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Postnatal depression: an update

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Apart from causing emotional suffering, postnatal depression strains marriage, undermines the mother's confidence, impairs her social functioning and quality of life, and in serious cases contributes to infant abuses, infanticides and suicidal behaviour. Recent studies also show that postnatal depression adversely affects emotional, behavioural and cognitive development of the newborn. In addition, there is growing awareness that depression can occur during pregnancy, and antenatal depression can adversely affect obstetric and neonatal outcomes. Antenatal depressive symptoms are also the strongest predictor of postnatal depression. This paper reviews the epidemiology, clinical presentation, risk factors, prevention and treatment of perinatal depression. The latest development in research and practice related to this condition are also highlighted.

Key words: postnatal depression; mood disorders; pregnancy complications; postnatal complications.

Postnatal depression is also known as postpartum or perinatal depression. It is a more serious type of depression than the 'baby blues'. Baby blues, unless persistent, usually do not require treatment and are normal reactions to the hormonal changes and stress after delivery. Postnatal depression can occur at any time up to 1 year after delivery. However, there is no general agreement on the exact length of the postnatal period. A patient demonstrating signs and symptoms of clinical depression at the

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peak period (4–6 weeks after delivery) should get a postnatal depression assessment. It is widely considered that postnatal depressions are temporary and treatable with skilled professional care and social support.

EPIDEMIOLOGY

Postnatal depression is a disease not to be treated lightly. Studies across the world show that postnatal depression affects 10–20% of recently delivered women.^{1–6} These figures should be treated with caution, as they are representative of above-threshold DSM IV diagnosis among mostly a selective population of middle-class Caucasian women. A more detailed review of the literature shows that the reported figures vary among countries, and even within country, from 0.5% to over 60%. Factors such as culture, socioeconomic status, genetics, ethnicity and style of reporting may contribute to the diversity.⁷

Nevertheless, earlier reviews suggested that socioeconomic and ethnic variables did not necessarily influence the prevalence of postnatal depression. If we look at the US reports more closely, poor inner-city women with diversified ethnicity (mostly black or Hispanic) exhibited high prevalence of postnatal depression symptoms. These are women living in poverty and having limited access to social support which overlap with the psychosocial factors.⁸

SYMPTOMS AND ASSESSMENT

A depressed mood, tearfulness, lack of drive and enjoyment, social withdrawal, insomnia, poor appetite, impaired concentration, and feelings of uselessness and helplessness are common symptoms. Some patients may be emotionally detached from the infant and show no affection towards family members. Some women may feel self-worthless and isolated due to the physical and emotional stress during delivery and the dilemma in meeting the demands of infant care and other family members. Patients may also feel as if they are inadequate mothers, causing them to have feelings of guilt and embarrassment. Bodily symptoms, such as wound pain, headache and back pain, are also prevalent. Some patients even have ideas about self-harm and suicidal plans.

It is important to appreciate that some depressive symptoms described in psychiatric textbooks and diagnostic criteria are difficult to apply to postnatal women. For instance, it is hard to assess if postnatal weight loss is reasonable or excessive. Likewise, forgetfulness and impaired concentration are common even among non-depressed postnatal women, probably because of oestrogen withdrawal and the stresses inherent in child rearing. These symptoms are hence of lesser value in distinguishing depressed mothers from non-depressed ones who are merely adjusting to the changes involved in motherhood.

The presence of ideas about or acts of infant-harm should be conceptualized as a dimension rather than a yes/no dichotomy. While it is important to check whether a depressed mother wants to harm her baby, it is equally important to ask if she has ever lost her temper with the baby — for example, when the baby cries. This may lead to a revelation of, for instance, the mother thrusting a pillow on the baby on occasions when she has been distressed by the baby's inconsolable crying. While the intention of the act may not have been infanticidal, it is nonetheless dangerous and has an important bearing on risk assessment and treatment plan.

