GFNPSS
Global Nursing Journal of India

Review Article

A Comprehensive Review of the Lifelong Health Implications of Obstetric Complications and Preventive Strategies

Geeta[1*], Rupali Chaudhary[2], Baljinder Kaur[3], Mohammed Sattar[4] ,Vijayasuguna V[5]

[1]Assistant Professor, Rakshapal Bahadur College of Nursing, Bareilly, Uttar Pradesh, India.
[2]Assistant Professor, College of Nursing, Government Medical College, Buduan, Uttar Pradesh, India.
[3]Astt. Professor Nursing (OBG), One Beat College of Medical Sciences, Bhira Kheri, Uttar Pradesh, India.
[4]Principal, R C Memorial Nursing College, Falna, Pali, Rajasthan, India.
[5]Prof Dr., Principal, Heritage School of Nursing, Bhadwar, Varanasi, Uttar Pradesh, India.

Abstract

The majority of pregnancy-related health issues seem to go away during delivery or soon after. Preterm labor, placental abruption, pre-eclampsia, and gestational diabetes are common examples. It is recognized that women who experience these kinds of problems are more likely to experience similar problems during subsequent pregnancies. These women are more likely to experience long-term health issues, as has lately come to light. In order to meet the metabolic needs of the feto-placental unit, the mother's physiology changes significantly throughout pregnancy. Maladaptive physiological reactions may arise in pregnancy difficulties, which could have an effect on the mother's and the fetus's health. Furthermore, some maternal alterations could continue after giving birth. Pre-eclampsia (PE) and gestational diabetic mellitus (GDM) typically go away after giving birth, but there is mounting evidence that both illnesses raise a woman's lifetime risk of cardiometabolic disease. The purpose of this review was to examine putative underlying processes based on animal and small-scale human investigations, summarize epidemiological evidence relating PE and GDM to future maternal cardiometabolic diseases, and evaluate implications for future research and postpartum therapeutic management.

Keywords: Obstetric complications, Pregnancy, Long-term health, Cardiovascular disease, Gestational diabetes, Preventive strategies, Postpartum care.

Introduction

The link between different prenatal problems and the emergence of chronic illness in later life is becoming better acknowledged. Because of the pressure pregnancy puts on a woman's body, it has come to be seen as a physiological stress test that can uncover underlying illness predispositions that would otherwise go undetected for years. Healthcare professionals are unaware of these concerns despite the growing amount of evidence.[1,2] The relationships between common pregnancy complications, such as gestational hypertension, pre-eclampsia, gestational diabetes, placental abruption, spontaneous preterm birth, stillbirth, and miscarriage, and the subsequent development of chronic disease have been outlined in our narrative literature review.[3]

Access this article online

Quick Response Code

Website: journal.gfnpss.org

DOI: 10.46376/GNJI/8.III.2025.914-917

Long-Term Health Implications of Obstetric Complications

Cardiovascular Disease and Mortality

Preterm delivery, small for gestational age newborns, pre-eclampsia, gestational hypertension, and gestational diabetes mellitus have all been found to be independent risk factors for long-term maternal mortality and cardiovascular morbidity.[4] Research indicates that women from such backgrounds have higher mortality risks, which may last for more than 40 years.

Address for correspondence: Geeta
Assistant Professor, Rakshapal Bahadur College of Nursing, Bareilly, Uttar Pradesh, India
E-mail: letter2geeta@gmail.com

How to cite this article: Geeta, Chaudhary R, Kaur B, Sattar M, Vijayasuguna V. A Comprehensive Review of the Lifelong Health Implications of Obstetric Complications and Preventive Strategies. GFNPSS Global Nursing Journal of India. 2025;8(3):914-917.
Received: 15-11-2025, **Accepted:** 15-12-2025, **Published:** 30-12-2025

Cardiovascular and metabolic problems are major contributors to this higher risk.[4] A paradigm change connecting obstetric history to continuous primary care risk assessment is necessary to identify pregnancy problems as indicators for subsequent CVD.

