



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

2 (88) 2026

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
У.О. АБИДОВ
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
Д.Т. АШУРОВА
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. РУЗИБОЕВ
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
Б.Б. ХАСАНОВ
Д.А. ХАСАНОВА
Б.З. ХАМДАМОВ
Э.Б. ХАККУЛОВ
Г.С. ХОДЖИЕВА
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)

2 (88)

www.bsmi.uz
https://newdaymedicine.com
E: ndmuz@mail.ru
Тел: +99890 8061882

2026 февраль

Received: 20.01.2026, Accepted: 06.02.2026, Published: 10.02.2026

UDC 618.177-089.888.11-06:618.2-036

ANALYSIS OF RISK FACTORS AND PERINATAL OUTCOMES IN PREGNANT WOMEN AFTER IN VITRO FERTILIZATION: A COMBINED RETROSPECTIVE–PROSPECTIVE STUDY

Tolibjonova M.O. <https://orcid.org/0009-0001-1306-6530>

Yuldasheva O.S. <https://orcid.org/0000-0003-2613-5782>

Andijan State Medical Institute, 170100, Uzbekistan, Andijan, Atabekova st.1 Тел:(0-374)223-94-60. E-mail: info@adti.uz

✓ Resume

Pregnancy achieved through in vitro fertilization (IVF) is associated with an increased risk of obstetric and perinatal complications. The aim of this study was to identify major risk factors affecting pregnancy course and perinatal outcomes after IVF, taking into account infertility etiology and maternal age. A combined retrospective–prospective analysis of 60 IVF pregnancies demonstrated that endocrine infertility and maternal age ≥ 40 years significantly increase the incidence of gestational diabetes mellitus, preeclampsia, placental insufficiency, and fetal growth restriction. Doppler ultrasound of uteroplacental circulation was identified as the most informative method for early prediction of placental dysfunction.

Keywords: in vitro fertilization, infertility factors, maternal age, perinatal outcomes, placental dysfunction

АНАЛИЗ ФАКТОРОВ РИСКА И ПЕРИНАТАЛЬНЫХ ИТОГОВ У БЕРЕМЕННЫХ ЖЕНЩИН ПОСЛЕ ВИТРОФЕРТИЗАЦИИ: КОМБИНИРОВАННОЕ РЕТРОСПЕКТИВНО-ПРОСПЕКТИВНОЕ ИССЛЕДОВАНИЕ

Толибжоновна М.О. <https://orcid.org/0009-0001-1306-6530>

Юлдашева О.С. <https://orcid.org/0000-0003-2613-5782>

Андижанский государственный медицинский институт Узбекистон, Андижон, Ул. Атабеков 1
Тел:(0-374)223-94-60. E-mail: info@adti.uz

✓ Резюме

Беременность после экстракорпорального оплодотворения характеризуется высоким риском акушерских и перинатальных осложнений. Целью исследования было выявление факторов риска осложненного течения беременности и неблагоприятных перинатальных исходов с учетом причины бесплодия и возраста матери. Комбинированный анализ 60 беременностей после ЭКО показал, что эндокринный фактор бесплодия и возраст 40 лет и старше достоверно повышают частоту преэклампсии, гестационного сахарного диабета, плацентарной недостаточности и задержки роста плода.

Ключевые слова: экстракорпоральное оплодотворение, факторы бесплодия, возраст матери, перинатальные исходы, плацентарная недостаточность

VITROFERTILIZATSIYADAN KEYINGI HOMILADORLARD A XAVF OMILLARI VA PERINATAL NATIJALAR TAHLILI: KOMBINATSIYALASHGAN RETROSPEKTIV-PROSPEKTIV TADQIQOT

Tolibjonova M.O. <https://orcid.org/0009-0001-1306-6530>

Yuldasheva O.S. <https://orcid.org/0000-0003-2613-5782>

Andijon davlat tibbiyot instituti O'zbekiston, Andijon, Otabekov 1 Tel: (0-374) 223-94-60.
E.mail: info@adti.uz

