

Primary and secondary prevention of postpartum depression

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Abstract. Pregnancy is one of the important life events in a woman's life, which in the face of pregnancy, childbirth and breastfeeding process, maternal psychology and physiology will have obvious changes, among which postpartum depression is more common. Postpartum depression (PPD) is a mental syndrome with obvious depressive symptoms or typical depressive episodes during the puerperal period. Its etiology is complex, with sleepiness, gloomy expression, crying and other symptoms in clinic, and even some patients will have suicidal tendencies, which seriously endangers maternal physical and mental health. In recent years, the adverse events caused by postpartum depression have attracted more and more social attention, and postpartum women's mental health has become a hot spot in clinical research. Clinical workers should improve the awareness of postpartum depression, and strengthen the maternal mental health screening, so as to detect psychological abnormalities as early as possible and give timely intervention measures. In view of the high incidence of postpartum depression, it is very important to establish a sound mental health service system for pregnant women. This paper will analyze the high risk factors of PPD summarized the targeted primary prevention and secondary prevention, and proposed prevention strategies before and after the onset of postpartum depression, respectively, to provide theoretical basis for effectively preventing the occurrence of postpartum depression or delaying the progression of postpartum depression.

Keywords: Tpostpartum Depression, Risk Factor, Prevent, Treatment.

1. Introduction

During the special period of pregnancy and childbirth, women's physiology and psychology will change, and their emotions will fluctuate easily, which will cause psychological adverse reactions. Postpartum depression (PPD) is one of the most common maternal disorders, including low mood, loss of interest, disturbed sleep, movement disorders, fatigue, and feelings of guilt or worthlessness. It usually occurs 6 weeks after delivery, some patients can recover spontaneously 3 to 6 months after delivery, and severe cases can last for 1 to 2 years, causing serious adverse effects to patients and their families [1,2]. Therefore, more and more people pay attention to postpartum depression, but so far, there is no clear method to treat postpartum depression, therefore, the prevention of postpartum depression is particularly important. This paper mainly studies the primary prevention and secondary prevention of postpartum depression. Primary prevention refers to the prevention before the onset of postpartum depression and prevents the occurrence of postpartum depression from the root cause of the onset. The incidence was reduced by analyzing the influencing factors. Secondary prevention refers to the treatment of postpartum depression after its onset.

2. Harms of postpartum depression

2.1. Hazard to maternity

Patients with PPD usually have symptoms of memory loss, which affects their life and work to varying degrees. Pio et al. found that women with PPD scored lower in memory tests than normal women, and the degree of short-term memory loss was more obvious [3]. A study reported that the instantaneous memory and memory quotient scores of PPD patients were significantly reduced, but there was no significant difference in long-term memory compared with the control group [4]. The impairment of memory function in PPD patients may be only a temporary disturbance of the neural circuit of the memory neural network, leading to the disturbance of the dynamic transformation of the memory system. Suicide is one of the main causes of maternal death in the first six months after delivery [5]. Self-harm was a significant predictor of suicide. Postpartum depression screening data from the United States showed that 21% of 628 women with PPD reported having thoughts of harming themselves [6].

2.2. The harm of breast milk

Breast milk is the best nutrition for children, but PPD affects the production, composition, and duration of breastfeeding. Maternal anxiety reduces oxytocin production and breast milk production. A Japanese study showed that postpartum anxiety and depression may lead to a decline in maternal self-confidence, which leads to a decrease in the number of breastfeeding [7]. Women who started breastfeeding immediately after delivery and continued to breastfeed until 3 months after delivery had a lower EPDS score than women who did not breastfeed or could not breastfeed continuously. Studies have shown that women who breastfed immediately after delivery and women who could continue to breastfeed are less likely to suffer from PPD during the postpartum period, and breastfeeding is a protective factor for postpartum women [8]. Demirezen et al. first studied the relationship between sodium content in breast milk and postpartum anxiety and depression symptoms, and the results showed that the sodium content and sodium potassium ratio in breast milk of women with high EPDS score were significantly higher than those with low EPDS score [9]. Among them, nearly 1/3 of the mothers' breast milk contained high levels of sodium, which was basically consistent with the research results of Flores et al. [10]. That suggests about a third of newborns are being breastfed with high levels of sodium. Studies have shown that blood sodium concentration >150 mmol/L is a potentially fatal risk for newborns [11].

