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REVIEW ARTICLE

Postpartum Depression: An Emerging Dilemma in Maternal Mental Health

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ABSTRACT

Postpartum depression (PPD) is a major mental health disorder in approximately 10–20% of mothers worldwide within the first year after childbirth and is recognized as a significant global public health concern. The etiology of PPD is multifactorial and incorporates many things like hormonal fluctuations after delivery, genetic predisposition, previous psychiatric family history, and lack of family as well as social support. In this review, we focused on current information regarding the etiology, risk factors, and clinical features of PPD and how to use early screening and comprehensive care models to lower the long-term negative effects.

KEYWORDS: *Birth, Genetic variables, Maternal mental health, Postpartum depression.*

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INTRODUCTION

Postpartum depression (PPD) otherwise also known as perinatal depression is a very new kind of serious depression. The periods of depression, that happen in the whole duration of pregnancy or after giving birth. Some normal changes that happen after pregnancy might cause symptoms that are similar to sadness, such as feeling overwhelmed when you bring your new baby home.[1,2]

Most mother who have modest emotional changes after giving birth will feel better in a few weeks. However, around 10% of mother may have a more severe and long-lasting type of depression after giving birth. Around 1 in 7 mother who are pregnant or have just given birth suffer from perinatal depression, which is a common and sometimes dangerous mood illness. Hormonal fluctuations, genetic variables, and environmental factors all have a role in the disorder, yet over half of instances go undetected because women's are embarrassed to talk about their symptoms.[2,3]

Women who have been depressed before or during pregnancy, have a family history of depression, have been abused or faced hardships as a child, had a difficult or traumatic birth, had problems during a previous pregnancy or birth, don't have enough support from family, friends, or partners, are having relationship problems, money problems, or other major life stressors may be more likely to get PPD.[4]

The U.S. Preventive Services Task Force says that doctors and nurses should aggressively look for and ask about signs of depression during and after pregnancy, no matter what risk factors a woman has for depression. PPD can have sometimes very serious health and mental effects on both the mother and their offspring and in some cases maternal suicide during pregnancy. In recent years, there are multiple cases despite the increase in PPD incidence, so it is very necessary to know the risk factors, causes and possible treatment options for reducing morbidity and improving outcomes.[1,5]

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ETIOLOGY AND PATHOPHYSIOLOGY OF PPD

There are various factors that play together to cause PPD, these are basically biological, psychological, and social factors. It is very important to understand these all mechanisms so that we can make treatments and preventive measures that are right for each person. Low self-esteem, toxic stress during pregnancy, and unhealthy ways of coping with stress are all mental health problems. There aren't enough support systems in society, and there is a lot of domestic violence and financial trouble. Obstetric: problems, unexpected pregnancies, early births, and caesarean sections. Lack of sleep, an unhealthy diet, and long-term stress are all examples of environmental and lifestyle factors. Teenage moms, women who have had more than one child, and people with mental illness are more likely to get it.[6,7]

Biological Factors

Biological changes that happen during the perinatal period have a big effect on when PPD starts.

Changes in Hormone Levels: A lot of women have big changes in their hormone levels, body shape and mood swings during pregnancy and the first one or two weeks after giving birth. After giving birth, levels of estrogen and progesterone drop sharply. These hormones were very high during pregnancy. Due to the neuromodulatory effects of these hormones on serotonergic and dopaminergic systems, mood instability may be caused by this abrupt hormonal withdrawal. Changes to neurosteroids like allopregnanolone, which affects GABA-A receptors, have also been linked to anxiety and mood swings.[8,9]

Hypothalamic-Pituitary-Adrenal Disruption (HPA Axis): The HPA axis is known to be too active during the perinatal period. In order for a foetus to grow properly during pregnancy, cortisol levels need to go up. However, some women may have problems with the HPA axis activity after giving birth. Some research suggests that a maladaptive stress response, such as a lower cortisol response or prolonged hypercortisolism after giving birth, may be linked to depressive symptoms.[8,10]

Immune Dysregulation and Neuro-inflammation: New research suggests that pathways that cause inflammation may be also involved in PPD. Women with PPD have been found to have higher levels of some pro-inflammatory cytokines like IL-6, IL-1, TNF-α, and C-reactive protein (CRP). These changes in the immune system can make mood disorders worse by changing how neurotransmitters are broken down, how the brain changes, and how the HPA axis works.[11]

