

Epidemiological analysis of perinatal depression

Análisis epidemiológico de la depresión perinatal

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Abstract

Perinatal depression is a commonly underdiagnosed problem which not only severely affects maternal mental and physical health, but also affects the newborn on a physical, mental and cognitive level with serious repercussions on adult life. Despite efforts to obtain useful information to dimension the problem, most experts in the field agree that this disorder is more frequent than estimated. Thus, the improvement in obtaining information on perinatal mental health will not only allow for a better dimensioning of the problem, but will also allow for better decision making in public mental health to reduce morbidity and mortality and the burden of disease associated with perinatal depression.

Keywords: Perinatal depression. Perinatal mental disorders. Maternal mental health.

Resumen

La depresión perinatal es un problema habitualmente subdiagnosticado que no sólo afecta de manera importante la salud mental y física materna, sino también al recién nacido en los aspectos físico, mental y cognitivo, con serias repercusiones en la vida adulta. A pesar de los esfuerzos para obtener información útil para dimensionar el problema, la mayoría de los expertos en el tema coinciden en señalar que este trastorno es más frecuente de lo que se estima. La mejora en la obtención de información en salud mental perinatal permitirá dimensionar mejor el problema y una adecuada toma de decisiones en salud mental pública para disminuir la morbimortalidad y la carga de la enfermedad asociada a la depresión perinatal.

Palabras clave: Depresión perinatal. Trastornos mentales perinatales. Salud mental materna.

Introduction

Pregnancy is the highest vulnerability period for women; for such reason, comprehensive care is required, since this impacts on the pregnancy outcome and the future health of the newborn¹. Perinatal

depression diagnosis is frequently dismissed by health professionals, and it is seldom taken into account on health political planning¹. Therefore, making substantial revision of the existing epidemiological evidence on perinatal depression can raise awareness of the issue.

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Definition of perinatal depression

Perinatal depression is a public health problem which needs to be addressed to reduce maternal and perinatal morbidity and mortality associated with this condition². Some references are already found in the writings of Hippocrates (469-337 BC), of Joao Rodrigues de Castelo Branco (1511-1568) and of Luis de Mercado (1531-1611)³⁻⁶. During the 16th-17th Centuries, perinatal depression was associated with filicide^{3,7}, and by the beginning of the 20th Century, it was clearly differentiated if the depressive symptoms were found before, during or after pregnancy.

During the 20th Century, sadness, psychosis, and melancholy were considered part of the postpartum depression. However, today they are considered separate conditions and are part of the differential diagnosis⁸. At the end of 20th Century, with the development of mental health as a field of study, it was necessary to collect statistical data to homogenize the definitions of disorders. Thus, in 1952, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) of the American Psychiatric Association was published, as a supplement to the sixth edition of *Clasificación Internacional de Enfermedades* (*International Classification of Diseases*) (CIE-6), which corresponds to the Spanish version of the *International Statistical Classification of Diseases and Related Health Problems* (ICD) published by the World Health Organization and which had its origin in the *Lista de causas de muerte* (*List of causes of death*) in 1893.

Regarding depressive disorders, the DSM-IV TR did not clearly define the meaning of perinatal depression and the same criteria were used to define the major depressive disorder (MDD) of the general population. In the DSM-5, very few changes have been introduced as regards MDD, where it is defined according to the following criteria:

- During a two-week period, at least five of the following symptoms must appear almost every day: weight gain or loss, insomnia or hypersomnia, psychomotor retardation or agitation, fatigue or loss of energy, feelings of worthlessness or guilt, decrease in the decision-making ability and recurrent thoughts of death or suicide ideation, of which at least one must be accompanied by a depressed mood or loss of interest or pleasure.
- The symptomology must cause an important and significant impairment in the social, occupational and other areas of functioning of the individual.

- This episode cannot be attributed to physiologic effects of some substance or any other medical condition⁹⁻¹².

Even nowadays, perinatal depression is described with different names, depending on the moment of its onset: prenatal depression, and postpartum depression. However, the “perinatal depression” term makes reference to both periods. “Perinatal depression” is defined as the occurrence of MDD during pregnancy or after the birth or adoption of a baby¹³. Up to the DSM-5, it has been described as “MDD with peripartum onset”, emphasizing that 50% of the postnatal depressive disorders, in fact, have their onset during the prenatal period, that is why using the term “peripartum” would be more appropriate. Therefore, the diagnosis must be considered from the beginning of the pregnancy and up to 1 year after delivery^{9,13}.