2.3. Harm to children's growth and development

Studies have found that PPD may lead to shorter durations of breastfeeding or even termination of breastfeeding, and pointed out that PPD is associated with undernutrition in infants. A longitudinal study in South Africa followed the children of mothers with PPD up to the age of 10 years and found that PPD was related to the physical development of children, and the most serious was that PPD patients even had the idea of infanticide [12]. It was reported that a 40-year-old Australian woman diagnosed with PPD killed her 2-month-old child [13]. Maternal PPD has a wide range of negative effects on the child's growth and development. A large amount of evidence shows that postpartum maternal psychological problems increase the risk of cognitive dysfunction, language impairment, and behavioral problems in children [14,15]. Infancy is a critical period of physical and mental development, especially for infants ≤ 6 months of age, children in this period need the mother's loving eyes, gentle hugs, gentle touch and other non-verbal communication, while PPD mothers often feel low, resulting in the lack of maternal role, and may not give corresponding non-verbal and verbal communication, thus affecting the infant's intelligence and language development. The occurrence of PPD in mothers would increase the risk of non-verbal developmental delay in children, while the delay of non-verbal communication ability would affect the later development of language ability [16,17].

2.4. Harm to spouse

The occurrence of PPD in mothers can lead to anxiety, depression and other negative emotions in spouses, and even marital problems [18]. A meta-analysis concluded that the incidence of PPD in

spouses of mothers in China is relatively high, especially in the 0-5+6 weeks postpartum, which is higher than that in developed countries such as Sweden, Germany and Portugal. There was also a weak positive correlation between maternal PPD and spouse PPD [19]. Fathers with PPD are often in a bad mood, which will affect their behavior of taking care of their children, reduce emotional and verbal interaction, increase the probability of infant crying, and affect the child's future language development and reading ability.

3. The risk factors of postpartum depression

There are many pathogenic factors of PPD, including physiological, genetic, psychological and social factors, among which psychological and social factors are the main risk factors.

3.1. Physiological factor

The changes of maternal endocrine and neurotransmitter are the key factors causing postpartum mood, and the levels of estrogen and progesterone in the body will suddenly decrease after childbirth. Decreased estrogen levels inhibit the secretion of catecholamines in the brain and endocrine tissues, causing changes in neurotransmitters that lead to mood swings and subsequent depressive symptoms. The decrease of progesterone level may cause the withdrawal reaction of benzenediaminol drugs, which is easy to cause depression. The decreased level of postpartum thyroxine is one of the risk factors for postpartum depression. Wang Xuexia's study showed that the serum levels of 5-hydroxytryptamine (5-HT) and thyroid stimulating hormone (TSH) in postpartum depressed women were significantly lower than those without postpartum depression in the week after delivery [20].

3.2. Genetic factor

As a kind of endogenous depression, the cause of postpartum depression is related to physiological and genetic factors. The risk of PPD was higher in women with premenstrual catatonia, prenatal depression, family history of depression and mental illness. 25.60% of the patients with postpartum depression had family genetic history of mental illness, while 7.54% of the women without postpartum depression had family genetic history of mental illness, which confirmed that family genetic history of mental illness was a high-risk factor for maternal depression [21].

3.3. Psychological factor

3.3.1. Maternal personality factor. Maternal personality is an important factor affecting the emotions, maternal personality introversion, compulsive personality, immature personality prone to post-natal depression. According to the study, introversion accounted for 88.6% of women without PPD, which was significantly higher than 71.9% of women with PPD [22].

3.3.2. The lack of role. From pregnancy to childbirth, women will experience a variety of role changes. Due to the lack of identification with the role of mother or the inability to adapt to the role change, especially in the first week after delivery, the maternal mood swings are obvious, the psychological state is unstable, and the maternal role has not yet entered the maternal role, especially the first-time mothers. Due to the physiological and psychological changes caused by the arrival of the newborn, the role of the mother may not adapt to the role of the mother. The role of the mother is closely related to the emotional and social support of the mother, so corresponding effective measures should be taken to reduce postpartum depression, improve social support, and promote the adaptation of the role of the mother.

3.3.3. Psychological stress. Due to the lack of experience in taking care of infants, especially the first-time mothers have no experience in taking care of infants, they are often at a loss in the face of infant crying, worried about that they can't take care of the children, coupled with postpartum discomfort and lack of sleep will cause maternal irritability and anxiety, resulting in greater psychological pressure, and then depression symptoms, promoting the development of the disease.

3.3.4. Education level. According to the clinical survey on 256 puerperas, 47.26% of the patients with PPD had a college education or above, and 16.02% had a junior high school education or below. It can be seen that puerperas with higher education are more likely to induce PPD [23].

3.4. The age

Older or younger women are more likely to develop PPD than women of childbearing age. Older women tend to worry about the adverse effects of advanced age on pregnancy and delivery. Most older women are highly nervous before delivery, worried about lack of breast milk after delivery, parenting difficulties, and greater psychological pressure, thus increasing the risk of postpartum depression. Younger women have a higher risk of postpartum depression because they have difficulty adapting to the role of mother.