Metabolic and Endocrine Disorders

Type 2 diabetes mellitus (T2DM) and metabolic syndrome are significantly more likely to develop in women with a history of GDM.[2] Additionally, longitudinal studies show that GDM may increase the risk of type 2 diabetes by up to 10 times, while PE can triple or quadruple future risk for cardiometabolic diseases. These correlations highlight the necessity of lifelong metabolic monitoring following complex pregnancies, especially in high-risk populations.[2]

Renal and Other Organ System Diseases

Pre-eclampsia is a prevalent pregnancy condition marked by hypertension that is exacerbated by placental, brain, cardiac, hepatic, renal, and hematologic failure. The most common major surgical operation in the world, cesarean delivery, is often performed on patients with pre-eclampsia. They are a high-risk perioperative population with substantial avoidable morbidity and mortality. Through a perioperative lens, this review focuses on how anesthesiologists can reduce maternal complications in patients with pre-eclampsia undergoing cesarean delivery by managing hypertension and using strategies to preserve the function of the brain, heart, liver, kidney, hematologic and coagulation systems, and placenta. Strategies for postoperative analgesia, thromboprophylaxis, and hypertension medications in nursing patients are covered, along with preeclampsia-specific resuscitation, customized fluid delivery, safe neuraxial and general anesthesia, and treatment of intraoperative bleeding.[5]

The gut microbiota is regarded as a complete endocrine organ since it regulates distant organs and pathways through a variety of effects on the intestinal milieu. Throughout a woman's life, the microbiota interacts with estrogen, androgens, insulin, and other hormones to play a significant role in the reproductive endocrine system. Pregnancy problems, poor pregnancy outcomes, polycystic ovarian syndrome (PCOS), endometriosis, and cancer are just a few of the illnesses and ailments that can result from an imbalance in the makeup of the gut microbiota; yet, little is known about the underlying mechanisms. The investigation of the underlying mechanisms and possible causes of microbiota-hormone-mediated disease, as well as the development of new therapeutic and preventive approaches, should receive more attention.[6]

Offspring Health and Intergenerational Impacts

Maternal gut flora changes in response to metabolic processes during pregnancy due to physiological changes. Pre-eclampsia, gestational diabetes, premature birth, and recurrent miscarriages are among the pregnancy issues that are significantly influenced by the maternal gut microbiota, which is strongly linked to the immunological milieu in utero throughout pregnancy, according to recent research. Through the immunological alignment between mother and fetus and potential intrauterine microbiome, further research has also demonstrated that abnormal maternal gut microbiota raises the risk of a number of problems in the offspring, including neurodevelopmental disorders and allergies. The high-fiber diet and probiotics are useful innovations to protect moms and fetuses from illness.[7]

Preventive Strategies and Postpartum Care

Pain in the vagina

When a spontaneous vaginal birth occurs, genital tract damage is evident.[8] Extensive vaginal tears may take longer to heal than mild ones, which happen during delivery and take a few weeks to heal. Encourage women to sit on a cushioned ring, apply an ice pack, or take over-the-counter painkillers like acetaminophen or ibuprofen. Healthcare professionals should advise women to seek medical attention if they have severe, ongoing discomfort and educate them about the symptoms of infection, such as fever.[9]

Emotional health and mood

- Use a validated tool to screen for anxiety and postpartum depression.[10]
- Give advice on local resources for help and mentoring.[11]
- Check for tobacco use and provide postpartum relapse risk counseling.[12]
- Check for substance use disorders and make the necessary referrals.[13]
- Monitor previous mental health conditions, provide referrals for or verify attendance at mental health-related appointments, and adjust medication dosages as necessary during the postpartum phase.

Management of chronic illnesses

- Talk about any pregnancy difficulties and how they affect long-term maternal health, particularly ASCVD, and future childbearing.
- For women with GDM, conduct a 75 g, two-hour oral glucose tolerance test or a fasting plasma glucose test.[14]
- Using a trustworthy resource like LactMed, review the medication choice and dosage outside of pregnancy, taking into account the patient's nursing status.
- As indicated, refer patients to primary care or subspecialist medical professionals for follow-up care.

