

Identifying patients at risk of perinatal mood disorders

Topiwala A, Hothi G, Ebmeier KP. Identifying patients at risk of perinatal mood disorders. *Practitioner* 2012;256 (1751):15-18

Dr Anya Topiwala
BA BM BCh MRCPsych
CT3 in Psychiatry, Oxford Deanery, Oxford, UK

Dr Gurjiven Hothi
MB BS
CT1 in Psychiatry, Oxford Deanery, Oxford, UK

Professor Klaus P. Ebmeier
MD
Professor of Old Age Psychiatry, University
of Oxford, Oxford, UK



Practitioner
Medical Publishing Ltd

Identifying patients at risk of perinatal mood disorders

AUTHORS

Dr Anya Topiwala

BA(BM)BCh MRCPsych
CT3 in Psychiatry, Oxford
Deanery, Oxford, UK

Dr Gurjiven Hothi

MB BS
CT1 in Psychiatry, Oxford
Deanery, Oxford, UK

Professor Klaus P. Ebmeier

MD
Professor of Old Age
Psychiatry, University
of Oxford, Oxford, UK



Which patients are at increased risk?

When should patients be referred?

What are the management options?



IN PERINATAL MENTAL ILLNESS NOT ONLY DOES THE PATIENT SUFFER,¹ BUT OBSTETRIC OUTCOMES,

mother-baby interactions² and hence longer term emotional and cognitive development of the child are also affected.^{3–6} Perinatal mental illness also has an impact on other family members.

The UK Confidential Enquiry into Maternal and Child Health has consistently found psychiatric disorders to be one of the leading causes of maternal death, often through suicide.⁷ Postnatal depression and puerperal psychosis are two disorders most commonly associated with the perinatal

period: the first, because of its high prevalence, 13% in the first few months following birth,⁸ the second because of its potentially disastrous consequences, including suicide, neglect of the baby and infanticide.

IDENTIFYING PATIENTS

The most efficient strategy to identify patients at risk relies on focussing on clinically vulnerable subgroups: enquiries about depressive symptoms should be made at the usual screening visits.^{1,7,9,10} In particular, a personal and family history of postpartum psychosis (especially bipolar affective disorder and schizophrenia) and severe depression

should be checked for, as well as previous psychiatric contact.^{1,9}

Although antenatal psychosocial assessment tools, such as the Whooley Questions, Edinburgh Postnatal Depression Scale or the Antenatal Psychosocial Health Assessment may increase awareness of psychosocial risk,^{11,12} there is no good evidence that routine screening may lead to improved perinatal mental health.^{13–18} Thus the extended Whooley questions, recommended by NICE,¹¹ (see box 1, p16) do not have sufficient sensitivity or positive predictive value to justify their routine use in the antenatal period.¹⁸ Other screening instruments, such as the Patient Health Questionnaire »

Box 1

The extended Whooley questions

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

Table 2

Confirmed risk factors for postnatal depression

- Depressed/anxious during pregnancy
- Past history of depression
- Baby blues*
- Family history of perinatal depression
- Adverse life events
- Poor social support
- Dissatisfaction with relationship with partner²⁹

*Intermittent mild affective symptoms that may affect more than 50% of women following childbirth and remit spontaneously after a few days

and the Hospital Anxiety and Depression Scale have not been validated in postnatal populations.¹⁹

Symptoms of perinatal depression are no different from symptoms of depression at other times of life: depressed mood; anhedonia; change of appetite or sleep patterns; fatigue; decreased libido; feelings of guilt and hopelessness. Attention should be paid to any signs of poor self-care, avoidance of eye contact, overactivity or underactivity or abnormalities in the rate of speech.

Particular care should be taken to ask about suicidal ideation and thoughts of harming others, including the baby. Patients with severe depression with psychotic features, or with puerperal psychosis, may hold delusional beliefs and be hallucinating. They may or may not have insight into their illness. As in postnatal depression, there are no validated screening tools for use in puerperal psychosis.¹

RISK FACTORS

Antenatal depression

Awareness is increasing that pregnancy is not protective against depression as previously thought.²⁰ There are data from meta-analyses to support several risk factors for antenatal depression,²¹ see table 1, above.

Postnatal depression

Several systematic reviews^{8,22-24} have identified a number of robust risk factors. One of the most important is a previous

history of depression, see table 2, left. The degree of risk is directly correlated with severity of past episodes. Prior contact with specialist psychiatric services or psychiatric hospital admission may be useful information to elicit.