RISK FACTORS

It is generally recognized that postnatal depression is caused by a combination of biological and psychosocial factors. There is preliminary evidence that genetic factors may contribute to as much as one third of the aetiological variance of postnatal depression.⁹ A recent study also showed that siblings of women with postnatal depression had increased risk of suffering from the condition.¹⁰ This finding is in line with another family study which reported evidence of a familial clustering of postnatal depressive episodes with a 4-week onset.¹¹ Hormones, such as oestrogen and progesterone, have commonly been suggested as potential biological causes, but studies thus far have yielded negative findings.¹² Thyroid dysfunction is responsible for a small number of postnatal depression cases, probably not more than a few per cent.¹³ Recent research has also focused on the role of omega-3 fatty acids in the development of postnatal depression, but the findings thus far have been inconclusive.^{14,15}

In contrast, psychosocial investigations of postnatal depression have produced consistent results. A meta-analysis summarizes the significant independent correlates of postnatal depression as: a history of depression (not necessarily associated with pregnancy), concurrent life stressors (such as bereavement), lack of social support, marital dissatisfaction, personal vulnerability (such as an anxiety-prone personality) and poverty.^{2,16} It is important to note that patients who have postnatal depression in previous pregnancies are more prone to the illness compared to those who have never had postnatal depression. Between one sixth and one half of the patients will have another episode in subsequent pregnancies.¹⁷

Recent study has also shown that traditional postnatal rituals such as mandated postnatal support by a dedicated lay person is associated with lower risk of pregnancy. In Hong Kong and many Asian societies, conflict between daughter and mother-in-law is more power than marital relationship in determining the development of depression in the postnatal period.¹⁸

It is also well established that antenatal depressive symptoms are the best predictor of postnatal depression.¹⁶ A substantial proportion of 'postnatal depression' actually begins during pregnancy. A study following a group of women through pregnancy to the postnatal period revealed that levels of antenatal depression are on a par with those of postnatal depression.¹⁹ Another study also indicated a continuum of depression through pregnancy and into the post-delivery period.²⁰

ANTENATAL DEPRESSION

Most of the research done on perinatal depression and screening methods such as the Edinburgh Postnatal Depression Scale (EPDS) has concentrated on studying postnatal depression. The study of antenatal depression is generally incidental to this work, but there is growing awareness that depression can also affect women during pregnancy.

Antenatal depression shares similar psychosocial risk factors with postnatal depression. The more common symptoms are insomnia, tearfulness, irascibility, a low mood, fearfulness, panicky feelings and excessive worries. Women who present with marked psychomotor retardation, early morning wakening and suicidal ideas generally require prompt psychiatric intervention.

Future studies should investigate approaches to early identification of antenatal depression. Research has shown that antenatal depression is associated with alcohol and

drug abuse, poorer adherence to antenatal care, intrauterine growth retardation, preterm labour, lower birth weight, caesarean section, and possibly hyperactivity and attention-deficit disorder of the newborn.²¹

DIAGNOSIS

The International Classification of Diseases, Ninth Revision (ICD-9) and the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) define depression as two or more weeks of persistent depressive symptoms and functional impairment.

A diagnosis of clinical depression generally requires five or more symptoms, which include a low mood, lack of drive/enjoyment, reduced energy, insomnia, a decrease in appetite/weight loss, impaired concentration, psychomotor retardation, negative cognitions and self-harm ideas/plans. At present, there are no specific diagnostic criteria for perinatal depression, but a specifier can be used to denote the puerperal onset. Some researchers also include minor depression (two or more symptoms with functional impairment) as postnatal depression because there is evidence to indicate that minor depression may progress to major depression (Table I).

Clinicians can also use self-report rating scales, such as the EPDS, to identify probable postnatal depression.^{22–24} The ten-item EPDS enquires about depressive symptoms over the past 7 days. In most studies, a score above a validated cut-off suggests probable postnatal depression.

