЬ ГЕСТАЦИИ //Современные вызовы для медицинского образования и их решения. – 2021. – С. 406.
33. Sultonova N. A. Treatment of hypercoagulable conditions in women with misscarriage in early gestation //Asian Journal of Multidimensional Research (AJMR). – 2020. – Т. 9. – №. 12. – С. 13-16.
34. Адизова Д. Р., Адизова С. Р., Иброхимова Д. Б. Место депрессивных расстройств у пациенток с хронической сердечной недостаточностью //Биология и интегративная медицина. – 2021. – №. 4 (51). – С. 79-90.
35. Adizova D. R. et al. Rational approach to standard therapy //Central Asian Journal of Pediatrics. – 2019. – Т. 2. – №. 2. – С. 49-53.