

THE SYNDROME OF UNFORTUNATE CONSEQUENCES

HELLPA

Asian International University

Temirova Dilnoza Olimjonovna

Annotation. *HELLP syndrome includes hemolysis (H-hemolysis), increased activity of liver enzymes (el - elevated liver enzymes) and a decrease in platelet count (Ip - low playlet count), usually manifests itself as a complication of preeclampsia, but can also develop independently. HELLP syndrome develops with a frequency of 1-6 cases per 1000 pregnancies and in 4-12% of patients with severe preeclampsia. Preeclampsia is characterized hypertension, proteinuria and edema in the second or third trimester of pregnancy and develops in 5-7% of pregnant women. In 70% of cases, HELLP syndrome develops before childbirth, in 30% - in the postpartum period.*

Keywords: *HELLP syndrome, eclampsia, antiphospholipid syndrome, hemolysis, thrombocytopenia.*

HELLP syndrome in pregnant women with gestosis is found in 0,5–1% of cases, characterized by high maternal and perinatal mortality. The pathophysiology of this syndrome has not been sufficiently studied. Endothelial dysfunction is considered to be a key link in the pathogenesis. Damage to the endothelium and inflammatory reaction leads to the development of coagulopathy, increased platelet consumption and the formation of platelet-fibrin microthrombus.

Every year, from 550 to 600 thousand women die from causes associated with pregnancy and childbirth.

One of these pathological conditions is the so-called HELLP syndrome, described by L. Weinstein in 1982 [1], which is considered as one of the forms of preeclampsia and eclampsia, accounting for 10-12% of maternal mortality [2]. The term is an abbreviation of English words that describe the main

manifestations of this syndrome - Hemolysis, Elevated Liver enzymes, and Low Platelets.

The syndrome can develop both during pregnancy (70% of cases) and after childbirth (30%) [3]. In typical cases, it occurs in multiparous women with a burdened obstetric history over the age of 25 years. Available unrecognized obstetric sepsis [4] and some other pathological conditions.

Characteristic early clinical manifestations of the syndrome are nausea and vomiting (86%), pain in the epigastric region (86%) and right hypochondrium, severe swelling (67%) [4]. Pain in the epigastric region can lead to erroneous diagnosis of acute surgical pathology.

The key criteria for diagnosing HELLP syndrome are the presence of hemolytic anemia, lactate dehydrogenase activity in the blood serum more than 600 U/L (as an indicator of hemolysis), AST >70 U/L and blood platelet content less than $100 \cdot 10^9/L$ [5], although unexpectedly, clinical symptoms such as headache, visual disturbances, epigastric pain, nausea and vomiting, turn out to be more accurate criteria for the unfavorable outcome of the syndrome than laboratory parameters [6].

The pathogenesis of HELLP syndrome is not well understood. We can definitely say that there is a genetic predisposition to it, as evidenced by both its reoccurrence in the same woman during the next pregnancy and family history.

There are 178 genes that, according to the literature, are related to the development of preeclampsia and HELLP syndrome [7]. It is believed that the occurrence of the syndrome is based on an autoimmune reaction, as evidenced by the presence of antiplatelet, antiendothelial and other autoantibodies in the serum of such patients [4]. A number of authors, not without reason, draw a parallel between pregnancy and allotransplantation.

Since trophoblast invasion brings fetal tissue into contact with maternal immunocompetent cells, it is accompanied by an appropriate immune response to fetal soluble HLA antigen (sHLA-DR). Due to the fact that this antigen is capable of inducing apoptosis, even small concentrations of it can affect the immune

system of the maternal body and the immune balance between it and the fetal body [8]

These changes occur in the first trimester of pregnancy [9].

With HELLP syndrome, high concentrations of the sHLA-DR antigen are always detected in the blood of pregnant women, and therefore its presence can be considered an acute reaction of transplant (fetal) rejection. Moreover, detection of this antigen in the blood of pregnant women with preeclampsia can be used to determine their risk of developing HELLP syndrome [8].

Differential diagnosis of HELLP syndrome is very difficult. Diseases with which it is necessary to differentiate HELLP syndrome include [11]:

1. Placental abruption.
2. Acute fatty hepatosis of pregnant women.
3. Anemia and thrombocytopenia.
4. Antiphospholipid syndrome in combination with pregnancy.
5. Eclampsia.
6. Hemolytic anemia.
7. Hemolytic Uremic syndrome.
8. Vomiting of pregnant women..
9. Hypertension and the occurrence of concomitant pregnancy.
10. Nephrolithiasis.
11. Peptic ulcer.
12. Preeclampsia.
13. Thrombocytopenia in pregnant women.
14. Thrombotic thrombocytopenic purpura.
15. Viral hepatitis.
16. Cytomegalovirus infection and infectious mononucleosis [1].