Several other associations have been reported, but not corroborated,^{25,26} and include: multiple births; assisted reproduction; stillbirth;²⁷ low birthweight baby;²⁸ history of abuse; obstetric complications; lower family income; lower occupational status/employment; unplanned pregnancy;³⁰ not breastfeeding; antenatal thyroid dysfunction; antenatal stress; and two or more children.

Both antenatal and postnatal depression are increasingly being recognised in men. Postnatal depression may occur in up to 26% of men three to six months postpartum.³¹ Potential risk factors include maternal depression and poor relationship.³²

‘Both antenatal and postnatal depression are increasingly being recognised in men’

Puerperal psychosis

Puerperal psychosis is rare (around 1 to 2 per 1,000). Sixty per cent of women with puerperal psychosis already have a diagnosis of bipolar disorder or schizoaffective disorder.^{33,34} In untreated women with bipolar disorder, relapse rates may be up to 50% (antenatal), and 70% (postnatal).³⁵

In women with bipolar disorder additional risk factors include:

- previous personal or family history of puerperal psychosis³⁶
- discontinuation of mood stabiliser³⁵
- primiparity³⁷
- difficult labour³⁷
- family history
- hormonal changes³⁸

Table 1

Risk factors for antenatal depression

- Maternal anxiety
- Life stress
- Prior depression
- Lack of social support
- Domestic violence
- Unintended pregnancy
- Relationship factors

Risk factors in women without a psychiatric history are: being unmarried; having a first baby; perinatal death;³⁹ family history of puerperal illness;³⁶ older age at delivery⁴⁰ and not living with the infant's father. However, these factors have not been verified in a meta-analysis.

REFERRAL

Women with a personal history of postpartum psychosis or bipolar affective disorder should be considered as high risk for postpartum psychosis. Risk is further increased if there is additional family history of postpartum psychosis or bipolar affective disorder.

The Confidential Enquiry into Maternal Deaths and the Royal College of Obstetricians and Gynaecologists recommend that all pregnant women who are identified as being at high risk should have a shared care plan for their late pregnancy and early postnatal psychiatric management.^{7,16} With the woman's agreement, a copy of the plan should be kept in her records.

The plan should identify what support should be in place and who to contact if problems arise, together with their contact details (including out of hours), and address decisions on medication management in late pregnancy, the immediate postnatal period and breastfeeding.¹

Women with current mood disorder of mild or moderate severity who have a first-degree relative with a history of bipolar disorder or postpartum psychosis should be referred for specialist psychiatric assessment.

A family history alone indicates a raised, but low, absolute risk of early postpartum serious mental illness.

Where family history only is identified, information should be shared between primary care and maternity services, and any evidence of mood disturbance during pregnancy or in the postnatal period should lead to referral to mental health services.¹ Patients should be referred to psychiatric services if indicated by increased risk and for specific psychiatric and psychological interventions.

key points

SELECTED BY

Dr Peter Saul

GP, Wrexham and Associate GP Dean for North Wales

Perinatal mental illness influences obstetric outcomes, mother-baby interactions and longer term emotional and cognitive development of the child. Psychiatric disorders have consistently been found to be one of the leading causes of maternal deaths, often through suicide. Postnatal depression and puerperal psychosis are two disorders most commonly associated with the perinatal period.

The most efficient strategy to identify patients at risk relies on focussing on clinically vulnerable subgroups: enquiries about depressive symptoms should be made at the usual screening visits. Antenatal psychosocial assessment tools may increase awareness of psychosocial risk but there is no good evidence that routine screening may lead to improved perinatal mental health. Attention should be paid to any sign of poor self-care, avoidance of eye contact, overactivity or underactivity, or abnormalities in the rate of speech. Particular care should be taken to ask about suicidal ideation and thoughts of harming others, including the baby.

One of the most important risk factors is a previous history of depression. The degree of risk is directly correlated with severity of past episodes. Both antenatal and postnatal depression are being increasingly recognised in men. Postnatal depression may occur in up to 26% of men three to six months postpartum. Potential risk factors include maternal depression and poor relationship.

Puerperal psychosis is rare (around 1 to 2 per 1,000). Sixty per cent of women with puerperal psychosis already have a diagnosis of bipolar disorder or schizoaffective disorder. Women with a personal history of postpartum psychosis or bipolar affective disorder should be considered as high risk for postpartum psychosis. All pregnant women who are identified as being at high risk should have a shared care plan for their late pregnancy and early postnatal psychiatric management. Women with current mood disorder of mild or moderate severity who have a first-degree relative with a history of bipolar disorder or postpartum psychosis should be referred for specialist psychiatric assessment.