Regarding CIE-10, perinatal depression is classified in two large categories:

- As part of mental and behavioral disorders (“mental and behavioral disorders associated with the puerperium, not elsewhere classified”).
- As part of the diseases which complicate pregnancy, childbirth and puerperium (“other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium”)¹⁴.

Population distribution of perinatal depression

Perinatal depression is multifactorial and affects any type of delivery and gestation number¹¹. Statistics are heterogeneous and depend on the country, institution and the author that publishes them. This may be due to the diversity of criteria used, to the moment and time window being assessed, to the underdiagnosis or to the lack of awareness and of training of the health professionals and health education in the general population. Worldwide, the prevalence of prenatal depression goes from 7-15% in high-economic-income countries to 19-25% in low-to-middle-economic-income countries¹⁵. Regarding postnatal depression, its prevalence in high-income countries is 10-15%, approximately 20% in low-to-middle-income countries, and as high as 30% in Asian countries¹⁵⁻¹⁷. In Mexico, it is estimated that 30.7% of women suffer from depression at some point during their pregnancy and up to 1 year after delivery^{18,19}. Usually, symptomatology begins within the 6-12 weeks post-partum and has a 7-month duration^{8,20}. In up to 50% of these women, some sleep disorder is identified^{20,21}.

Langan and Goodberg²² recognized the following risk factors: history of depression (*odds ratio* [OR]: 29.0), fear to delivery (OR: 3.8), smoking (OR: 3.25), adolescence (OR: 3.14), being a single mother (OR: 2.86), low socioeconomic status (OR: 2.59), age ≥ 40 years (OR: 1.41), domestic violence (OR: 3.1), maternal anxiety (OR: 2.7), accidental pregnancy (OR: 1.41) and gestational diabetes (OR: 2.29). On the other hand, Blom et al.²³ identified other risk factors: preeclampsy (OR: 2.58), hospitalization during pregnancy (OR: 2.25), emergency C-section (OR: 1.53) and neonatal complications (OR: 1.56). Among Mexican women, apart from the above-mentioned factors, the following have been identified: high-school education (OR: 5.61), unemployment (OR: 3.57), miscarriages/abortions (OR: 2.56), low social support (OR: 5.76), stressful life events (OR: 3.95), prenatal depression (OR: 2.84), low resilience (OR: 3.05)²⁴, violence (OR: 3.9)²⁵, female newborn (OR: 2.38), fear to delivery (OR: 2.11)²⁶, prenatal stress (OR: 5.80), stress during delivery (OR: 7.71), poor relationship with the partner (OR: 7.03)²⁷; and number of pregnancies (OR: 2.3)²⁸.

Rochat et al.²⁹ described as prevalent depressive symptomatology the following: depressed mood or loss of interest or pleasure (21.10%), depressed mood plus loss of interest or pleasure (50.46%), changes in the appetite or in the body weight (97.5%), fatigue (63.3%), changes in the ability to concentrate (54.13%), sleep disorders (53.21%), excessive or inappropriate guilt (53.21%), psychomotor retardation or agitation (41.28%) and suicide ideation (27.52%).

The first three postpartum months is the period of highest vulnerability in women³⁰, so it is recommended to pay attention to the following alarm symptoms: psychosomatic complaints, tiredness, different pains, repetitive help request, sadness and constant preoccupation, or fear^{31,32}.

Disease burden from perinatal depression

Currently, there are no specific metrics for perinatal depression, because these are included in those corresponding to the general population. In 1990, depressive disorders were the fourth cause of disability in the world, reaching the third place in 2017³³. In the year 2000, 6582 deaths secondary to depressive disorders were reported. Regarding the comparative metrics from 1990 with respect to 2000, an increase in the estimation of years lived with disability, from 10.7% to 12.1%, was observed, in addition to the

increase in disability-adjusted life years from 3.7% to 4.46%. Similarly, there are epidemiological differences by region, as the burden of depressive disorders in Africa is as low as 1.2%, while in Latin America it is as high as 8.9%. In low-to-middle-income countries, the disability-adjusted life years are 4.1%³⁴.

