A Woman Who Cannot Enjoy Her Pregnancy: Depression in Pregnancy and Puerperium

3

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3.1 Introduction and Aims

Depressive symptoms during pregnancy and after delivery are common. Overall 7–13% of women suffer from major depression during their pregnancy and/or in the first 3 months after delivery. Perinatal depression is associated with both maternal and child adverse outcomes, but often remains unrecognized. Therefore, early detection and treatment of depression during pregnancy and in the postpartum period is crucial.

3.2 Definition in Lay Terms

Perinatal depression is a specifier of a depression with an onset of mood symptoms during pregnancy or in the first 4 weeks following delivery. A diagnosis of major perinatal depression requires a depressed mood or a loss of interest or pleasure in daily activities for more than 2 weeks, along with a fixed number of emotional, somatic or cognitive symptoms. The severity of these symptoms should impair social, occupational, and/or educational functioning.

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3.3 Didactic Goals

After reading this chapter, you will be able to:

- Describe the criteria for perinatal depression
- Distinguish perinatal depression from pregnancy-related symptoms and maternity blues
- Mention risk factors and possible etiologies of perinatal depression
- Identify women with perinatal depression
- Consider pharmacological and non-pharmacological options for treating perinatal depression
- Weigh the risks and benefits of antidepressant medication during pregnancy and lactation period

Case History
Nadia Teal, 29 years old, presents for her pregnancy booking with her midwife at 10 weeks gestation. She is pregnant for the first time. The pregnancy was unplanned and unexpected. Although she is not confident about her relationship, she is willing to keep the baby. She tells her midwife that since she learned she was pregnant, she feels tired and sick, is easily irritated, has a lack of appetite, suffers from insomnia, and has problems concentrating at work. Currently she is at home, because she is not able to work. She asks whether these symptoms are related to pregnancy and if the midwife could help her to feel better.

3.4 Facts and Figures: Definitions, Classification, and Prevalence

3.4.1 What Is the Definition of Perinatal Depression?

See DSM-5 for the criteria for a major depressive disorder. According to the DSM-5, a specifier "with peripartum onset" can be applied to a major depressive episode if the depressive symptoms start during pregnancy or in the first 4 weeks after delivery. The diagnostic criteria for a depression in pregnancy and postpartum ("perinatal depression") do not differ from a depression outside the perinatal period. However, the presentation of depressive symptoms might differ from a "normal" depression. Women with perinatal depression often present with impaired bonding to their (unborn) child and feelings of guilt and insufficiency toward both their child and their partner.

3.4.2 How to Distinguish Postpartum Depressive Symptoms from Postpartum Blues

In the first week after delivery, about half of women experience symptoms such as crying, mood lability, irritability, anxiety, and insomnia. These symptoms, often referred to as "postpartum blues," "maternity blues," or "baby blues," typically start

Table 3.1 Point prevalence of major and minor perinatal depression

Point prevalence	Major and minor depression (%)	Major depression (%)
First trimester	11.0	3.8
Second trimester	8.5	4.9
Third trimester	8.5	3.1
1 month postpartum	9.7	3.8
3 months postpartum	12.9	4.7
6 months postpartum	10,6	5.6
12 months postpartum	6.5	3.9

Data from Ref. [2]

around the 3rd or 4th day after delivery and should resolve within 2 weeks [1]. This is considered to be a physiological phenomenon, often assumed to be related to hormonal readjustment after delivery. If postpartum blues do not resolve within 2 weeks, women are at risk for developing depression and should be evaluated by their general practitioner (GP) or a psychologist.

3.4.3 What Is the Prevalence of Depression During Pregnancy and Postpartum?

Although traditionally it was assumed that women were at highest risk for depression in the postpartum "puerperal" period, increasing research has shown that the rates of postpartum depression do not significantly differ from those of the reproductive years in general or during pregnancy. The prevalence of perinatal depression varies depending upon the method of assessment and the period over which prevalence is determined. Overall, 18.4% of women suffer from depression during their pregnancy, of whom 12.7% have major depression. In the first 3 months after delivery, 19.2% of women have depression, of whom 7.1% suffer from major depression [2]. Point prevalence estimates for minor and major depression are presented in Table 3.1 [2].