Cocaine addiction [1].

Immediate delivery is indicated for women with HELLP syndrome after 34 weeks' gestation. During labor and for 24 hours after delivery, patients should receive intravenous magnesium sulfate to prevent eclampsia, usually given as a loading

dose of 4 grams followed by 2 g/hour. If the patient is already in labor, vaginal delivery is possible in the absence of signs of fetal distress or disseminated intravascular coagulation.

For any symptom of the development of multiple organ dysfunction, renal failure, or placental abruption, delivery should be performed immediately, usually by cesarean section. Induction of labor is not indicated for these patients, as this process can take from several hours to several days and pose a threat to the mother and fetus. Platelets are typically transfused if the platelet count is less than 20,000/mm³, or if a caesarean section is necessary if the platelet count is less than 50,000/mm³, or if there is any significant bleeding. Multiple platelet transfusions are usually not required in the absence of significant bleeding, as delivery will eventually resolve the thrombocytopenia

Forecast. HELLP syndrome is associated with an increased risk of maternal and fetal morbidity and mortality. The risk of maternal mortality is approximately 1%. HELLP syndrome is associated with multiple maternal complications, including pulmonary edema, acute renal failure, disseminated intravascular coagulation, placental abruption, liver hemorrhage or liver failure, and acute respiratory distress- syndrome and stroke. Patients with HELLP syndrome also have a higher risk of blood transfusions.

HELLP syndrome not only increases maternal morbidity and mortality, but also fetal morbidity and mortality. The incidence of perinatal mortality ranges from 7.4 to 20.4% and is largely dependent on gestational age and any additional complicating factors during pregnancy or childbirth.

The highest rates of fetal morbidity and mortality associated with early gestation (<28 weeks) are no higher than the rates of morbidity and mortality for fetuses of the same gestational age in women diagnosed with preeclampsia only.

LITERATURE

1. Temirova, D. O. (2024). Diagnosis of Cervical Erosion. *American Journal of Bioscience and Clinical Integrity*, 1(11), 84-89.

2. ZHUMAeva, D. (2024). OPTIMIZATION OF METHODS OF DIAGNOSTICS OF VARIOUS FORMS OF ENDOMETRIOSIS IN WOMEN OF REPRODUCTIVE AGE. *Valeology: International Journal of Medical Anthropology and Bioethics (2995-4924)*, 2(9), 120-125.
3. Абдукаримов, У. Г., Ихтиярова, Г. А., & Джумаева, Д. Р. (2024). Скрининг Рака Молочной Железы: Настоящее И Будущее. Обзор Литературы. *Research Journal of Trauma and Disability Studies*, 3(2), 144-148.
4. Хикматова, Н. И., & Жумаева, Д. Р. (2023). Инвазивные И Неинвазивные Методы Диагностики Заболевания Молочных Желез. *Central Asian Journal of Medical and Natural Science*, 4(6), 652-658.
5. D.R.Zhumaeva, D.R.Zhumaeva (2024) *The State of the Vaginal Microbiocenosis, Bacterial Vaginosis and its Treatment Options*. American Journal of Bioscience and Clinical Integrity, 1 (11). pp. 78-83. ISSN 2997-7347
6. ERGASHEVA, G. T. (2024). OBESITY AND OVARIAN INSUFFICIENCY. *Valeology: International Journal of Medical Anthropology and Bioethics*, 2(09), 106-111.
7. Ergasheva, G. T. (2024). Modern Methods in the Diagnosis of Autoimmune Thyroiditis. *American Journal of Bioscience and Clinical Integrity*, 1(10), 43-50.
8. Tokhirovna, E. G. (2024). COEXISTENCE OF CARDIOVASCULAR DISEASES IN PATIENTS WITH TYPE 2 DIABETES. *TADQIQOTLAR. UZ*, 40(3), 55-62.
9. Toxirovna, E. G. (2024). DETERMINATION AND STUDY OF GLYCEMIA IN PATIENTS WITH TYPE 2 DIABETES MELLITUS WITH COMORBID DISEASES. *TADQIQOTLAR. UZ*, 40(3), 71-77.
10. Toxirovna, E. G. (2024). XOMILADORLIKDA QANDLI DIABET KELITIRIB CHIQRUVCHI XAVF OMILLARINI ERTA ANIQLASH USULLARI. *TADQIQOTLAR. UZ*, 40(3), 63-70.