✓ Rezyume

Ekstrakorporal urug‘lantirish (EKO) orqali erishilgan homiladorliklar акушерлик va perinatal asorotlar xavfining yuqoriligi bilan tavsiflanadi. Ushbu tadqiqotning maqsadi bepustlik etiologiyasi va ona yoshi omillarini hisobga olgan holda EKOdan keyingi homiladorlikning kechishi hamda perinatal natijalarga ta’sir etuvchi asosiy xavf omillarini aniqlashdan iborat. 60 ta EKO orqali yuzaga kelgan homiladorlikni retrospektiv va prospektiv tahlil qilish natijasida endokrin bepustlik va 40 yosh va undan katta ona yoshi gestatsion qandli diabet, preeklampsiya, platsentar yetishmovchilik hamda homila o’sishining susayishi holatlarining sezilarli darajada oshishiga olib kelishi aniqlandi. Uteroplatsentar qon aylanishining dopplerometrik baholanishi platsentar disfunktsiyani erta aniqlashda eng informativ usul ekanligi ko‘rsatildi.

Kalit so‘zlar: ekstrakorporal urug‘lanish, bepustlik omillari, ona yoshi, perinatal natijalar, yo‘ldosh yetishmovchiligi

Relevance

Over the past decades, assisted reproductive technologies have become an essential component of modern reproductive medicine. In vitro fertilization allows women with various forms of infertility, including long-term and age-related infertility, to achieve pregnancy. However, despite advances in embryology and hormonal support, pregnancies resulting from IVF remain classified as high-risk.

According to numerous international studies, IVF pregnancies are associated with a significantly higher incidence of hypertensive disorders of pregnancy, gestational diabetes mellitus, placental insufficiency, fetal growth restriction, preterm birth, and operative delivery compared to spontaneously conceived pregnancies. These complications substantially contribute to increased perinatal morbidity and mortality. The relevance of this issue is further enhanced by the increasing proportion of women of advanced reproductive age undergoing IVF. Age-related vascular changes, metabolic disturbances, and chronic endocrine disorders negatively affect placentation processes and adaptive mechanisms of the fetoplacental complex. In addition, the etiological factors of infertility themselves—particularly endocrine and mixed forms—may independently impair trophoblast invasion and uteroplacental blood flow.

At present, there is no universally accepted approach to individualized risk stratification and monitoring of IVF pregnancies based on infertility etiology and maternal age. Early identification of women at high risk for placental dysfunction and adverse perinatal outcomes is therefore of paramount importance. In this context, further investigation of prognostic markers and optimization of monitoring strategies remains a highly relevant task in contemporary obstetrics.

Over the past decades, assisted reproductive technologies have significantly expanded reproductive possibilities for couples with infertility. In vitro fertilization remains the most effective method; however, pregnancies achieved through IVF are still classified as high-risk. Numerous studies report higher rates of hypertensive disorders of pregnancy, gestational diabetes mellitus, placental dysfunction, fetal growth restriction, and preterm birth in IVF pregnancies compared with spontaneous conception. These complications contribute substantially to perinatal morbidity and mortality.

One of the key challenges in modern obstetrics is the heterogeneity of IVF patients. Women undergoing IVF often present with advanced reproductive age, chronic endocrine disorders, metabolic disturbances, or long-standing infertility. The etiological factors of infertility may independently affect implantation, placentation, and fetal development. Therefore, assessment of pregnancy risks in IVF patients should not be generalized but stratified according to pregravid characteristics.

Purpose of the study: To identify key risk factors associated with complicated pregnancy course and adverse perinatal outcomes in women after IVF, based on infertility etiology and maternal age.