Cognitive behaviour and interpersonal therapy are the most effective psychological treatments in the management of mild to moderate antenatal and postnatal depression. Tricyclic antidepressants have the lowest known risk in pregnancy and breastfeeding. All commonly used mood stabilisers are teratogenic when used in the first trimester. Use of antiepileptic medication in pregnancy is associated with increased congenital malformations (specifically neural tube defects). There is an increased risk of gestational diabetes with clozapine and olanzapine.

MANAGEMENT

Psychological treatments

Cognitive behaviour and interpersonal therapy are the most effective psychological treatments in the management of mild to moderate antenatal and postnatal depression.⁴¹ They may help prevent postnatal depression in those at high risk. NICE recommends that women who require psychological treatment should be seen within one month of, and no longer than three months after, initial assessment.⁹

Pharmacotherapy

Women of childbearing potential should generally be made aware of the potential effects of medications in pregnancy. When prescribing during pregnancy and lactation good communication with the patient is essential. Discussion should centre on the following themes:

- What is the risk of relapse and deterioration during the perinatal and antenatal period?
- What is the patient's treatment preference?
- Discuss the potential risk-benefit balance
- What are the risks of suddenly stopping medications?
- Discuss increased harm to the fetus associated with overdose of medication
- Discuss which medications are safest when breastfeeding

During the perinatal and antenatal period prescribers should:

- Choose a drug with the lowest risk profile for both patient and fetus
- Always start with the lowest possible dose and increase slowly under review
- Try to use monotherapy when possible

Relevant up-to-date information should be taken from the most recent BNF, or can be requested from the UK Teratology Information Service (tel: 0844 892 0909; www.uktis.org).

Antidepressants

Antidepressants are effective in the antenatal and postpartum periods. As a group they are not thought to increase the risk of major malformations.

However, paroxetine has shown an association with cardiac malformations and should therefore be avoided in pregnancy and in those planning to become pregnant.⁴²

Persistent pulmonary hypertension of the newborn has been linked with SSRI exposure after 20 weeks' gestation.⁴²

Tricyclic antidepressants have the lowest known risk in pregnancy and breastfeeding; however they have a higher fatal toxicity when compared with SSRIs.

All antidepressants carry a risk of withdrawal and toxicity in neonates, so require careful monitoring.

Elevated drug concentrations of fluoxetine, citalopram and escitalopram have been found in breastfed infants. Doxepin has high milk to plasma ratios and should be avoided in breastfeeding. Sertraline, paroxetine, nortriptyline and imipramine have undetectable drug concentrations in the infant.^{43,44}

Mood stabilisers

All commonly used mood stabilisers are teratogenic when used in the first trimester. When planning a pregnancy each case should be reviewed individually, and risk of relapse of mood disorder should be weighed against risk of harm to the fetus.

Lithium has been associated with an increased risk of: Ebstein's anomaly, floppy baby syndrome, non-toxic goitre, hypothyroidism, nephrogenic diabetes insipidus and cardiac arrhythmias.⁴⁵ Hence, if possible, lithium should be avoided in pregnancy.

However, if the benefits are deemed to outweigh the risks, a detailed ultrasound scan can be offered, looking specifically at the four chambers of the heart. If an abnormality is detected this is an indication for fetal cardioechogram to assess for Ebstein's anomaly. Serum monitoring is required monthly during pregnancy and more frequently during labour when the risk of toxicity to mother and neonate is high. Lithium is found in high concentrations in breast milk, and breastfeeding should therefore be avoided. If the baby is to be breastfed, careful serum monitoring of the infant should be implemented.^{45,46}

Use of antiepileptic medication in pregnancy is associated with increased congenital malformations, specifically neural tube defects. The use of reliable contraceptive methods should be discussed. Valproate, as a mood stabiliser, should be avoided.¹ It is considered the most teratogenic and has shown an association with long-term neurobehavioural changes. If no other alternative is available, and valproate has to be continued in pregnancy, NICE guidance suggests no more than 1g be given daily in divided doses with 5mg of folic acid.⁹

Excretion of antiepileptic medication in breast milk varies from sodium valproate, 1-2% of maternal serum levels, to carbamazepine, 6-65%, and lamotrigine, 18%.⁴⁷⁻⁴⁹ Regular sodium valproate when breastfeeding has not shown short-term adverse effects in the baby.^{48,49} Decisions regarding the use of these medications >>

during lactation should be made following a full discussion of the risks and benefits with the mother.

Antipsychotics

There is an increased risk of gestational diabetes with clozapine and olanzapine.⁵⁰ NICE guidance recommends switching from clozapine to another antipsychotic during pregnancy and lactation because of the theoretical risks of agranulocytosis in the infant.⁹ Depot antipsychotics should be avoided in pregnancy.