11. Toxirovna, E. G. (2024). QANDLI DIABET 2-TIP VA KOMORBID KASALLIKLARI BO'LGAN BEMORLARDA GLIKEMIK NAZORAT. *TADQIQOTLAR. UZ*, 40(3), 48-54.
12. Tokhirovna, E. G. (2024). MECHANISM OF ACTION OF METFORMIN (BIGUANIDE) IN TYPE 2 DIABETES. *JOURNAL OF HEALTHCARE AND LIFE-SCIENCE RESEARCH*, 3(5), 210-216.
13. Tokhirovna, E. G. (2024). THE ROLE OF METFORMIN (GLIFORMIN) IN THE TREATMENT OF PATIENTS WITH TYPE 2 DIABETES MELLITUS. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, 4(4), 171-177.
14. Эргашева, Г. Т. (2024). Эффект Применения Бигуанида При Сахарным Диабетом 2 Типа И Covid-19. *Research Journal of Trauma and Disability Studies*, 3(3), 55-61.
15. Toxirovna, E. G. (2024). QANDLI DIABET 2 TUR VA YURAK QON TOMIR KASALLIKLARINING BEMOLARDA BIRGALIKDA KECISHI. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(7), 202-209.
16. Мухиддинова, Х. С. (2024). РАЗВИТИЕ ЯИЧНИКОВ, ИХ МОРФОЛОГИЯ И ОСОБЕННОСТИ ФУНКЦИОНИРОВАНИЕ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 134-141.
17. Мухитдинова, Х. С. (2024). СОВРЕМЕННЫЕ ВЗГЛЯДЫ НА РАЗВИТИЕ БАКТЕРИАЛЬНОГО ВАГИНОЗА У ЖЕНЩИН ФЕРТИЛЬНОГО ВОЗРАСТА. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 97-103.
18. Мухитдинова, Х. С. (2024). ЗАБОЛЕВАЕМОСТЬ СПИДОМ, МОРФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ БОЛЕЗНИ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 104-112.

19. Samikhovna, M. K. (2024). Clinical and Morphological Aspects of the Functioning of the Lymphatic System. *International Journal of Alternative and Contemporary Therapy*, 2(9), 101-106.
20. Samikhovna, M. K. (2024). MODERN VIEWS ON ACROMEGALY AND IMMUNOMORPHOLOGY OF THIS DISEASE. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, 4(10), 179-183.
21. Saloxiddinovna, X. Y. (2024). Modern Views on the Effects of the Use of Cholecalciferol on the General Condition of the Bod. *JOURNAL OF HEALTHCARE AND LIFE-SCIENCE RESEARCH*, 3(5), 79-85.
22. Халимова, Ю. С., & Хафизова, М. Н. (2024). МОРФО-ФУНКЦИОНАЛЬНЫЕ И КЛИНИЧЕСКИЕ АСПЕКТЫ СТРОЕНИЯ И РАЗВИТИЯ ЯИЧНИКОВ (ОБЗОР ЛИТЕРАТУРЫ). *TADQIQOTLAR. UZ*, 40(5), 188-198.
23. Халимова, Ю. С. (2024). Морфологические Особенности Поражения Печени У Пациентов С Синдромом Мэллори-Вейса. *Journal of Science in Medicine and Life*, 2(6), 166-172.
24. Halimova, Y. S. (2024). Morphology of the Testes in the Detection of Infertility. *Journal of Science in Medicine and Life*, 2(6), 83-88.
25. Халимова, Ю. С., & Хафизова, М. Н. (2024). ОСОБЕННОСТИ СОЗРЕВАНИЕ И ФУНКЦИОНИРОВАНИЕ ЯИЧНИКОВ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 188-194.
26. Хафизова, М. Н., & Халимова, Ю. С. (2024). МОТИВАЦИОННЫЕ МЕТОДЫ ПРИ ОБУЧЕНИИ ЛАТЫНИ И МЕДИЦИНСКОЙ ТЕРМИНОЛОГИИ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 165-171.
27. Хафизова, М. Н., & Халимова, Ю. С. (2024). ИСПОЛЬЗОВАНИЕ ЧАСТОТНЫХ ОТРЕЗКОВ В НАИМЕНОВАНИЯХ ЛЕКАРСТВЕННЫХ ПРЕПАРАТОВ В ФАРМАЦЕВТИКЕ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 172-178.