3.5 Etiology and Pathogenesis

3.5.1 What Is the Pathogenesis of Perinatal Depression?

The pathogenesis of perinatal depression is largely unknown. As is true for depression in general, the causes of perinatal depression are likely to be a combination of biological, psychological, and environmental factors.

3.5.2 What Are Risk Factors for Perinatal Depression?

Psychological and environmental risk factors for perinatal depression that are reported in separate studies are [3]:

1. Past history of psychiatric disorders

2. Depression/anxiety during current pregnancy
3. Maternity blues
4. Recent adverse life events
5. Low socioeconomic status
6. Insufficient emotional/social support
7. Poor marital relationship
8. Unplanned pregnancy
9. Immigration/pre-migration stress
10. Personality traits
11. Unfavorable obstetric/pregnancy outcomes
12. Unfavorable neonatal outcomes
13. Chronic/current physical illness
14. History of Premenstrual Mood Disorder (PMD)
15. History of physical/sexual abuse
16. Multiple births
17. Domestic violence
18. Childcare stress/infant temperament

Table 3.2 shows the effect sizes of risk factors associated with depression during pregnancy and postpartum, based on systematic reviews [4, 5]. In summary, there are many risk factors or indicators for depression.

3.5.3 Do Hormonal Factors Play a Role in the Pathogenesis?

Since levels of the reproductive hormones estrogen and progesterone increase during pregnancy and fall rapidly after delivery, perinatal depression is often hypothesized to be related to hormonal fluctuations. However, clinical studies

Table 3.2 Risk factors for perinatal depression and their effect sizes

Risk factor	Depression during pregnancy	Postpartum depression
History of depression	+++	++++
Anxiety	++++	++++
Life stress/events	+++	++++
Neuroticism	?	+++
Lack of support	++++	++++
Poor partner relationship	+++	+++
Domestic violence	+	?
Unintended pregnancy	+++	?
Obstetric factors	–	+
Smoking	+	?
Socioeconomic status	–	+

Data from Refs. [4, 5]
– no association, + small association, ++ small-to-medium association, +++ medium association, ++++ medium-to-large association, ? no studies available (based on Cohen's definitions of standardized effect sizes)

investigating the effect of hormonal interventions to prevent or reduce perinatal depression are limited and inconclusive [6].

More evidence exists for hypothalamic-pituitary-adrenal (HPA) axis dysfunction in women with perinatal depression. Patients with depression, both during and outside the perinatal period, have higher baseline levels of cortisol and a hyperactivity in reaction to stress. For example, a double-blinded study in which the rapid withdrawal of reproductive hormones after delivery was simulated in euthymic, nondepressed women outside the puerperal period with and without a history of postpartum depression showed that women with a history of perinatal depression were at much higher risk to develop significant mood symptoms in the withdrawal period [7]. Also, some studies found an association between lower levels of serum free triiodothyronine (FT3) and free thyroxine (FT4) and an increased incidence of mood disturbances in the postpartum period [8, 9]. However, these studies do not give evidence and/or indications for prevention or treatment of perinatal depression. Therefore, hormone substitution in women with—or at risk for—perinatal depression should be avoided until more evidence is available.

3.6 Specific Diagnostic Aspects

Early detection and diagnosis of perinatal depression can be complicated by the shame and burden most women feel at presenting with depressive symptoms to their healthcare professional in a period that is traditionally considered cheerful. Therefore, one should be particularly aware of the emotional and social isolation that women with depressive feelings often experience. Even if women do not appear depressed, they could significantly suffer from their symptoms. Another difficulty in identifying women with perinatal depression is that depressive symptoms could mimic pregnancy-related symptoms, such as altered weight, insomnia or hypersomnia, fatigue or loss of energy, and problems with concentration. In contrast to women with only pregnancy-related symptoms, women with perinatal depression also suffer from one of the core symptoms: depressed mood and/or loss of interest/pleasure (anhedonia).