Perinatal depression produces a high social cost in terms of health expenditures, unemployment, work absenteeism and overall productivity loss. For the Organization for Economic Co-operation and Development, the health expenditure due to mental disorders can reach up to the 4% of the national gross domestic product. The delay in providing treatment can lead to infanticide or suicide, the latter being the main cause of maternal death during the first postpartum year^{15,35}. Other factors that can increase the health expenditures are miscarriage, prematurity, preeclampsia, obstetric complications, low birth weight and neonatal complications³⁶⁻³⁹. MDD often affects mother-infant bonding³⁷. The children of depressed mothers have also a higher risk of developing emotional problems or mental disorders in their childhood and adult life.^{12,40,41}.

Social determinants and perinatal depression

Mental health determinants directly or indirectly benefit or affect maternal mental health⁴². Therefore, an adverse environment, pollution, poverty, malnutrition, drug consumption, stress or excessive workout can negatively impact the mental and physical health of the woman and the fetus⁴³. Fisher et al.⁴⁴ identified higher education (OR: 0.5), having an employed partner (OR: 0.3) and postpartum care provided by a relative or trustworthy person (OR: 0.4) as protective factors. On the other hand, low access to health care services, low income and financial problems (OR: 2.1), belonging to an ethnic or religion minority (OR: 2.1), addiction in the couple (OR: 1.96), intra-family violence (OR: 1.1), polygamy union (OR: 7.7), social or family insufficient support (OR: 2.8) and living in a rural area (OR: 2.1) were identified as social determinants⁴⁴. In the national literature, the minimization of symptomatology by the patient, her family or the health-care staff, the partner's abandonment by separation or divorce, the lack of a support network, a history of physical, emotional or sexual abuse, poor family relationship and difficulty for taking care of other children are also described^{31,44-46}.

Prevention strategies

In order to reduce the morbidity and mortality due to perinatal depression, it is vital³¹:

- To provide sufficient, clear and precise information to women, their partners and families.
- Symptomatology control.
- To reduce fear and distress.
- To strengthen mother-infant bonding and that with the partner.
- To promote family well-functioning.
- To intervene in current stressors.
- To strengthen family, social and institutional support networks.

Good results have been described with the following strategies: the creation of areas specialized in perinatal mental health (OR: 0.30)⁴⁷, home visits (OR: 0.71), follow-up calls (OR: 0.36), interactive coaching (OR: 0.41), individual and group cognitive-behavioral psychotherapy (OR: 0.51), mother-infant psychoeducative interventions (OR: 0.47) and doing physical activity (OR: 0.49)^{2,22,48}.

In Mexico, even though there is the guide *Prevención, diagnóstico y manejo de la depresión prenatal y posparto en el primer y segundo niveles de atención* (Prevention, diagnosis and management of prenatal and postpartum depression in the first and second levels of care) (2014), this does not specify the mechanism for implementation and, unfortunately, its usefulness for planning resources and implementing the necessary strategies is limited. So far, the only global strategy has been education at every level¹⁸.

Conclusions

In Mexico, the prevalence of perinatal depression is only known from research conducted by various authors, mainly in mental health institutions, and most obstetrics and gynecology hospitals do not have areas for perinatal mental health care. Therefore, the problem could be more serious compared to what is actually published⁴⁹. The studies reflect limited and unrepresentative metrics of the general population. In order to improve the flow of information, it is necessary to improve the referral-counter-referral system between institutions providing obstetric care and institutions specializing in mental health. In addition, the National Epidemiological Surveillance System should be enhanced for the creation of strategies and actions to produce epidemiological information that would be useful for public mental health.

One of the first steps that could be considered is the inclusion of active detection systems of perinatal depression, particularly in maternal-fetal and neonatal units, as well as in obstetric outpatient clinics. It is recommended the use previously validated screening instruments, such as the *Edinburgh Postnatal Depression Scale*⁵⁰. Thus, not only would the mental disorder be identified in a timely manner, but also, with the result inclusion in the medical records, the hospital statistics would improve as well.

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Conflicts of interest

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