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Understanding and Addressing Male Postpartum Depression: Incidence, Causes, Diagnosis, and Management Strategies

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Pregnancy-related stress affects not only the woman but also her partner. The issue of postpartum depression in women is increasingly discussed, apart from its occurrence in men, which can develop up to 12 months after giving birth. Risk factors for depression in young fathers are numerous and include hormonal fluctuations, socioeconomic conditions, and co-occurrence of other diseases. Emerging depressive symptoms are nonspecific and can be missed even by experienced medical personnel. Currently, screening tests use questionnaires that do not consider male risk factors. Perhaps the development of more personalized diagnostic methods would enable early identification of men at risk and include preventive measures. The proposed treatment methods of postpartum depression, such as sertraline or cognitive-behavioral therapy, enable patients to recover and provide appropriate support. The disease can cause long-term consequences that negatively affect the development and functioning of the child's psyche. Behavioral disorders and emotional problems are observed in children whose fathers had postpartum depression. Moreover, partner relationships deteriorate and the father-child bond is impaired. Further research should focus on identifying risk factors in men from different social classes, considering environmental, personal, and ethnic characteristics, and on the effectiveness of postpartum depression treatment in men. This article aims to review the incidence, causes, diagnosis, and management of male postpartum depression.

Keywords: Depression • Men's Health • Postpartum Period • Stress Disorders, Traumatic

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Introduction

Postpartum depression is a serious disease characterized by a mood disorder that can develop from several weeks to several months after the birth of a child [1]. Like mothers, fathers are also at risk of postpartum depression, although the disorder occurs slightly less frequently in them. Statistically, postpartum depression is estimated to occur in 6.5% to 20% of women and in approximately 10% of men [2,3]. The Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V) classifies postpartum depression as major depressive disorder with peripartum onset and diagnoses the disease based on their criteria [4]. Additionally, the Edinburgh Postnatal Depression Scale (EPDS), EPDS-Partner (EPDS-P), and Patient Health Questionnaire-9 (PHQ-9) are used as screening tools.

For various reasons, postpartum depression in men is sometimes overlooked or unnoticed by patients and medical staff, even though it poses the same threat as it does to mothers. Current prevention of postpartum depression should include not only the identification of risk factors in young mothers, but also in their partners. Therefore, this article aims to review the incidence, causes, diagnosis, and management of male postpartum depression, because increasing the awareness of doctors and society about the occurrence of this disease also in men will help prevent its potentially tragic consequences.

Epidemiology

The birth of a child is a huge emotional experience for the entire family and requires modification of the family's current way of functioning. The birth of a child is a source of joy but also creates new tasks and responsibilities for parents, which contributes to the increase in stress levels in new parents and affects their relationships [5]. As a result of various factors, exceeding the tolerable level of stress and increased susceptibility of the psyche to stress, its functioning can become decompensated, and depressive symptoms can occur in parents experiencing new difficulties.

Currently, there is more discussion about the occurrence of postpartum depression in young mothers [6]. This problem is so important that if it is overlooked or untreated, it can lead to tragedy. Unfortunately, this disease does not spare fathers and affects them only slightly less frequently than women. Research conducted in Chile showed the prevalence of postpartum depression among fathers at 18.5%, the results varying geographically [7]. Currently, the prevalence of postpartum depression in fathers is assumed to be 8% to 10% [3]. It is also worth emphasizing that depression in a man is strongly correlated with depression in his partner, where the severity of depressive symptoms in one partner increases the risk of its development in the other [8]. The disease usually affects people who become parents for the first time, but it can appear in subsequent pregnancies [9].