Postnatal depression is under-diagnosed worldwide. According to the US Department of Health and Human Services 2000 data, up to 50% of postnatal cases go undetected.²⁵ Studies in developed countries show that, in the absence of systematic screening, only 10% of depressed mothers eventually receive treatment.²⁶ Therefore, the majority of cases of postnatal depression are not diagnosed and as a result are not treated. It has been shown that the routine application of screening scales, such as the EPDS, in women improves the detection of postnatal depression.^{27,28}

Differential diagnoses of postnatal depression include postnatal blues and puerperal psychosis. Postnatal blues, also known as baby blues, is a self-limiting condition that generally does not require medical attention. Up to 85% of women after delivery experience postnatal blues, and this may last until 2 weeks post-delivery.²⁹ However, if it persists for more than 7 days, the possibility of postnatal depression should be seriously considered. In the same vein, women with postnatal depression generally do not exhibit psychotic symptoms, such as auditory hallucinations and

Table I. Diagnostic criteria for clinical depression.

1. Low mood
2. Lack of drive/enjoyment
3. Reduced energy
4. Insomnia
5. A decrease in appetite/weight loss
6. Impaired concentration
7. Psychomotor retardation
8. Negative cognitions (e.g. helplessness, uselessness, hopelessness)
9. Self harm ideas/plans

delusions. Thus, when postnatal depression is accompanied by psychotic symptoms, the possibility of puerperal psychosis should be seriously considered. Puerperal psychosis, which is rare, is a psychiatric emergency that requires immediate (same-day) psychiatric assessment and intervention.

TREATMENT AND MANAGEMENT

Postnatal depression generally responds well to treatment. Mild depression can be treated with psychological counselling and social interventions, whereas more severe cases would benefit from antidepressants. It is important to remember that postnatal depression is generally associated with psychosocial stressors that can be improved with counselling and social interventions. For instance, mild postnatal depression may be improved by the family providing more assistance and support for the new mother. Cognitive behavioural counselling and interpersonal therapy have been shown to be useful in treating postnatal depression.^{1,2,30,31}

In more severe cases, pharmacotherapy is needed to expedite the recovery. Antidepressants with fewer sedative side-effects are the drugs of choice for non-breastfeeding mothers, allowing them to continue to look after the newborn at night time. When the mother is breastfeeding, the uncertain neurobehavioural risks of antidepressants need to be carefully considered. It is also important to consider the mother and her family's wishes in tailoring the treatment. Current evidence shows that intense psychological treatment can be as effective as antidepressants, although it is much more time-consuming.

The same dilemma is encountered when deciding psychopharmaceutical treatment for antenatal depression. It is now recognized that many antidepressants can cause neonatal withdrawal syndrome.³² There is also emerging evidence that maternal paroxetine (a serotonin selective reuptake inhibitor) antidepressant treatment during the first trimester is associated with higher rates of fetal malformation, such as ventricular septal defects.³³ Until more concrete data are available, the risks and benefits of antidepressant treatment during pregnancy must be carefully balanced.

An expert consensus guideline has been developed for the treatment of four depressive conditions specific to women, including depression in pregnancy and postnatal depression in a mother choosing to breast-feed.³⁴ This guideline will help clinicians and patients in understanding the relative merits of a variety of interventions.

Studies generally show that two thirds of women with postnatal depression recover by the end of the first postnatal year, and 90% by the end of the second year.¹⁷

PREVENTION

More than a dozen randomized clinical trials have been conducted on the primary prevention of postnatal depression, but results have been mainly negative.³⁵ Most of these intervention studies conceptualized postnatal depression as a monolithic diagnosis with homogenous aetiology, whereas in real life, postnatal depression is caused by heterogeneous bio-psycho-socio-cultural factors. Hence, different individuals would require different modes of intervention to prevent postnatal depression. A recent meta-analysis also shows that interventions targeted at individuals during the postnatal period are more likely to be effective.³⁰ In any case, a tailored approach, perhaps with

identification of high-risk cases, is probably needed if future intervention studies are to demonstrate efficacy in preventing postnatal depression.

Until there are more promising findings on primary prevention, secondary prevention will remain the best public health approach to postnatal depression. Given the ubiquity and gravity of postnatal depression, a 'postnatal psychological health check' should be integrated into the routine postnatal maternal health care. Studies are already under way to examine whether improved detection and early intervention will lead to better treatment outcomes of postnatal depression. Ultimately, these studies may show that a proactive psychological health check is an investment well spent.