Breastfeeding:

Both the mother and the infant benefit from breastfeeding.[15] Women who breastfeed have a lower risk of developing type 2 diabetes, breast cancer, and ovarian cancer.[8] Healthcare professionals should assess newborns' latch, swallow, nipple type and condition, and hold for any issues. Formal education, peer support, and professional assistance are examples of interventions.[16] Unless breastfeeding is prohibited, healthcare professionals should strongly advise women to do so. The

World Health Organization (WHO) suggests doing this every three to four hours every day for at least four to six months. Breastfeeding lowers the infant's risk of atopic eczema, pediatric cancer, and gastrointestinal tract infections[17]. Every postnatal visit should include an evaluation of breastfeeding.

Exercise and Diet

Higher gestational weight gain, black race, and lower socioeconomic status are risk factors for postpartum weight retention in women. These factors also raise their risk of type 2 diabetes and obesity in the future.[18] Encourage women to return to their regular eating patterns and embrace a range of balanced, healthful diets. Every nursing mother must consume an additional 500 calories every day. During the first two to three weeks after giving birth, avoid physically demanding activities and get lots of rest. It is advised to gradually resume prior activities after beginning with non-impact exercises like walking.[19]

Function of the bladder and bowel

To avoid asymptomatic bladder overfilling, voiding needs to be monitored and encouraged. If a woman has not defecated within three days of giving birth, she is advised to use mild laxatives like docusate, psyllium, and bisacodyl. Osmotic laxatives like lactulose and polyethylene glycol are another factor to take into account.[20]

The use of contraception

The ideal time to talk about postpartum contraception is during pregnancy. During pregnancy, adolescents start motivational interviewing and talking about long-acting reversible contraception[21]. Nonhormonal techniques are typically recommended for nursing mothers. Progestin-only contraceptives are the best hormonal contraceptive option for nursing mothers, according to the ACOG. Nursing mothers should not use combination estrogen-progestin contraceptives since they can disrupt the production of breast milk[22]. After four weeks postpartum, combined estrogen-progestin vaginal rings can be utilized as one of the hormonal approaches. Since they don't interfere with milk production, hormonal therapies such as progestin-only oral contraceptives, depot medroxyprogesterone acetate injections, and progestin implants are recommended.

Health Education

Essential information about newborn care, including bathing, breastfeeding, umbilical cord care, and the significance of vaccinations, should be given by healthcare professionals.

Conclusion

Later in life, women who have experienced poor pregnancy outcomes are more likely to develop metabolic and cardiovascular disorders. An elevated risk of vascular illness in later life is linked to maternal vascular, metabolic, and inflammatory pregnancy problems, according to growing data.[23]

Financial Support and Sponsorship

Nil.

Conflicts of Interest

The author declares that they have no conflict of interest with regard to the content of the report.