Etiology

The functioning of a young father's psyche changes from the moment he knows about his partner's pregnancy. Over the course of several weeks, enormous changes occur in the psyche's functioning, preparing a man to take on a new role, the role of a father. Related changes, such as partnership, personality, and task changes, are a source of stress that men have to face [10]. The fact is that not only women experience somatic symptoms of pregnancy, but also men. This phenomenon has been described as Couvade syndrome. In Poland, approximately 72% of future fathers experience at least one of the symptoms of this syndrome [11]. Its symptoms include nausea, vomiting, abdominal pain, toothache, weight gain/loss, and skin problems. These ailments appear in the first trimester of the partner's pregnancy, disappear temporarily in the second trimester, and reappear in the third trimester with increased intensity [12]. The most vulnerable are men who are expecting a first-born child in couples with a very strong emotional bond [11]. Couvade syndrome occurs in 11% to 36% of partners of pregnant women [13]. Hormonal changes are believed to be the cause of the symptoms, as a marked decrease in testosterone was observed in fathers with somatic stress associated with pregnancy and the postpartum period [14]. The transition of functioning into the "father's model" takes considers several levels, such as sociocultural and hormonal and the reconstruction of the neuronal network. The socio-cultural aspect refers to fathers' expectations, different parenting attitudes, and involvement in helping infants [8]. These factors indirectly affect neurons, as time spent directly caring for the child has been shown to be linearly related to the connectivity between brain areas related to parenting in fathers [15]. Moreover, it was observed that in fathers, unlike mothers, the volume of gray matter was reduced from 2 to 4 weeks to 12 to 16 weeks after delivery. Similarities in the activation of the superior temporal sulcus – the social understanding network – have also been demonstrated between fathers taking care of their children alone and fathers who play a secondary role in their care, as well as similarities between fathers and mothers in the activation of the amygdale – the emotional attachment network [14].

There are many potential risk factors for men developing postpartum depression. These include the father's age, education, history of mental illness, marital discord, financial problems, partner's depression, and hormonal fluctuations [16].

One of the main causes of postpartum depression in women is sudden hormonal fluctuations. They also occur in partners

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and can be responsible for the development of the disease to a similar extent [17]. A study of men about to become fathers for the first time showed lower testosterone and cortisol concentrations and increased estradiol concentrations. The concentrations fluctuated due to the approaching due date [18]. Many of these hormonal changes are thought to help create the father-child relationship. One study described a correlation between reduced testosterone levels in fathers and an increased response of compassion to a crying child, or increased levels of estrogen, vasopressin, prolactin and increased involvement in parental behaviors [19]. Changes in the concentrations of these hormones can also predispose to the occurrence of postpartum depression symptoms or their exacerbation. There is a direct correlation between reduced testosterone levels and symptoms of postpartum depression, whereby low levels of estrogen, vasopressin, and prolactin can cause difficulties in establishing and strengthening the father-child relationship, which in turn can lower the mood of the young father [16]. Cortisol has also been shown to influence parenting. In fathers, cortisol levels increase in response to their baby's crying and decrease when they hold the baby or interact with it. One study found lower quality of infant care up to 6 weeks after the child's birth in fathers with high prenatal cortisol levels [14].

Correlations were also demonstrated between a significant psychiatric interview and the recurrence of affective disorders in young fathers. One study found that previous antidepressant treatment and social deprivation were key determinants of the need to start antidepressant treatment in men within a year after the birth of a child, because they developed depressive symptoms [20].

New responsibilities and tasks faced by a young father increase his level of stress and anxiety. After analyzing research aimed at highlighting the main risk factors for the development of postpartum depression, it was determined that the most influential external factor is stress related to the father's role [7]. Postpartum anxiety can coexist with postpartum depression. An analysis of 43 international studies showed that 18% of postpartum men reported high levels of anxiety, which, however, did not meet the criteria for a specific anxiety disorder [21]. The incidence of generalized anxiety disorder was estimated at approximately 4%, while 5% of men experienced symptoms of post-traumatic stress disorder several months after the child's birth. It also seems interesting that men can show symptoms of obsessive-compulsive disorder or meet its criteria, such as excessive worry about the child's health, preoccupation with care rituals, or intrusive thoughts about unintentionally harming the child. One study showed a decrease in the rate of diagnosis of the disorder from 3.4% before delivery to 1.8% after delivery [16].