3.5. Social factor

Family support, economic factors and social support are risk factors for PPD. Family support includes the husband and his family members, the postpartum body is in the recuperation, recovery stage, coupled with the change and re-adaptation of life habits before pregnancy, pregnancy, postpartum, in this special period, if not the husband's care, understanding and help of family members, often make the mother feel wronged, lost, tired, and then appear depressive symptoms. Studies have shown that the probability of PPD in women whose husbands do not participate in the whole process of delivery is 3.162 times that of women whose husbands participate in the whole process of delivery [24]. Disharmony between husband and wife is an important risk factor for postpartum depression. There are many reasons that affect the relationship between husband and wife, such as the attention of the family after the birth of the newborn is mostly focused on taking care of the child, resulting in less attention to the mother, at this time the mother may have a sense of psychological gap. In addition, after childbirth, the body is weaker, the body hormone level will also change, and the mood will fluctuate. The spouse should pay attention to the maternal mental state in time to reduce the generation of family conflicts. Studies have shown that the probabilities of PPD among mothers with poor relationship between mother-in-law and daughter-in-law and unsupported family members account for 94.4% and 94.6% [25]. Family economic income is another important factor affecting women's postpartum depression, and the birth and rearing of newborns is undoubtedly a large expense for ordinary families. Mothers with poor family economic status need to worry about the cost of the birth of their children, and may also feel guilty because they cannot provide a better living environment for their children, increasing their own psychological pressure and leading to depression. Research shows that 85.4% of mothers suffer from postpartum depression due to family economic income. The probability of PPD among women who have concerns about work and employment is 3.938 times that of those who have no concerns about work [26]. In addition, postpartum depression is also related to whether the newborn suffers from diseases. Studies have shown that the probability of PPD among pregnant women with diseases is 9.226 times that of healthy newborn women. When the newborn is born with diseases, the pregnant women are worried about the development and prognosis of the disease, which can lead to a heavy psychological burden, resulting in bad emotions. Therefore, it is an effective measure to reduce PPD to standardize the prenatal examination, timely evaluate the fetal growth and development, and provide timely guidance to reduce the incidence of neonatal diseases.

4. The treatment of postpartum depression

The treatment principles for PPD are the same as those for depressive disorders in non-pregnant adults. However, it is necessary to take into account the related metabolic changes of patients after delivery, the exposure of infants to antidepressants during breastfeeding, the adverse reactions of drugs and the long-term effects on the growth and development of newborns into consideration, etc. Currently, the treatment for PPD includes drug therapy, psychological therapy and physical therapy. Since many mothers consider the impact of drug therapy on breastfeeding, Therefore, psychological therapy is the first choice to treat postpartum depression.

4.1. Psychological nursing intervention measures

At present, there are many nursing interventions for patients with PPD, and the more common methods include psychological intervention, cognitive behavioral intervention, etc.

4.1.1. Prenatal psychological support intervention. Pregnant women to establish pregnancy examination files, pay attention to maternal psychological changes. The maternal health guidance manual is distributed to improve their health knowledge, and the childbirth plan is formulated jointly with the pregnant women to give them a sense of support. The screening of depressive mood and mental health education during pregnancy were included in the routine antenatal examination. Schools for pregnant women are set up to help pregnant women adapt to the role of motherhood and prepare for it through lectures, videos and health education manuals. Strengthen the prenatal examination, in order to find the deformed fetus in time, to avoid its birth to bring a greater blow to the mother. In view of the physical discomfort caused by pregnancy and childbirth, the change of interpersonal relationship and family pattern after the birth of the fetus, the pressure of raising children and other risk factors, psychological intervention is given to let the mother learn emotional management.

4.1.2. Intrapartum care. The woman was accompanied by husband and midwife to give psychological support and verbal comfort. Studies have shown that the incidence of postpartum depression among women who are accompanied by their spouses is 4.00%, which is significantly lower than that of women who are not accompanied by their spouses, which is 20.00% [27]. To encourage mothers, midwives to assist mothers to eat and drink, regularly ask about their physical conditions, and give them physical, psychological and emotional support.