28. Saloxiddinova, X. Y., & Ne'matillaeva, X. M. (2024). FEATURES OF THE STRUCTURE OF THE REPRODUCTIVE ORGANS OF THE FEMALE BODY. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 179-183.
29. Халимова, Ю. С., & Хафизова, М. Н. (2024). КЛИНИЧЕСКИЕ АСПЕКТЫ ЛИЦ ЗЛОУПОТРЕБЛЯЮЩЕЕСЯ ЭНЕРГЕТИЧЕСКИМИ НАПИТКАМИ. *TADQIQOTLAR. UZ*, 40(5), 199-207.
30. Халимова, Ю. С., & Хафизова, М. Н. (2024). КЛИНИЧЕСКИЕ ОСОБЕННОСТИ ЗАБОЛЕВАНИЙ ВНУТРЕННИХ ОРГАНОВ У ЛИЦ, СТРАДАЮЩИХ АЛКОГОЛЬНОЙ ЗАВИСИМОСТЬЮ. *TADQIQOTLAR. UZ*, 40(5), 240-250.
31. Халимова, Ю. С., & Хафизова, М. Н. (2024). кафедра Клинических наук Азиатский международный университет Бухара, Узбекистан. *Modern education and development*, 10(1), 60-75.
32. Халимова, Ю. С., & Хафизова, М. Н. (2024). МОРФО-ФУНКЦИОНАЛЬНЫЕ И КЛИНИЧЕСКИЕ АСПЕКТЫ ФОРМИРОВАНИЯ КОЖНЫХ ПОКРОВОВ. *Modern education and development*, 10(1), 76-90.
33. Nematilloeva, K. M., & Salokhiddinova, K. Y. (2024). IMPORTANT FEATURES IN THE FORMATION OF DEGREE OF COMPARISON OF ADJECTIVES IN LATIN. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 150-157.
34. KHALIMOVA, Y. S. (2024). MORPHOFUNCTIONAL CHARACTERISTICS OF TESTICULAR AND OVARIAN TISSUES OF ANIMALS IN THE AGE ASPECT. *Valeology: International Journal of Medical Anthropology and Bioethics*, 2(9), 100-105.
35. Salokhiddinova, K. Y., Saifiloevich, S. B., Barnoevich, K. I., & Hikmatov, A. S. (2024). THE INCIDENCE OF AIDS, THE DEFINITION AND CAUSES OF THE DISEASE. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 55(2), 195-205.

36. Salokhiddinova, K. Y. (2024). IMMUNOLOGICAL CRITERIA OF REPRODUCTION AND VIABILITY OF FEMALE RAT OFFSPRING UNDER THE INFLUENCE OF ETHANOL. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, 4(10), 200-205.
37. Nematilloeva, X. M., & Salokhiddinova, X. Y. (2024). TIBBIYOT FANLARIDA MOTIVATSIYON METODLARI. *Modern education and development*, 16(7), 31-42.
38. Nematilloeva, X. M., & Salokhiddinova, X. Y. (2024). TURLI TIBBIY TERMINLARNING YASALISH USULLARI. *Modern education and development*, 16(7), 68-78.
39. Nematilloeva, X. M., & Salokhiddinova, X. Y. (2024). TIBBIY TERMINOLOGIYADA TARJIMA MASALALARI. *Modern education and development*, 16(7), 43-56.
40. Nematilloeva, X. M., & Salokhiddinova, X. Y. (2024). TIBBIY TERMINOLOGIYADA TARJIMA MASALALARI. *Modern education and development*, 16(7), 43-56.
41. Nematilloeva, X. M., & Salokhiddinova, K. Y. (2024). NUMERALS IN THE LATIN. *Modern education and development*, 16(7), 57-67.
42. Khalimova, Y. S. (2024). Features of Sperm Development: Spermatogenesis and Fertilization. *American Journal of Bioscience and Clinical Integrity*, 1(11), 90-98.
43. Sharapova, N. (2023). ARTERIAL GIPERTENZIYA VA SEMIZLIK KASALLIKLARINING O'ZARO BOG'LIQLIK SABABLARI VA METABOLIK SINDROMLAR. *Центральноазиатский журнал образования и инноваций*, 2(11 Part 2), 174-179.
44. Шаропова, Н. (2023). КЕКСА ВА ҚАРИ ЁШЛИ АЁЛЛАРДА БЕЛ АЙЛАНАСИНИНГ ЖИСМОНИЙ ФАОЛЛИК БИЛАН БОҒЛИҚЛИГИ ҚИЁСИЙ ТАҲЛИЛИ. *Центральноазиатский журнал образования и инноваций*, 2(12 Part 2), 127-133.