The factors described above, as well as many others, are stressors that are responsible for the symptoms of postpartum depression in men. Emotional support, which is so important for men starting a new stage of life, should also not be omitted. Research has shown a correlation between a lack of emotional support and the development of postpartum depression in men [22].

Symptoms of Disease

Symptoms were found to usually appear 1 to 2 weeks after delivery; however, in some, the disease developed within 3 to 6 months of delivery [23]. Postpartum depression in men can manifest differently than in women. This is related to the way men deal with stress, which is different because they are less willing to talk about their feelings. Therefore, the onset of the disease can be very insidious and missed, which is why so many fathers develop symptoms of depression even 12 months after the birth of a child [16].

Subtle signs of illness include chronic fatigue, persistent irritability, decreased libido, sleep problems, and frequent mood changes [8]. These symptoms can initially be associated with a difficult and demanding parenting period. However, the man's surroundings begin to cause anxiety when the symptoms last longer, intensify, and new symptoms appear. Men can report exhaustion, significant weight loss or gain, decreased interest in or loss of pleasure in caring for the child or in things that previously provided pleasure, feelings of worthlessness in their role as a father, or recurrent thoughts about their own or the child's death. Social withdrawal, difficulty in caring for a child and carrying out daily duties, neglect of one's appearance and hygiene, or obsessive thoughts of various content are also among the symptoms of postpartum depression in men [4]. Additionally, men can report depressed or sad mood, insomnia or excessive sleepiness, agitated or delayed psychomotor drive, and decreased ability to think or concentrate [10]. None of the problems reported by young fathers should be underestimated, as they can constitute a picture of developing postpartum depression. Moreover, the closest contacts should be sensitive to the parents' behavior, as the symptoms of the disease are often ignored by the patients themselves.

Diagnosis

The diagnosis of postpartum depression in men should be made after observing disturbing symptoms. Quick initiation of pharmacotherapy and psychotherapy will enable a more efficient recovery, eliminate the patient's symptoms, and prevent dangerous complications of the disease. Unfortunately, there are not many tools that doctors can use to detect the disease early;

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therefore, it is important to increase the awareness of medical staff about its possible insidious onset not only in young mothers but also in fathers. Screening tests that doctors can currently use include the Edinburgh Postnatal Depression Scale (EPDS), and because men may be less willing to talk about their emotions and thus mask symptoms, this scale uses a lower cut-off point for them [24]. If the father cannot be directly assessed using this questionnaire, the partner can complete the EPDS-Partner scale as a screening tool [25]. Additionally, in a screening study for postpartum depression in men, the Patient Health Questionnaire-9 (PHQ-9) was found to be effective [26].

A mental disorder related to the puerperium can be classified with the ICD-10 using 2 different codes: the first is F.53 (mental disorder related to the puerperium, not elsewhere classified) and the second is O99.3 (mental disorder and diseases of the nervous system complicating pregnancy, childbirth, and puerperium).

However, in the DSM-5, postpartum depression is classified as major depressive disorder with peripartum onset. Postpartum depression is diagnosed based on a clinical interview using the DSM-5 criteria, which include [16] the presence of 5 or more of the following symptoms with onset during pregnancy or within 4 weeks after delivery, at least one of which is depressed mood or loss of interest and depressed mood most of the day or almost every day, as indicated by subjective assessment or observation of others: markedly decreased interest or pleasure in all activities that previously provided it most of the day or almost every day (as indicated by subjective report or observation); significant weight loss without dieting or weight gain; trouble falling asleep or excessive sleepiness; psychomotor agitation or retardation almost every day (noticeable to others, not just a subjective feeling of anxiety or slowness); fatigue or loss of energy almost every day; feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) almost every day (not just remorse or guilt about the illness); almost daily decreased ability to think and concentrate or indecision (based on subjective report or observation of others); and recurrent thoughts of death (not just fear of death), recurrent thoughts of suicide without a specific plan, suicide attempt or specific plan to commit suicide. Moreover, the next 2 criterion need to be present: symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning, and the episode cannot be attributed to the physiological effects of a substance or to another medical condition [4].