3.6.1 How Can Women at Risk for Perinatal Depression Be Screened?

As recommended by the National Institute for Health and Care Excellence (NICE) guidelines in the UK, healthcare professionals (including midwives, obstetricians, health visitors, and GPs) should ask two questions at a woman's first contact with primary care, at her booking visit, and postnatally (usually at 4–6 weeks and 3–4 months) to identify a possible depression:

1. During the past month, have you often been bothered by feeling down, depressed, or hopeless?

2. During the past month, have you often been bothered by having little interest or pleasure in doing things?

If the woman answers "yes" to either of the above, then a third question should be asked:

3. Is this something you feel you need or want help with?

For further assessment of perinatal depression, the most widely accepted Edinburgh Postnatal Depression Scale (EPDS) could be used, which takes 2–5 min to complete [10]. In this validated 10-item self-report questionnaire, the somatic symptoms are excluded because they do not differentiate well between depressed and nondepressed pregnant and postpartum women. This questionnaire is also validated for use during pregnancy [11]. A cutoff score of ≥10 is indicative for clinically relevant depressive symptoms. Women who score above this threshold should be referred to a general practitioner or psychologist for further evaluation and eventual treatment of perinatal depression.

Case History: Continued
When the midwife asks Nadia whether she felt depressed or has been bothered by having little interest or pleasure in doing things during the past month, Nadia answers "yes" to both questions. Further assessment of the severity of depressive symptoms by means of the EPDS reveals a score of 15, which is above the cutoff score for clinically relevant depressive symptoms. The midwife, who closely collaborates with a perinatal psychologist, arranges a consultation in the next week.

3.7 Specific Therapeutic Aspects

3.7.1 What Are Evidence-Based Treatments for Perinatal Depression?

There is growing notice of the importance of screening for depression during pregnancy. However, evidence-based treatment algorithms for depression during pregnancy are limited. In general there is no reason to assume that evidence-based treatments for "normal" depression would not be as effective in the perinatal period.

However, in decisions about treating perinatal depression, the risks and benefits to the unborn child must also be taken into account. Leaving depression untreated may be hazardous to the unborn child. At present, it is well known that children of women who suffered from depression during pregnancy have an increased risk of adverse perinatal health outcomes and behavioral, emotional, cognitive, and motor problems in early childhood [12, 13].

An important first step in treating perinatal depression is explaining to the woman and her partner that depression is a frequently occurring condition that can effectively be treated. Second, it is important to discuss ideas about the disorder, including stigma and feelings of guilt and shame, and expectations about treatment. If possible, also the partner, family, and other nearby people should be actively involved in the decisions about treatment and their role in supporting the woman.

3.7.1.1 Non-pharmacological Treatment

Pregnant women express a strong preference for non-pharmacological depression treatment over antidepressant medication, because of the possible harm to their child [14]. In pregnancy and in the postpartum period, the efficacy of psychotherapy is empirically supported. Interpersonal psychotherapy (IPT) and cognitive behavioral therapy (CBT) have been shown to be effective for perinatal depression across the spectrum from mild to severe depression [15]. The results of the latter study stress the importance of implementing preventive CBT as a first-choice treatment for relapse of depression/anxiety during pregnancy.

IPT is a time-limited psychotherapy that targets reduction of depressive symptoms, improved interpersonal functioning, and increased social support. The underlying theory is that changes in interpersonal relationships trigger depression in sensitive women [16]. Especially in the perinatal period, relationships with the partner, employer, and the woman's own parents are changing and often stressful. The first phase in IPT is identifying the major loss or losses that are related to the interpersonal role changes that occur during pregnancy or after childbirth. For example, a woman who used to have an active social life before becoming pregnant has to give up going out during nights as frequently as before pregnancy. First she could be helped with realizing and accepting that life will never be like before pregnancy again and that this is a major loss that may cause feelings of mourning. After discussing the loss and feeling the grief, the therapist will help this woman to identify possibilities to adjust to the new situation of pregnancy. For example, she could discuss with her partner to find other distractions that are more compatible with her pregnancy or aim at ways of getting to know other pregnant women with whom she could meet during the day and share feelings that are typically related to pregnancy and becoming a mother.