45. Erkinjonovna, S. N. (2023). DIABETES MELLITUS IN PREGNANT WOMEN. *Best Journal of Innovation in Science, Research and Development*, 110-116.
46. Erkinjonovna, S. N. (2024). CHARACTERISTICS OF DENTAL PROSTHESES WEARING IN PATIENTS WITH TYPE 2 DIABETES ACCORDING TO KIDNEY IMPAIRMENT. *PEDAGOG*, 7(1), 84-88.
47. Erkinjonovna, S. N. (2024). THE BEST WAYS TO CONTROL HIGH BLOOD PRESSURE WITHOUT MEDICATION. *Journal of new century innovations*, 47(2), 175-183.
48. Halimovna, M. M. (2021). The Role of Features of Linguocountrylearning in Teaching English. *Central Asian Journal of Literature, Philosophy and Culture*, 2(10), 64-68.
49. MAKHMUROVA, M. K. (2021, March). GRAMMATICAL CATEGORIES IN GERMAN AND UZBEK. In *E-Conference Globe* (pp. 118-123).
50. Махмурова, М. Х. (2021). МЕТАФОРЛАР НУТҚ ШАКЛИ СИФАТИДА. *МЕЖДУНАРОДНЫЙ ЖУРНАЛ ИСКУССТВО СЛОВА*, 4(1-1).
51. A'zamovna, A. R., Halimovna, M. M., & Bakhtiyorovna, N. M. (2019). The matter of equivalence in English and Uzbek proverbs. *Test Engineering and Management*, 81(11-12), 1632-1637.
52. Makhmurova, M. H. (2024). Applications of the Latin Language in Speech. *American Journal of Alternative Education*, 1(8), 59-63.
53. Махмурова, М. Х. (2024). Теоретико-Литературное Развитие Учащихся При Изучении Басен. *Miasto Przyszłości*, 54, 1032-1035.
54. Makhmurova, M. (2021). ЎҚУВЧИ БИЛИШ ФАОЛИЯТИНИ ФАОЛЛАШТИРИШДА ИЖОДИЙ ГРАФИК МАСАЛАЛАРНИ Auto CAD ДАСТУРИ АСОСИДА ЕЧИШ. *ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu.uz)*, 3(3).

55. BABAYEVA, V. T., MAKHMUROVA, M. H., & NAZAROVA, G. K. (2021, March). Studying language as the second language learners. In *E-Conference Globe* (pp. 89-94).
56. Salokhiddinovna, X. Y. (2023). Anemia of Chronic Diseases. *Research Journal of Trauma and Disability Studies*, 2(12), 364-372.
57. Salokhiddinovna, X. Y. (2023). MALLORY WEISS SYNDROME IN DIFFUSE LIVER LESIONS. *Journal of Science in Medicine and Life*, 1(4), 11-15.
58. Salohiddinovna, X. Y. (2023). SURUNKALI KASALLIKLARDA UCHRAYDIGAN ANEMIYALAR MORFO-FUNKSIONAL XUSUSIYATLARI. *Ta'lim innovatsiyasi va integratsiyasi*, 10(3), 180-188.
59. Халимова, Ю. С. (2024). КЛИНИКО-МОРФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ВИТАМИНА D В ФОРМИРОВАНИЕ ПРОТИВОИНФЕКЦИОННОГО ИММУНИТА. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 36(3), 86-94.
60. Saloxiddinovna, X. Y. (2024). CLINICAL FEATURES OF VITAMIN D EFFECTS ON BONE METABOLISM. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 36(5), 90-99.
61. Saloxiddinovna, X. Y. (2024). CLINICAL AND MORPHOLOGICAL ASPECTS OF AUTOIMMUNE THYROIDITIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 36(5), 100-108.
62. Saloxiddinovna, X. Y. (2024). MORPHOFUNCTIONAL FEATURES BLOOD MORPHOLOGY IN AGE-RELATED CHANGES. *Лучшие интеллектуальные исследования*, 14(4), 146-158.
63. Saloxiddinovna, X. Y. (2024). CLINICAL MORPHOLOGICAL CRITERIA OF LEUKOCYTES. *Лучшие интеллектуальные исследования*, 14(4), 159-167.