Treatment

Antidepressants are drugs that alleviate the symptoms of the disease and due to their similar presentation in men and women, the proposed treatment method is the same for both sexes. The first choice remains serotonin reuptake inhibitors, such as sertraline [27,28]. Unfortunately, due to the infrequent occurrence of the disease among men, no control studies have been conducted to assess the effectiveness of postpartum depression treatment in this sex.

Treatment of postpartum depression involves the use of psychotherapy, including cognitive-behavioral therapy, which allows patients to recognize and change their negative emotions, and interpersonal therapy, which enables understanding and working through problematic personal relationships [29]. Additionally, cognitive-behavioral therapy showed greater effectiveness than did the use of sertraline in a small study group of women with postpartum depression. No major benefit has been reported with combination therapy [30]. In severe depression, benzodiazepines can also be used for a short period to support the period until the antidepressants take effect [31]. Electroshock therapy is also used in severe and treatment-resistant postpartum depression. However, this method has numerous limitations [32].

Health-promoting behaviors that can have a beneficial effect in alleviating symptoms should not be omitted. These include proper sleep hygiene, a diet that includes calcium intake [33], regular physical activity [34], and bright light therapy [35]. Moreover, it can be beneficial for the functioning of the father's psyche to have others show support and acknowledge the emotions and conflicts he feels. Socioeconomic support in the form of paid paternity leave can also contribute to reducing the level of stress related to the father's role and facilitate the adaptation process [10].

Consequences of Postpartum Depression

The consequences of the disease are long-term and cause enormous changes in the psyche of children of parents affected by the disease. Research has shown that children whose fathers had postpartum depression have twice the risk of developing behavioral, emotional, and social problems and delays in speech development than do children whose fathers did not have depression [36]. It was also found that father's depression is associated with poorer psychosocial functioning, more frequent suicidal thoughts and attempts in their sons in young adulthood, and depression in their daughters [37]. Postpartum depression also has a negative impact on the functioning of the family, relationships with partners and relatives, and the quality of life of patients [38].

Future Directions

Identifying risk factors and early depressive symptoms in fathers can prevent the development of the disease. Therefore,

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screening tests should be developed that consider sex, social class, level of education, financial and socioeconomic status, comorbidities, and significant psychiatric history. These factors can predispose fathers to the development of depression. The possibility of their independent use by all interested individuals should be also considered. Easily accessible, reliable, and free applications can become a modern way of "self-diagnosis". In addition, research should be conducted on the use of new treatment methods and the assessment of their effectiveness.

Loneliness has been shown to be a significant factor associated with postpartum depression [39]. The development of support programs should be considered, and single fathers should be encouraged to participate in them, as the meetings provide appropriate assistance.

Promoting mental health in the form of posters and information about postpartum depression can increase public awareness of the severity of the disease, reduce the stigmatization of those with postpartum depression, and encourage them to seek help if they notice its symptoms.

Conclusions

Postpartum depression in men is very hidden. Many psychological, organic, and environmental factors are responsible for its occurrence; therefore, it is important to identify them at an early stage in order to prevent the development of the disease.

It is important that postnatal patronage visits and the mood monitoring conducted during them cover both parents to the same extent. This method will enable earlier diagnosis and prevent the danger to the patient and his immediate surroundings.

Currently proposed pharmacotherapy and psychotherapy enable patients to recover; however, the consequences of the development of the disease show how important screening tests and the awareness of medical staff in recognizing the symptoms of depression are. Further development of research may contribute to earlier implementation of preventive actions; therefore, the ongoing work should be closely monitored.

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