


PROCEEDINGS OF THE
V INTERNATIONAL SCIENTIFIC
AND THEORETICAL CONFERENCE

SCIENTIFIC FORUM:
THEORY AND PRACTICE
OF RESEARCH

05.04.2024

VALENCIA
KINGDOM OF SPAIN

UDC 082:001
S 40

 <https://doi.org/10.36074/scientia-05.04.2024>




Chairman of the Organizing Committee: Goldenblat M.

Responsible for the layout: Bilous T.

Responsible designer: Bondarenko I.

S 40 **Scientific forum: theory and practice of research:** collection of scientific papers «SCIENTIA» with Proceedings of the V International Scientific and Theoretical Conference, April 5, 2024. Valencia, Kingdom of Spain: International Center of Scientific Research.

ISBN 979-8-88955-787-6 (series)  Bowker

DOI 10.36074/scientia-05.04.2024

Papers of participants of the V International Multidisciplinary Scientific and Theoretical Conference «Scientific forum: theory and practice of research», held on April 5, 2024 in Valencia are presented in the collection of scientific papers.

The conference is included in the Academic Research Index ReserchBib International catalog of scientific conferences and registered for holding on the territory of Ukraine in UKRISTEI (Certificate № 74 dated January 5th, 2024).



Conference proceedings are publicly available under terms of the Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0) at the www.previous.scientia.report.

UDC 082:001

© Participants of the conference, 2024

© Collection of scientific papers «SCIENTIA», 2024

© NGO International Center of Scientific Research, 2024

ISBN 979-8-88955-787-6

CYTOLOGICAL EXAMINATION OF HEALING PROCESS OF LATERAL DEFECTS CREATED DURING PALATOPLASTY IN CLEFT PATIENTS Shaeva R.G., Shomurodov K.E.	82
DYNAMICS OF INDICATORS OF ENDOTHELIAL DYSFUNCTION IN THE TREATMENT OF CHRONIC KIDNEY DISEASE OF VARIOUS ETIOLOGIES Shukurova L.H., Daminova L.T., Rashidova A.S.	84
LATERAL WINDOW ACCESS WITH ELEVATION OF THE MAXILLARY SINUS MEMBRANE FOR DENTAL IMPLANT PLACEMENT IN THE ATROPHIED EDENTULOUS ALVEOLAR RIDGE Rafikov Komolddin Muhiddin o'g'li	86
PREGNANCY LOSS IN ANAMNESIS: SHORT AND LONG TERM CONSEQUENCES FOR WOMEN'S HEALTH Scientific research group: Siusiuka V., Belenichev I., Deinichenko O., Soloviova N.	88
REGIONAL ALTERATION OF ASTROGLIAL GFAP IN THE BRAIN OF SEPTIC PATIENTS WITH SEPSIS-ASSOCIATED ENCEPHALOPATHY: POSTMORTEM STUDY Shuliatnikova T.V., Tumanskyi V.O., Tumanska L.M.	92
SURGICAL TREATMENT ZYGOMATIC-ORBITAL COMPLEX WITH INTEGRATION OF THE ARTIFICIAL INTELLIGENCE Iminov K.O.	94
АДЕНОКАРЦИНОМА ПЕРЕДМІХУРОВОЇ ЗАЛОЗИ: ОСОБЛИВОСТІ ДІАГНОСТИКИ ТА ЛІКУВАННЯ Х'юз З., Приймак Д.В.	96
ВСТАНОВЛЕННЯ РІВНЯ ОБІЗНАНОСТІ ЛЮДЕЙ ЩОДО ПРОФІЛАКТИЧНИХ ОГЛЯДІВ Чепурна В.Д., Карташева Д.М.	98
ДІЯ НЕЙРОМЕДІАТОРІВ НА СЛИННІ ЗАЛОЗИ Булах В.Р., Єна М.С.	100
ДОСЛІДЖЕННЯ ВПЛИВУ СТРЕСУ НА МЕНСТРУАЛЬНИЙ ЦИКЛ ПІД ЧАС ВІЙНИ Герасименко О.І., Негода Ю.С., Онацька М.І.	105

SECTION 13.