4.1.3. Postpartum psychological counseling. Maternal labor will consume a lot of physical strength, coupled with postpartum incision pain (vaginal delivery perineal incision, cesarean section incision), postpartum need to ensure adequate sleep. During hospitalization, it is necessary to provide a quiet and comfortable environment for the parturient to rest and use the knowledge of sociology and psychology to carry out psychological intervention to reduce the psychological burden of parturient. Encourage maternal husbands and family members to actively communicate with them, eliminate maternal anxiety, stimulate maternal interest in life and surrounding things, avoid postpartum emotional overreaction, and prevent depression. Let family members understand, care and be considerate of the mother, and take the initiative to help take care of the baby, so that the mother can keep the mood relaxed and happy. For postpartum depression caused by different causes, give targeted psychological counselling, such as maternal family discord, encourage the maternal family to take the new life as the center, establish a good family environment; Women who cannot adapt to the role change should be informed that becoming a mother is a necessary life process for women, correctly understand the role change, and gradually adapt to the role. Studies have shown that the implementation of psychological care and health education for patients with postpartum depression can improve their mental health level, reduce anxiety and depression symptoms, and improve postpartum quality of life [28].

4.2. Solution-focused nursing intervention

The focused solution model is a new nursing intervention model, which takes the positive psychology as the background, respects the individual, trusts the individual's own resources and potential as the intervention principle, and finally helps the maternal to find the life goal and rebuild the life confidence. The focused solution model can make women feel fully respected and affirmed, increase their self-confidence, obtain good psychosocial support, actively participate in their own emotional management, and improve negative emotions. The model can improve the nurse-patient relationship, build trust, facilitate communication, and promote the maternal initiative to vent emotions. Liu Junxia et al. confirmed that the model can improve the adverse emotions and coping styles of high-risk pregnant women and reduce the occurrence of adverse pregnancy events [29].

4.3. Cognitive behavioral intervention

The distortion of cognitive behavior or wrong thinking of parturients is the main cause of psychological disorders. Depressed patients tend to misunderstand neutral and positive attitudes and are more likely to choose negative thinking. According to relevant studies, patients with postpartum depression usually adopt negative coping styles, such as self-blame and avoidance [30]. Cognitive behavior intervention can change individual thinking, stimulate individual internal motivation, make them face positively, reduce postpartum negative emotions, and guide women to adopt positive application methods. The research showed that for patients with PPD, after cognitive behavioral intervention on the basis of conventional antidepressant treatment, the scores of patients' Functional Status Rating Scale (DAS) and Hamilton Depression Scale (HAMD) were significantly reduced [31].

4.4. Music therapy

Music therapy is a kind of therapy that integrates medicine, music aesthetics, psychology and other disciplines, and adjusts the body and mind of patients by regulating with beautiful music. Choosing comfortable music can stimulate the auditory center of the human body and enhance the parasympathetic nerve activity, while weakening the sympathetic nerve activity. The melody and rhythm of music itself can play a good role in regulating the emotional group of patients with depressive symptoms.

4.5. Medical treatment

4.5.1. The indications. Moderate or above depression or depression that has failed to respond to other treatments can be considered for drug treatment. Selective serotonin reuptake inhibitors are the first choice for the treatment. This class of drugs mainly regulate brain neurotransmitters by inhibiting the reuptake of serotonin in the synaptic space, relieving mood and thus having antidepressant effects.

4.5.2. The matters needing attention. During antidepressant therapy, it is necessary to closely observe clinical symptoms, especially in the first few months of drug therapy and when the dose changes, if symptoms worsen or behavior changes are abnormal, you should see a doctor in time to adjust the medication schedule. When reducing the dose of antidepressant medication, the dosage should be reduced gradually to avoid the occurrence of withdrawal reaction and worsening of symptoms.

4.5.3. Effects on lactation. Drugs to treat depression are prohibited or should not be used during lactation, so try to use artificial feeding while taking drugs to treat depression. If breastfeeding is necessary, it is recommended to take the minimum dose of medication to control symptoms, and to increase the dose slowly when it is necessary to increase the dose.

5. Conclusion

Postpartum depression (PPD) is the result of physiological, psychological, social environment and other factors, which not only has a certain harm to the mother itself, but also affects the growth and development of the baby, and there are disadvantages to the spouse or family. Therefore, it is necessary to strengthen the prenatal, puerperal and postpartum care, provide effective intervention strategies, pay attention to PPD in various aspects, and achieve early detection, early diagnosis and early treatment.

At present, there is no targeted treatment for postpartum depression, so the prevention of postpartum depression is particularly important. It is necessary to carry out early identification and screening, early intervention for risk factors, improve prevention and control effects, and establish a more perfect maternal and perinatal mental health service system. For patients with PPD, the combination of medication and psychotherapy or other measures for PPD may produce a better additive effect, which is worthy of further study. In the future, long-term and large-scale multi-center studies should be conducted to establish a large-sample follow-up cohort. For different PPD patients, comprehensive consideration should be given to biological, social, family and psychological factors to provide an individualized optimal treatment plan.

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