PATERNAL POSTNATAL DEPRESSION

At present, postnatal depression is essentially conceptualized as a maternal mental health problem in both research and clinical contexts. While this 'maternally oriented' model is a useful framework to guide research effort and clinical intervention, it does not provide a total representation of the problem. Specifically, the model fails to recognize that contemporary fathers are also confronted with physical and psychosocial stresses (e.g. sleep deprivation, role changes and financial distress) in the postnatal period.

Recent studies have shown that 5–24% of fathers suffer from depression in the early postnatal period.³⁶ It is also known that the occurrence of paternal postnatal depression is closely related to that of maternal depression. When the mother is depressed, there is a 40–50% risk that the father will also suffer from depression. Paternal postnatal depression has also been associated with unemployment, a paternal psychiatric history, marital discord, neuroticism, a younger paternal age and immigrant status.³⁷ A recent study showed that failure to involve the spousal partner in the management of postnatal depression is associated with poorer treatment outcomes.³⁸

MATERNAL DEPRESSION AND THE NEWBORNS

Many studies have reported a correlation of stress during pregnancy and preterm delivery and low birth weight.³⁹ Both are suggested to be associated with long-term neurological and developmental impairments, mental and cognitive dysfunctions, diabetes, cardiovascular disease, schizophrenia and other somatic disorders.⁸

There is growing evidence of the adverse impact of postnatal depression on the emotional, behavioural and cognitive development of the newborn.^{40,41} Longitudinal studies in the UK showed that newborns of women with postnatal depression are more likely to have impairment in terms of socio-emotional and cognitive developments.⁴² Mothers suffering from postnatal depression are more likely to exhibit behaviours such as intrusiveness, withdrawal and disengagement that would impact the children negatively. Postnatal depression symptoms are also a consistent predictor of negative parenting behaviour. It is suggested that problems in infants may be reduced or prevented if maternal depression is prevented and treated early.⁸ Researchers in the US, however, have questioned the clinical significance of the observed differences. On a more practical note, postnatal depression may lead to simple things like infant under-nutrition and other physical consequences of suboptimal child care.

While earlier studies tended to focus on the impact of postnatal depression on the newborn, recent studies have shown an intriguing relationship between infant temperament and the development of postnatal depression. More interesting work has recently come out in Australia. A study showed that infant temperament is an independent

predictor of postnatal depression.⁴³ This is a cogent reminder that, in the assessment of postnatal depression, it is important to examine childcare difficulties secondary to a difficult newborn.

SUMMARY

Postnatal depression is a treatable disease. Early detection and intervention can prevent patients from developing higher levels of depression, which may in turn prevent developmental problems in infants. Mild depression can be effectively treated with psychological counselling and social interventions, such as cognitive behavioural counselling and interpersonal therapy. In more severe cases, the use of antidepressants may be necessary. When the mother is breastfeeding, the uncertain neurobehavioural risks of antidepressants need to be carefully considered. When antidepressants are prescribed to women during pregnancy, the relative risk of untreated depression and the potential harm associated with intrauterine exposure needs to be carefully balanced against the potential side-effects of the medication. At present, until there is better understanding of how best to implement effective primary prevention measures, secondary prevention and early intervention is the best public health approach to postnatal depression.

The authors advocate a proactive psychological health check as part of the routine postnatal maternal health check to identify the at-risk group so that appropriate support and intervention can be provided. Undetected and untreated postnatal depression could have detrimental consequences for both the mother and the child.

While it is known that the occurrence of paternal postnatal depression is positively correlated to that of maternal depression, more research on the impact of physical and psychosocial stresses on the fathers of the newborns is required.

Practice points

- clinician can use self-reporting rating scales, such as EPDS, to identify probable postnatal depression
- psychological counselling and social interventions are effective for mild postnatal depression; in more severe cases, antidepressants should be considered
- treatment should be tailored to the patient considering the patient's circumstances such as during pregnancy, breast-feeding and severity of depression; the wishes of the patient and her family should be considered

Research agenda

- treatment outcomes of early screening and intervention
- genetics and neuro-imaging studies of postnatal depression
- effects of intrauterine exposure to antidepressants
- improved prediction and identification of postnatal depression

CONFLICT OF INTEREST STATEMENT

No conflicts of interest declared.

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