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Postpartum depression – a mood disorder after delivery

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Abstract Postpartum depression (PPD) is a mood disorder characterized by depressive episode symptoms within three months after delivery, lasting between two and six months. The characteristic symptoms of postpartum depression are: exaggerated worry about the child's state of health, which does not cause any concern, weakened bond with the child, obsessive thoughts about harming the child (egodystonic thoughts), egosyntonic, non-obsessive thoughts about killing the child. All psychotropic medications are secreted in breast milk.

Pharmacological treatment of PPD is not contraindication for breastfeeding. PPD should be treated because it disturbs formation of a proper bond between mother and child, which has an adverse effect on the child's psychosocial development.

INTRODUCTION

Postpartum depression (PPD) is a mood disorder characterized by depressive episode symptoms within three months after delivery, lasting between two and six months. It affects many women of all demographic and cultural backgrounds in reproductive age. The prevalence of postpartum depression among women is estimated to be between 10% and 15%.[1,2] The characteristic symptoms of postpartum depression are: exaggerated worry about the child's state of health, which does not cause any concern, weakened bond with the child, obsessive thoughts about harming the child (egodystonic thoughts), egosyntonic, non-obsessive thoughts about killing the child (which may lead to specific intentions).[3] PPD symptoms include low mood, hopelessness, difficulty concentrating, psychomotor retardation, appetite disorders, sleep problems, anxiety disorders and suicidal thoughts. These symptoms often prevent them from carrying out their daily duties and taking care of the newborn baby.

The International Statistical Classification of Diseases and Related Health Problems (ICD-10), placed postpartum depression in the group of “Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified” and classified under the code F53.0. According to the ICD-10 criteria, symptoms of depression should appear within 6 weeks of childbirth. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) classified the "postpartum onset" as a specificity of depressive disorder and is consider onset of symptoms within 4 weeks after delivery. The criteria required to diagnose postpartum depression are the same as those required to make a diagnosis of major or minor depression unrelated with delivery (American Psychiatric Association 2013).

CAUSES OF POSTPARTUM DEPRESSION

The causes of postpartum depression are not entirely clear. Some studies confirmed that pathophysiology of this disorder is associated with genetic factors, such as polymorphism of monoamine (MAOA) neurotransmitters and catechol-O-methyltransferase (COMT).[2] It is currently believed that postpartum depression symptoms may be associated with hormonal disorders of the adrenal-pituitary-adrenal axis (HPA axis) and hypothalamic-pituitary axis. Research on estrogen, progesterone, thyroid hormone, testosterone, corticotropin releasing hormone and cortisol is currently in progress.[1] There is no confirmation for the thesis that a significant change in lifestyle caused by childcare can cause postnatal depression. Mothers who gave birth to several children without developing postpartum depression may still suffer from this disorder in future.[4]

RISK FACTORS

There are several PPD risk factors: postpartum depression / depression / anxiety disorders in the past or in family members, chronic stress, stressful events during pregnancy, past sexual abuse, unwanted pregnancy, traumatic experience in previous pregnancies, heavy or traumatic delivery, premenstrual dysphoric disorders, postpartum blue, young mother age (<25 years), lonely motherhood, bad relationships with mother, bad relationships in the family, financial problems, birth of a female sex baby.[5–8]

POSTPARTUM BLUES (PPB) AND POSTPARTUM PSYCHOSIS

PPD should be differentiated from postpartum blues (PPB) and postpartum psychosis. Postpartum blues is a transient postpartum mood disorder characterized by milder depressive symptoms like crying, decreased appetite and depressed mood. It occurs in around 70% of patients within the first week after childbirth and disappears within two weeks.[9–11] Postpartum psychosis is a rare mental health condition (1:1000 births) that presents hallucinations and delusions.[12]

BREASTFEEDING AND PHARMACOTHERAPY

Mother's milk guarantees immune protection and is a better source of nutrients[13] than formula feeding. Most antidepressants are excreted into breast milk but their concentration is low. Pharmacological treatment of PPD is not contraindication for breastfeeding. Untreated disease can affect child development. According to the recent studies, formula feeding has more adverse effects than potential impact of antidepressant drugs on the child. It is therefore believed that pharmacotherapy is safe for the child and can be used by breastfeeding women.[14] Several groups of drugs

are used to treat depression. The most common are selective serotonin reuptake inhibitors (SSRIs). Newer generations of serotonin-norepinephrine reuptake inhibitors (SRNI) as well as noradrenergic and specific serotonergic antidepressant drugs are also used. Well-known Tricyclic antidepressants (TCA) are still used, although the indications are significantly reduced.

All psychotropic medications are secreted in breast milk. Different drugs have very diverse pharmacokinetic properties: half-life, cumulative effect or relative infant dose (RID), which allows to estimate child's exposure to the drug. RID determines the percentage of the dose taken by a breast-feeding woman (expressed in mg/kg body weight per day) that the child takes with breast milk. It is considered that it is safe to use drug whose RID is <10% during breast-feeding.

HALE’S CLASSIFICATION

Hale's classification[15], consist of 5 drugs groups (L1-L5), is based on reports of drug intake by breast-feeding women. It includes data on the concentration of the drug in breast milk, it’s pharmacokinetics, as well as occurrence of adverse effects in children during breastfeeding. Drug groups according to Hale[15] *(Table 1):*

Classification	***Description***
L1 - compatible	Drug that has been taken by a large number of breastfeeding mothers without any observed increase adverse effects in the infant
L2 - probably compatible	Drug that has been studied in a limited number of breastfeeding women without an increase in adverse effects in the infant and/or the evidence of a demonstrated risk that is likely to follow use of the medication in a breastfeeding woman is remote
L3 - probably compatible	There are no controlled studies in breastfeeding women; however, the risk of untoward effects to a breastfed infant is possible, or controlled studies show only minimal nonthreatening adverse effects. Drugs should be given only if the potential benefit justifies the potential risk to the infant
L4 - possibly hazardous	There is positive evidence of risk to a breastfed infant or to breastmilk production, but the benefits from use in breastfeeding mothers may be acceptable despite the risk to the infant
L5 - hazardous	Studies in breastfeeding mothers have demonstrated that there is a significant and documented risk to the infant based on human experience, or it is a medication that has a high risk of causing significant damage to an infant. The risk of using of the drug in breastfeeding women clearly outweighs any possible benefit from breastfeeding. The drug is contraindicated in women who are breastfeeding an infant.

Table 1. - Hale's classification[15]

Choice of antidepressant should take into account the child's situation: age (premature, newborn, infant) and additional health burdens. Older infants have better metabolism and drug excretion.

PPD should be treated because it disturbs formation of a proper bond between mother and child, which has an adverse effect on the child's psychosocial development. Children of mothers with untreated depression following delivery have a higher risk of anxiety disorders and depression in the future.

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