CBT has mainly been studied, and shown to be effective, in the prevention and treatment of postpartum depression [15]. CBT addresses dysfunctional thoughts and beliefs, e.g., "I will never be a good mother" or "other women do much better than I." These often automatically generated negative thoughts will first be identified and secondly challenged and replaced with alternative more helpful thoughts and activities. Registration of thoughts and feelings during the day and goal-oriented exercises provide women with insight and tools to change their maladaptive behaviors.

Other non-pharmacological treatments that might be considered are summarized in Table 3.3 [16–22]. These effect sizes are mainly based on randomized controlled trials (RCTs). However, a placebo response could not be ruled out because in most non-pharmacological treatments, blinding is not possible, except for bright light therapy.

3.7.1.2 Pharmacological Treatment

When the direct availability of psychotherapists is limited and/or when the depression is severe (e.g., in case of psychotic features and suicidal ideation), antidepressant medication should be actively considered. This should be carefully evaluated and monitored by a psychiatrist. Research is still equivocal on the effect of antidepressant medication use during pregnancy. In Table 3.4 the known effects of depression and antidepressant medication use during pregnancy, birth outcome, and child development are presented. Only data from meta-analyses are presented [13, 23–28].

Table 3.3 Non-pharmacological treatments for perinatal depression and their effect sizes

Treatment	Effect size
Interpersonal psychotherapy [16]	++++
Cognitive behavioral therapy [17]	++++
Relational therapy [18]	++
Bright light therapy [19]	+++
Mindfulness [20]	?
Acupuncture [21]	+
Massage [22]	+
e-Health	?

Data from Refs. [16–22]
– no association, + small association, ++ small-to-medium association, +++ medium association, ++++ medium-to-large association, ? no studies available (based on Cohen's definitions of standardized effect sizes)

Table 3.4 Effects of depression and antidepressant medication during pregnancy

Treatment	Depression	Antidepressant medication
Spontaneous abortion	–	–
Preeclampsia	+	–
Premature birth (<37 weeks)	+	+
Low birth weight	+/–	+
Small for gestational age	+/–	+
Overall congenital malformations	–	–
Cardiovascular malformation	–	+[a]
Poor neonatal adaptation	–	+++
Persistent pulmonary hypertension	–	++[b]
Child developmental problems	+	+/–

Data from Refs. [13, 23–28]
– no association, +/– inconclusive, + OR 1.00–2.00, ++ OR 2.00–3.00, +++ OR >3.00
[a]Mainly cardiac septal defects and occasionally right ventricular outflow tract obstruction
[b]The effect was only significant for the third trimester, and the absolute risk of PPHN is very low (2.9–3.5 per 1000 infants)

3.7.2 What Are the Risks and Benefits of Antidepressant Medication During Pregnancy?

It should be noted that both treated and untreated depression are associated with adverse outcomes. Also, the meta-analyses are based on studies with generally low levels of evidence due to a lack of randomization and uncontrolled confounders (e.g., actual level of depression, substance use, comorbidity, and co-medication). If antidepressant medication has an increased risk for adverse outcomes at all, this risk is generally not clinically relevant and for some outcomes (e.g., birth outcomes) is comparable to untreated depression.

In clinical practice, the clinician must carefully discuss the risks and benefits of antidepressant use during pregnancy. The decision to use antidepressants must be weighed against the risks of untreated maternal depression, including poor self-care, suboptimal food intake, increased risk of relational problems, and potential self-harm, including suicide. As shown in Fig. 3.1, Yonkers et al. presented a helpful algorithm for decision-making in women with major depression in obstetric care [29].