PHYSICAL CULTURE, SPORTS AND PHYSICAL THERAPY

ЕФЕКТИВНІСТЬ ФІЗИЧНОЇ РЕАБІЛІТАЦІЇ СПОРТСМЕНІВ З ВИКОРИСТАННЯМ ЛІКУВАЛЬНОЇ ФІЗИЧНОЇ КУЛЬТУРИ І МАСАЖУ Головченко М.В.	107
--	-----

SCIENTIFIC RESEARCH GROUP

Volodymyr Siusiuka 

Doctor of Medical Sciences, professor, head of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical and Pharmaceutical University, Ukraine

Igor Belenichev 

Doctor of biological sciences, professor, head of the Department of pharmacology
and medical prescription with a course in normal physiology
Zaporizhzhia State Medical and Pharmaceutical University, Ukraine

Olena Deinichenko 

Doctor of Philosophy, Associate Professor of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical and Pharmaceutical University, Ukraine

Natalia Soloviova 

PhD graduate student of the Department of Obstetrics and Gynecology
Zaporizhzhia State Medical and Pharmaceutical University, Ukraine

PREGNANCY LOSS IN ANAMNESIS: SHORT AND LONG TERM CONSEQUENCES FOR WOMEN'S HEALTH

Resume. *The article presents an analysis of modern research on the relationship between pregnancy loss (natural or induced) and short-/long-term consequences for a woman's health. The presence of a case of pregnancy loss in the anamnesis negatively affects the reproductive function of a woman in the future, affects the course and outcome of the next pregnancy. However, reproductive risk factors are not limited to the obstetric period. The association between spontaneous abortion and cardiovascular disease may reflect shared mechanisms and is considered an early marker of future risk to women's health, including premature death. Therefore, future efforts should focus on increasing follow-up of mothers after delivery, increasing awareness of risk factors, and evidence-based prevention strategies for this cohort of women.*

Miscarriage is usually defined as pregnancy loss (PL) before viability and is the most common complication of pregnancy. The population prevalence of women who had one miscarriage is 10.8% (10.3-11.4%), two miscarriages – 1.9% (1.8-2.1%), three or more miscarriages - 0.7% (0.5-0.8%). The overall risk of miscarriage is 15.3% (95% CI 12.5-18.7%) of all recognized pregnancies [1, 2]. PL is usually associated with physical effects, such as bleeding in early pregnancy, which varies in severity from spotting to bleeding. However, it can also be associated with profound psychological distress that both partners may experience and may include feelings of denial, shock, anxiety, depression, PTSD, and suicidality [1, 3]. PL, whether natural or induced, is associated with higher rates of mental health problems. It is an independent risk factor for postpartum mental illness [4]. Miscarriage in all its forms is one of the most common adverse outcomes of pregnancy, but the psychological impact of such loss is often underestimated. The individual response to this may vary between women, but most experience anxiety, stress and symptoms of depression [5].

The presence in a woman's anamnesis of even one case of pregnancy loss negatively affects her reproductive function in the future, affects the course and outcome of the next pregnancy. Reproductive losses in the anamnesis increase the risk of recurrence of the complication in

subsequent pregnancies up to 10 times [5, 6, 7, 8, 9, 10]. The number, duration of pregnancy and the time of its loss are associated with adverse consequences in subsequent pregnancies [11]. Yes, miscarriage, and especially recurrent miscarriage, is also a marker of risk for obstetric complications, including preterm birth, fetal growth retardation, placental abruption, and stillbirth in future pregnancies, as well as a predictor of long-term health problems such as cardiovascular disease and vein diseases [1].