References

1. Neiger R. Long-Term Effects of Pregnancy Complications on Maternal Health: A Review. J Clin Med. 2017 Jul 27;6(8):76. doi: 10.3390/jcm6080076. PMID: 28749442; PMCID: PMC5575578.
2. Barrell, A. M., & Sferruzzi-Perri, A. N. (2025). The Impact of Pre-eclampsia and Gestational Diabetes on Future Maternal Cardiometabolic Health. *Acta physiologica (Oxford, England)*, *241*(11), e70113. https://doi.org/10.1111/apha.70113
3. McNestry, C., Killeen, S. L., Crowley, R. K., & McAuliffe, F. M. (2023). Pregnancy complications and later life women's health. *Acta obstetricia et gynecologica Scandinavica*, *102*(5), 523–531. https://doi.org/10.1111/aogs.14523
4. Crump C, Sundquist J, Sundquist K. Adverse Pregnancy Outcomes and Long-Term Mortality in Women. JAMA Intern Med. 2024;184(6):631–640. doi:10.1001/jamainternmed.2024.0276
5. Dennis, A. T., Xin, A., & Farber, M. K. (2025). Perioperative Management of Patients with Pre-eclampsia: A Comprehensive Review. *Anesthesiology*, *142*(2), 378–402. https://doi.org/10.1097/ALN.0000000000005296
6. Qi, X., Yun, C., Pang, Y., & Qiao, J. (2021). The impact of the gut microbiota on the reproductive and metabolic endocrine system. *Gut microbes*, *13*(1), 1–21. https://doi.org/10.1080/19490976.2021.1894070
7. Lu X, Shi Z, Jiang L, Zhang S. Maternal gut microbiota in the health of mothers and offspring: from the perspective of immunology. Front Immunol. 2024 Mar 13;15:1362784. doi: 10.3389/fimmu.2024.1362784. PMID: 38545107; PMCID: PMC10965710.
8. Albers L, Garcia J, Renfrew M, McCandlish R, Elbourne D. Distribution of genital tract trauma in childbirth and related postnatal pain. Birth. 1999 Mar;26(1):11-7. [PubMed]
9. Declercq E, Cunningham DK, Johnson C, Sakala C. Mothers' reports of postpartum pain associated with vaginal and cesarean deliveries: results of a national survey. Birth. 2008 Mar;35(1):16-24. [PubMed]
10. Screening for perinatal depression. Committee Opinion No. 630. American College of Obstetricians and Gynecologists. Obstet Gynecol 2015;125:1268–71 .
11. Earls MF. Incorporating recognition and management of perinatal and postpartum depression into pediatric practice. Committee on Psychosocial Aspects of Child and Family Health American Academy of Pediatrics. Pediatrics 2010;126:1032–9
12. American College of Obstetricians and Gynecologists. Tobacco and nicotine cessation toolkit . Washington, DC: American College of Obstetricians and Gynecologists; 2016.
13. Opioid use and opioid use disorder in pregnancy. Committee Opinion No. 711. American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e81–94 .
14. Optimizing support for breastfeeding as part of obstetric

practice . Committee Opinion No. 658 . American College of Obstetricians and Gynecologists . Obstet Gynecol 2016 ; 127 : e86 – 92 .

15. Monvillers S, Tchaconas A, Li R, Adesman A, Keim SA. Characteristics of and Sources of Support for Women Who Breastfed Multiples for More than 12 Months. Breastfeed Med. 2020 Apr;15(4):213-223. [PubMed]
16. Gertosio C, Meazza C, Pagani S, Bozzola M. Breastfeeding and its gamut of benefits. Minerva Pediatr. 2016 Jun;68(3):201-12. [PubMed]
17. Chepkirui D, Nzinga J, Jemutai J, Tsofa B, Jones C, Mwangome M. A scoping review of breastfeeding peer support models applied in hospital settings. Int Breastfeed J. 2020 Nov 14;15(1):95. [PMC free article] [PubMed]
18. Gabbe SG, Gregory RP, Power ML, Williams SB, Schulkin J. Management of diabetes mellitus by obstetrician-gynecologists. Obstet Gynecol. 2004 Jun;103(6):1229-34. [PubMed]
19. Artal R. Exercise in Pregnancy: Guidelines. Clin Obstet Gynecol. 2016 Sep;59(3):639-44. [PubMed]
20. Paladine HL, Blenning CE, Strangas Y. Postpartum Care: An Approach to the Fourth Trimester. Am Fam Physician. 2019 Oct 15;100(8):485-491. [PubMed]
21. Stevens J, Lutz R, Osuagwu N, Rotz D, Goesling B. A randomized trial of motivational interviewing and facilitated contraceptive access to prevent rapid repeat pregnancy among adolescent mothers. Am J Obstet Gynecol. 2017 Oct;217(4):423.e1-423.e9. [PubMed]
22. Berens P, Labbok M., Academy of Breastfeeding Medicine. ABM Clinical Protocol #13: Contraception During Breastfeeding, Revised 2015. Breastfeed Med. 2015 Jan-Feb;10(1):3-12. [PubMed]
23. Neiger R. Long-Term Effects of Pregnancy Complications on Maternal Health: A Review. J Clin Med. 2017 Jul 27;6(8):76. doi: 10.3390/jcm6080076. PMID: 28749442; PMCID: PMC5575578.