3.7.3 Is Breastfeeding Contraindicated When Antidepressant Medication Is Continued?

There is no methodologically sound literature on the effects of antidepressant medication during breastfeeding on child outcomes. Some small studies did not find any adverse child outcomes for which they may or may not have sought medical attention [30, 31]. Most tricyclic antidepressants and the selective serotonin reuptake inhibitors (SSRIs) sertraline, fluvoxamine, and paroxetine have low transfer rates to breast milk. For venlafaxine, (es)citalopram, and fluoxetine, higher levels are found in breast milk. In general, breastfeeding with antidepressant medication is not contraindicated unless the child is born prematurely or in a poor condition after childbirth.

Case History: Continued

As suggested, Nadia Teal consulted a psychologist in the same week. Her partner Donald, who was invited as well, accompanied her. During the consultation Nadia showed no suicidal ideations and there were no psychotic symptoms. Nadia explained she was never treated for depression before. After discussing the different treatment options, she showed highest motivation for a non-pharmacological treatment. Because of the problems adjusting to pregnancy and the relational stress, the psychologist started with interpersonal psychotherapy. Donald appeared to be very willing to work on their relationship and agreed to join some sessions.

After 12 weekly sessions, the depression and the relationship significantly improved. Nadia delivered a healthy baby, was able to adjust to motherhood well, and felt supported by Donald.

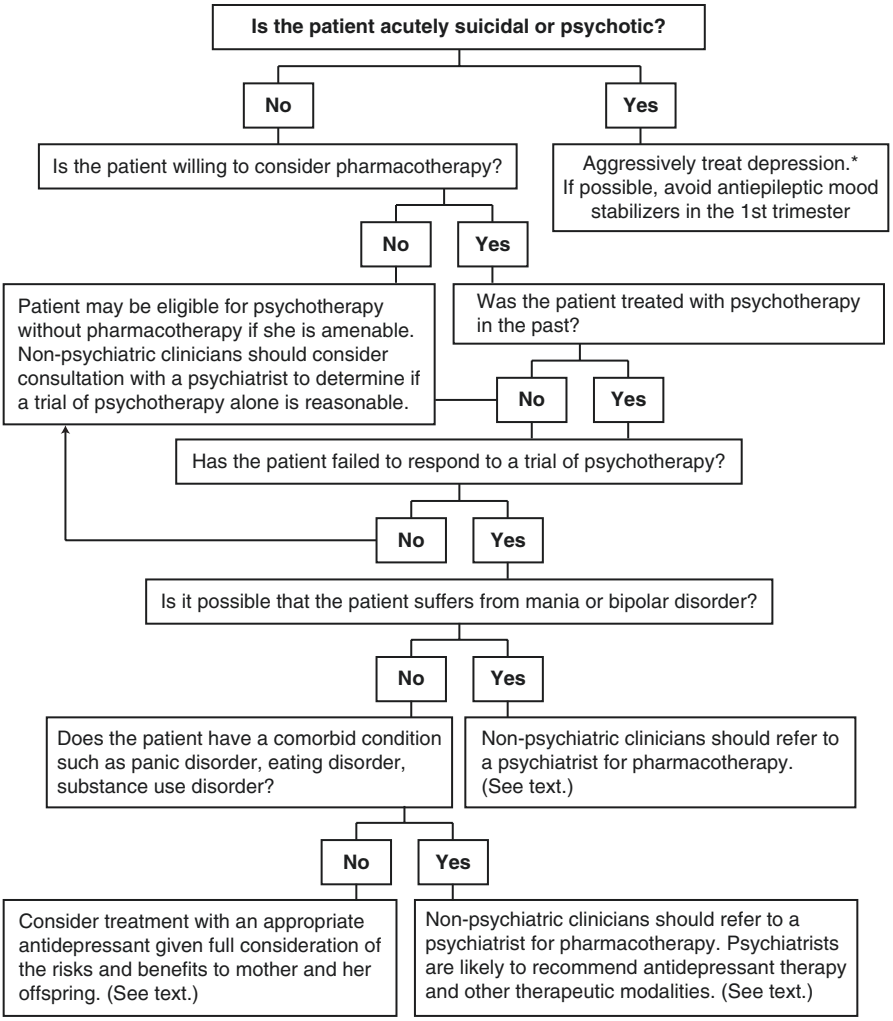

Fig. 3.1 Algorithm for treating depression in an obstetric setting (Used with permission of Wolters Kluwer from Yonkers et al. [29])