Genetic and epigenetic risk factors

Genetics is one of the most important things that makes people more likely to get PPD. Studies of families with postpartum mood disorders and twin studies have found that the risk of passing these disorders on to children is between 30% and 50%. Changes in genes that affect estrogen receptors, brain-derived neurotrophic factor (BDNF), and serotonin transporter (SLC6A4) have been linked to a higher risk. Also, stressors in the environment during pregnancy can change the way genes work, such as by changing the way DNA methylation works in genes that are linked to stress. This could change how genes are expressed and make people more vulnerable.[3,12]

Psychological and social factors

PPD is more likely to happen if you have anxiety or sadness, neurotic personality traits, or unhealthy ways of dealing with stress. Negative psychosocial factors, like domestic violence, marital problems, financial problems, and a lack of social support, make this vulnerability worse. These things usually work with underlying biological tendencies to make the environment even more dangerous.[13]

Clinical Features and Risk Factors responsible for PPD

PPD can happen at any time during the first year after giving birth, but it usually happens in the first four to six weeks. The symptoms are similar to those of major depressive disorder, but they show up after giving birth instead. The main signs are constant sadness, anhedonia (not being interested in or enjoying everyday things), tiredness, and trouble concentrating. People often talk about these other traits as well: Irritability, crying uncontrollably, and feelings of despair or shame are all symptoms of mood disorders. Cognitive symptoms include having trouble making decisions and not thinking highly of oneself. Some common symptoms are changes in hunger, psychomotor agitation or retardation, and sleep problems that have nothing to do with taking care of the baby. Thoughts of hurting yourself or the baby are serious signs, and psychotic symptoms like hallucinations or delusions are very rare. A score of 13 or higher on the Edinburgh Postnatal Depression Scale (EPDS) means that there is a good chance of depression, and it is often used to screen for it.[14,15]

Prevention and Possible Treatment

To effectively manage PPD, a complete packages of plan that includes not only drug, but incorporate all therapies responsible for PPD such as psychosocial therapies. Interventions with Drugs SSRIs (like sertraline and paroxetine) are the first-line treatment for depression because they work and are safe for nursing women. Recently, a new drug called Brexanolone was approved to treat severe PPD. It is an allopregnanolone analog that works on the GABA-A receptor. Combination treatments include mood stabilizers and hormonal therapy, like estrogen patches, for people who haven't responded to the main treatment. Different Ways of Doing Psychotherapy CBT, or cognitive behavioral therapy, is based on evidence and mainly tries to change the way people think that isn't working. Interpersonal therapy (IPT) focuses on resolving conflicts and changing roles.[14,16] Group therapy and peer support make people feel less alone and more connected to others. A non-medical approach means making changes to our life, like getting more sleep, working out more, and eating better. There is some promising research on how yoga and mindfulness-based cognitive therapy work together. Routine use of the EPDS for screening for prevention during prenatal and postnatal visits. Psychoeducation is the process of teaching families how to spot warning signs and where to get help. Interventions that are tailored to certain groups of people, like prenatal counselling and early postpartum follow-up for women who are at high risk (have a history of depression, lack of social support, etc.).[3,17]

FUTURE PERSPECTIVES

Genetic, epigenetic, and neuroendocrine biomarker markers discovery for early risk stratification is needed. Personalized medicine aims to take into account a patient's unique mental and physical traits when making treatment plans.

Digital health solutions include telepsychiatry systems and mobile apps that help people in areas with few resources get screened and treated.[18] New treatments include the creation of anti-inflammatory strategies and neurosteroid-based drugs to deal with the underlying pathophysiology. As part of global health efforts, maternal mental health services should be included in primary care, especially in places with few resources.

CONCLUSION

PPD is a complicated mental illness that affects the health of not only mother their child may also suffer from serious problems in many ways. Even though more people are aware of them, underdiagnosis and undertreatment are still big problems around the world. An important biopsychosocial strategy is to combine early screening with therapies that have been shown to work and support from the community. New research on the causes of brain disorders and new treatments, we may soon be able to use more specific and effective methods. To lower the global burden of PPD and improve the mental health of mothers, we need to work together across disciplines and provide care that is sensitive to different cultures.

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