Materials and Methods

A combined retrospective–prospective study was conducted at the Andijan State Medical Institute. The retrospective arm included analysis of 30 delivery records of women with IVF pregnancies to evaluate perinatal outcomes in relation to infertility causes, including tubal-peritoneal, endocrine,

male, and mixed factors. The prospective arm involved 30 pregnant women after IVF who were followed dynamically throughout gestation.

Prospective participants were divided into three age groups: under 35 years, 35–39 years, and 40 years and older. All patients underwent routine clinical evaluation, laboratory testing, ultrasound monitoring, and Doppler assessment of uteroplacental and fetoplacental blood flow. Statistical analysis was performed using nonparametric methods, with $p < 0.05$ considered statistically significant.

Results and discussion

Analysis demonstrated that infertility etiology significantly influenced pregnancy complications. Endocrine infertility, particularly polycystic ovary syndrome and chronic anovulation, was associated with a markedly higher incidence of gestational diabetes mellitus. This finding may be explained by preexisting insulin resistance and metabolic imbalance, which are exacerbated during pregnancy.

In contrast, women with tubal-peritoneal infertility showed a higher prevalence of chronic placental insufficiency. Previous inflammatory processes and surgical interventions may impair endometrial receptivity and uteroplacental vascular remodeling, leading to compromised placental function.

Maternal age was identified as an independent risk factor. Women aged 40 years and older demonstrated significantly higher rates of preeclampsia and fetal growth restriction. Age-related vascular changes and reduced adaptive capacity of the placenta may contribute to these outcomes.

Doppler ultrasound revealed early signs of impaired uteroplacental blood flow 3–4 weeks before clinical manifestations in high-risk groups. These findings emphasize the importance of early Doppler monitoring for timely identification of placental dysfunction and prevention of severe perinatal complications.

Routine biochemical parameters did not show significant intergroup differences, indicating their limited predictive value. Therefore, reliance solely on standard laboratory tests may delay diagnosis of placental disorders in IVF pregnancies.

Conclusion

Maternal age of 40 years and older and endocrine infertility are the main risk factors for complicated pregnancy course after IVF. Individualized monitoring strategies based on pregravid risk stratification are essential. Doppler assessment of uteroplacental circulation is the most informative method for early prediction of placental complications and should be routinely implemented in high-risk IVF pregnancies.

LIST OF REFERENCES:

1. Savelyeva G.M., Shalina R.I., Panina O.B. Obstetrics. Moscow: GEOTAR-Media; 2021.
2. Radzinsky V.E., Fuks A.M. Reproductive Technologies and High-Risk Pregnancy. Moscow; 2020.
3. Adamson G.D., de Mouzon J., Chambers G.M. International trends in assisted reproductive technology. *Fertility and Sterility*. 2018;110(3):456–464.
4. Luke B., Brown M.B. Elevated risks of pregnancy complications in assisted reproductive technology pregnancies. *Obstetrics & Gynecology*. 2019;134(4):845–855.
5. Pinborg A., Wennerholm U.B., Romundstad L.B. Why do singletons conceived after assisted reproduction have adverse perinatal outcomes? *Human Reproduction Update*. 2019;25(1):87–104.
6. Qin J., Sheng X., Wu D. Pregnancy-related complications and perinatal outcomes after assisted reproductive technology. *Scientific Reports*. 2020;10:11690.
7. Santulli P., et al. Adverse obstetric outcomes associated with assisted reproductive technologies. *Human Reproduction*. 2021;36(2):436–444.
8. Declercq E., Luke B., Belanoff C. Advanced maternal age, assisted reproduction, and adverse pregnancy outcomes. *Fertility and Sterility*. 2020;113(3):560–568.
9. Cavoretto P., et al. Role of uterine artery Doppler in pregnancies conceived by in vitro fertilization. *Ultrasound in Obstetrics & Gynecology*. 2021;57(2):314–322.
10. La Marca A., Sunkara S.K. Individualization of IVF treatment and pregnancy outcomes. *Human Reproduction Update*. 2020;26(4):507–525.

Entered 20.01.2026