Studies have found that previous miscarriage in nulliparous women was associated with a higher frequency of labor induction, cesarean delivery, and placental abruption [12]. However, multivariable logistic regression analysis (adjusted) showed that women with a history of spontaneous abortion had a lower risk of preeclampsia than women without a history of spontaneous abortion [13]. Corresponding results are confirmed by other authors [14]. However, women with a history of preeclampsia had a higher risk of its recurrence [13].

Reproductive risk factors are not limited to the obstetric period. The association between PL and chronic disease suggests that PL may have long-term consequences for the mother's overall health. History of coronary artery disease is an independent risk factor for cardiovascular diseases [15, 16, 17, 18, 19]. Studies show that such risks increase by more than 20%, regardless of the further development of metabolic disorders [20, 21]. Pathophysiological mechanisms of increased risk of cardiovascular and metabolic diseases may be associated with oxidative stress and inflammation [28]. The association between spontaneous abortion and cardiovascular disease may reflect shared mechanisms that contribute to spontaneous abortion and the development of cardiovascular disease and ultimately premature death. Miscarriage can be an early marker of future health risk for women, including premature death. These findings underscore a growing body of literature showing that certain reproductive events and chronic disease risk are associated throughout a woman's life [22]. The relevance of these studies is due to the fact that cardiovascular diseases remain the main cause of death worldwide, they account for 35% of deaths among women [23]. Therefore, the American Heart Association and the American College of Obstetricians and Gynecologists recommend that cardiovascular disease screening begin in the first 3 months postpartum for women with an adverse pregnancy outcome, including any history of miscarriage or stillbirth. One of the proposed strategies is the inclusion of the concept of the fourth trimester in clinical recommendations and health care policy [24, 25]. Future efforts should focus on strategies to increase postpartum maternal follow-up, increase awareness of sex-specific cardiovascular risk factors, and identify evidence-based strategies for precision prevention [26]. A history of spontaneous abortion is also associated with an increased risk of gestational diabetes. Identification of pregnant women at high risk for gestational diabetes is crucial for the implementation of early prevention and appropriate intervention [27, 28].

Today, there is growing recognition of the connection between various complications of pregnancy and the development of chronic diseases later in life. Pregnancy began to be considered as a physiological stress test, since the load it creates for the female body can reveal an underlying predisposition to diseases that would otherwise remain hidden for many years [29]. Abnormal cardiometabolic and vascular responses to the physiological stress of pregnancy can lead to adverse pregnancy outcomes, including hypertensive disorders of pregnancy, preterm birth, gestational diabetes, low-term birth, placental abruption, and pregnancy loss [30, 31, 32]. That is why the awareness that pregnancy is a «stress test» for future health can be extremely important for a woman in her reproductive age [33].

Thus, certain reproductive events and the risk of chronic diseases are linked throughout a woman's life. Having a history of pregnancy loss negatively affects her reproductive function in the future, thereby increasing the risk of complications in the next pregnancy, and what is important, is not limited to the obstetric period. The presence of a relationship between pregnancy loss and chronic disease suggests possible long-term consequences for the mother's overall health. Given that a history of pregnancy loss is an independent risk factor for cardiovascular disease and

metabolic disorders, the focus should be on increasing maternal follow-up after delivery, increasing awareness of risk factors, and evidence-based prevention strategies.

References:

1. Quenby S, Gallos ID, Dhillon-Smith RK, et al. Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss. *Lancet*. 2021;397(10285):1658-1667.
2. Linehan LA, San Lazaro Campillo I, Hennessy M, Flannery C, O'Donoghue K. Reproductive outcomes following recurrent first-trimester miscarriage: a retrospective cohort study. *Hum Reprod Open*. 2022;2022(4):hoac045.
3. Tetrushvili N, Domar A, Bashiri A. Prevention of Pregnancy Loss: Combining Progestogen Treatment and Psychological Support. *J Clin Med*. 2023;24:12(5):1827.
4. Reardon DC, Craver C. Effects of Pregnancy Loss on Subsequent Postpartum Mental Health: A Prospective Longitudinal Cohort Study. *Int J Environ Res Public Health*. 2021;23:18(4):2179.
5. Cuenca D. Pregnancy loss: Consequences for mental health. *Front Glob Womens Health*. 2023;23:3:1032212.
6. Korinets YaM, Prokopchuk NM. Analiz efektyvnosti prenatalnoi diahnozyky u simiakh z reprodaktyvnymy vtratamy v anamnezi [Analysis of the effectiveness of prenatal diagnosis in families with a history of reproductive loss]. *Aktualni pytannia pediatrii, akusherstva ta hinekologii - Current issues of pediatrics, obstetrics and gynecology*. 2014;2:127-131.
7. Yarotskyi Mİe, Semeniuk LM. Henetychni faktory rozvytku hiperandrohenii u zhinok [Genetic factors in the development of hyperandrogenism in women]. *Klinichna endokrynologhiia ta endokrynna khirurgiia - Clinical endocrinology and endocrine surgery*. 2016;4(56):24-33.
8. Vorobei LI. Diahnozyka ta profilaktyka dystresu ploda u vahitnykh z perynatalnymy vtratamy v anamnezi [Diagnosis and prevention of fetal distress in pregnant women with a history of perinatal losses]. *Zbirnyk naukovykh prats asotsiatsii akusheriv-hinekologiv Ukrainy - Collection of scientific works of the Association of Obstetricians and Gynecologists of Ukraine*. 2019;2(44):24-30.
9. Lytvyn NV, Henyk NI. Otsinka prychn rannikh vtrat vahitnosti u zhinok iz bezpliddiam, vkluchenykh u prohramu dopomizhnykh reprodaktyvnykh tekhnologii [Assessment of the causes of early pregnancy loss in women with infertility included in the program of assisted reproductive technologies]. *Aktualni pytannia pediatrii, akusherstva ta hinekologii - Current issues of pediatrics, obstetrics and gynecology*. 2017;1:84-89.
10. Syusyuka VG, Soloviova NM. Features of pregnancy and childbirth of women with a history of reproductive loss. *Prospects and innovations of science*. 2023;16:1003-1014.
11. Ahrens KA, Rossen LM, Branum AM. Pregnancy loss history at first parity and selected adverse pregnancy outcomes. *Ann Epidemiol*. 2016;26(7):474-481.e9
12. Hirsch L, Ashwal E, Aviram A, Rayman S, Wiznitzer A, Yogev Y. The association between previous single first trimester abortion and pregnancy outcome in nulliparous women. *J Matern Fetal Neonatal Med*. 2016;29(9):1457-1461.
13. Mohamedain A, Rayis DA, AlHabardi N, Adam I. Association between previous spontaneous abortion and preeclampsia: a case-control study. *BMC Pregnancy Childbirth*. 2022;22(1):715.
14. Lao TT, Hui ASY, Law LW, Sahota DS. Prior abortion history and pregnancy hypertensive disorders in primiparous gravidae. *Pregnancy Hypertens*. 2018;14:168-173.
15. Ma SS, Yin WJ, Wang P, et al. Previous pregnancy loss and gestational cardiovascular health: A prospective cohort of nulliparous women. *Front Public Health*. 2023;11:1071706.
16. Tsulukidze M, Reardon DC, Craver C. Effects of prior reproductive losses on risk of cardiovascular diseases within six months of a first live birth. *Int J Cardiol Cardiovasc Risk Prev*. 2024;21:200260.
17. Jung YM, Lee SM, Wi W, et al. Adverse pregnancy outcomes as a risk factor for new-onset metabolic dysfunction-associated steatotic liver disease in postpartum women: A nationwide study. *JHEP Rep*. 2024;6(4):101033.
18. Okoth K, Chandan JS, Marshall T, et al. Association between the reproductive health of young women and cardiovascular disease in later life: umbrella review [published correction appears in *BMJ*. 2020;14:371:m3963]. *BMJ*. 2020;371:m3502.
19. Jiang L, Huang S, Hee JY, Xin Y, Zou S, Tang K. Pregnancy Loss and Risk of All-Cause Mortality in Chinese Women: Findings From the China Kadoorie Biobank. *Int J Public Health*. 2023;68:1605429.
20. Wang YX, Mínguez-Alarcón L, Gaskins AJ, et al. Pregnancy loss and risk of cardiovascular disease: the Nurses' Health Study II. *Eur Heart J*. 2022;43(3):190-199.
21. Quesada O, Scantlebury DC, Briller JE, Michos ED, Aggarwal NR. Markers of Cardiovascular Risk Associated with Pregnancy. *Curr Cardiol Rep*. 2023;25(2):77-87.
22. Wang YX, Mínguez-Alarcón L, Gaskins AJ, Missmer SA, Rich-Edwards JW, Manson JE, Pan A, Chavarro JE. Association of spontaneous abortion with all cause and cause specific premature mortality: prospective cohort study. *BMJ*. 2021;24:372:n530.
23. Vogel B, Acevedo M, Appelman Y, et al. The Lancet women and cardiovascular disease Commission: reducing the global burden by 2030. *Lancet*. 2021;397(10292):2385-2438.