3.8 Critical Reflection and Conclusive Remarks

Depression is a very heterogeneous disorder with a complex etiology involving biological, psychological, and environmental risk factors. It is still under debate whether a typical perinatal or postpartum depression exists. The symptoms, prevalence, and risk factors associated with perinatal depression are not significantly different from those of nonpregnant women of reproductive age. However, it is important to realize that women with depressive symptoms are probably underdiagnosed because of the burden professionals and women feel about discussing

negative feelings in a period that is traditionally considered as a cheerful period. Therefore, healthcare professionals should ideally address and discuss both positive and negative feelings of pregnancy. Also, depressive symptoms show overlap with pregnancy-related symptoms, making it more difficult to recognize depression at an early stage. On the other hand, the perinatal period offers a unique opportunity for early detection and lifetime prevention for depression. In this period in which scheduled pregnancy visits take place, midwives and obstetricians should routinely ask about depressed feelings and/or decreased pleasure in doing things since the last visit. If positive, the EDS can be used to detect and if necessary refer women at risk for depression.

With respect to treatment, the window of opportunity is small, and therefore treatment options should be weighed against the motivation of the woman, availability of non-pharmacological therapy, and severity of the depression. If the woman is motivated and the depression does not require immediate treatment with antidepressant medication (e.g., in case of suicidal ideation or psychotic features), then the treatment of first choice is psychotherapy (e.g., cognitive behavioral therapy or interpersonal psychotherapy).

Tips and Tricks

- Since depression is prevalent, often not recognized, and associated with serious adverse outcomes for both mother and child, routine screening for perinatal depression in obstetric practice is advocated. When signs of depression are found while taking history during intake, the EDS can be used as an easy-to-administer and validated questionnaire to detect women at risk for perinatal depression. The EDS can easily be found as an online screening tool on websites such as the Australian "Beyond Blue" site (http://www.beyondblue.org.au/the-facts/depression/signs-and-symptoms/anxiety-and-depression-checklist-k10).
- Since the time window of treatment for perinatal depression is small, obstetricians and midwives should closely collaborate with mental healthcare professionals to provide prompt and efficient treatment.
- Ideally the partner and family should be involved in the management and treatment of perinatal depression, for a better understanding and optimizing of their supportive role.

Test Your Knowledge and Comprehension

1. The diagnostic criteria for a depression in pregnancy and postpartum period do not differ from a depression outside the perinatal period.
   (a) True
   (b) False
2. The diagnosis of a perinatal depression requires a depressed mood and a loss of interest or pleasure in daily activities.
   (a) True
   (b) False

3. Hormonal therapy is effective in preventing postpartum depression.
   (a) True
   (b) False
4. Postpartum blues is a physiological phenomenon that should be finished in the first 2 weeks after delivery.
   (a) True
   (b) False
5. Antidepressant medication should be avoided during pregnancy.
   (a) True
   (b) False

Five closed book questions and answers based on the chapter:

6. Perinatal depression (minor and major) occurs in approximately ____% of women
   (a) 5%
   (b) 10%
   (c) 15%
   (d) 20%
7. Which of the following factors is most strongly associated with perinatal depression?
   (a) Smoking
   (b) Lack of support
   (c) Obstetric factors
   (d) Low socioeconomic status
8. Which of the following outcomes is *not* associated with depression during pregnancy?
   (a) Preeclampsia
   (b) Premature birth
   (c) Spontaneous abortion
   (d) Child developmental problems
9. Which of the following outcomes is associated with perinatal depression?
   (a) Food supplements
   (b) Bright light therapy
   (c) Cognitive psychotherapy
   (d) Interpersonal psychotherapy
10. Which of the following antidepressant medication should be avoided during breastfeeding?
    (a) Paroxetine
    (b) Escitalopram
    (c) Tricyclic antidepressants
    (d) None of the above

Answers

1. True
2. False
3. False

4. True
5. False
6. (b)
7. (b)
8. (c)
9. (a)
10. (d)

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