24. Parikh NI, Gonzalez JM, Anderson CAM, et al. Adverse Pregnancy Outcomes and Cardiovascular Disease Risk: Unique Opportunities for Cardiovascular Disease Prevention in Women: A Scientific Statement From the American Heart Association. *Circulation*. 2021;143(18):e902-e916.
25. Brown HL, Warner JJ, Gianos E, et al. Promoting Risk Identification and Reduction of Cardiovascular Disease in Women Through Collaboration With Obstetricians and Gynecologists: A Presidential Advisory From the American Heart Association and the American College of Obstetricians and Gynecologists. *Circulation*. 2018;137(24):e843-e852.
26. Jowell AR, Sarma AA, Gulati M, et al. Interventions to Mitigate Risk of Cardiovascular Disease After Adverse Pregnancy Outcomes: A Review [published correction appears in *JAMA Cardiol*. 2023;1:8(8):797]. *JAMA Cardiol*. 2022;7(3):346-355.
27. Zhao Y, Zhao Y, Fan K, Jin L. Association of History of Spontaneous or Induced Abortion With Subsequent Risk of Gestational Diabetes. *JAMA Netw Open*. 2022;1:5(3):e220944.
28. Peters SAE, Yang L, Guo Y, et al. Pregnancy, pregnancy loss and the risk of diabetes in Chinese women: findings from the China Kadoorie Biobank. *Eur J Epidemiol*. 2020;35(3):295-303.
29. McNestry C, Killeen SL, Crowley RK, McAuliffe FM. Pregnancy complications and later life women's health. *Acta Obstet Gynecol Scand*. 2023;102(5):523-531.
30. Grandi SM, Filion KB, Yoon S, et al. Cardiovascular Disease-Related Morbidity and Mortality in Women With a History of Pregnancy Complications [published correction appears in *Circulation*. 2019;27:140(9):e544]. *Circulation*. 2019;139(8):1069-1079.
31. Parikh NI, Gonzalez JM, Anderson CAM, et al. Adverse Pregnancy Outcomes and Cardiovascular Disease Risk: Unique Opportunities for Cardiovascular Disease Prevention in Women: A Scientific Statement From the American Heart Association. *Circulation*. 2021;143(18):e902-e916.
32. Johnson HM. Count From Zero: Pregnancy History and Heart Risk. *J Am Heart Assoc*. 2024;13(5):e032973.
33. Fuglsang J. Pregnancy and future health: Why do we need to spread the word?. *Acta Obstet Gynecol Scand*. 2023;102(5):521-522.