FOLLOW-UP IN PRIMARY CARE

Women with mood disorders during pregnancy and lactation should be followed up at least as frequently as other patients with mental health disorders. Shared decision-making with this group of patients, including other healthcare professionals, such as health visitors, is vital.

Ideally psycho-education should be offered to women prior to conception, in addition to during and after pregnancy, to facilitate informed decision-making. Those with, or at high risk of, perinatal mood disorders should have a written care plan devised in conjunction with the patient and other healthcare professionals (see above), which will provide a useful resource for the GP.

Importantly, there should be good communication between specialist perinatal mental health services and primary care services.⁹ During pregnancy and lactation certain medication, such as lithium, will require closer serum level monitoring.

REFERENCES

- 1 Scottish Intercollegiate Guidelines Network. SIGN 127. Management of perinatal mood disorders. SIGN. Edinburgh. 2012
- 2 Murray L, Cooper P. Effects of postnatal depression on infant development. *Arch Dis Child* 1997;77(2):99-101
- 3 Cooper P, Murray L. Prediction, detection, and treatment of postnatal depression. *Arch Dis Child* 1997;77(2):97-9
- 4 Field T, Healy B, Goldstein S et al. Infants of depressed mothers show 'depressed' behavior even with nondepressed adults. *Child Dev* 1988;59(6):1569-79
- 5 Cogill SR, Caplan HL, Alexandra H et al. Impact of maternal postnatal depression on cognitive development of young children. *Br Med J* 1986;292(6529):1165-7
- 6 Dennis NA, Hayes SM, Prince SE et al. Effects of aging on the neural correlates of successful item and source memory encoding. *J Exp Psychol Learn Mem Cogn* 2008;34(4):791-808
- 7 Cantwell R, Clutton-Brock T, Cooper G et al. Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer: 2006-2008. The Eighth Report of the Confidential Enquiries into Maternal Deaths in the United Kingdom. *BJOG* 2011;118 Suppl 1:1-203
- 8 O'Hara MW, Swain AM. Rates and risk of postpartum depression – a meta-analysis. *Int Rev Psychiatry* 1996;8: 37-54
- 9 National Institute for Health and Clinical Excellence. CG45. Antenatal and postnatal mental health: Clinical management and service guidance. NICE. London. 2007 guidance.nice.org.uk/CG45/Guidance/pdf/English
- 10 Bick D, Howard L. When should women be screened for postnatal depression? *Expert Rev Neurother* 2010;10(2):151-4
- 11 Whooley MA, Avins AL, Miranda J, Browner WS. Case-finding instruments for depression. Two questions are as

- good as many. *J Gen Intern Med* 1997;12(7):439-45
- 12 Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *Br J Psychiatry* 1987;150:782-6
 - 13 Hill C. An evaluation of screening for postnatal depression against NSC criteria; 2010 www.screening.nhs.uk/policydb_download.php?doc=181
 - 14 Austin MP, Priest SR, Sullivan EA. Antenatal psychosocial assessment for reducing perinatal mental health morbidity. *Cochrane Database Syst Rev* 2008(4):CD005124
 - 15 Hewitt C, Gilbody S, Breaaley S et al. Methods to identify postnatal depression in primary care: an integrated evidence synthesis and value of information analysis. *Health Technol Assess* 2009;13(36)
 - 16 Royal College of Obstetricians and Gynaecologists. Management of women with mental health issues during pregnancy in the postnatal period. Good practice [Internet]. 2011; 14 www.rcog.org.uk/files/rcog-corp/ManagementWomenMentalHealthGoodPractice14.pdf
 - 17 Gibson J, McKenzie-McHarg K, Shakespeare J et al. A systematic review of studies validating the Edinburgh Postnatal Depression Scale in antepartum and postpartum women. *Acta Psychiatr Scand* 2009;119(5): 350-64
 - 18 Austin MP, Lumley J. Antenatal screening for postnatal depression: a systematic review. *Acta Psychiatr Scand* 2003;107(1):10-7
 - 19 Boyd RC, Le HN, Somberg R. Review of screening instruments for postpartum depression. *Arch Womens Ment Health* 2005;8(3):141-53
 - 20 Gaynes BN, Gavin N, Meltzer-Brody S et al. Perinatal depression: prevalence, screening accuracy, and screening outcomes. *Evid Rep Technol Assess (Summ)* 2005(119):1-8
 - 21 Lancaster CA, Gold KJ, Flynn HA et al. Risk factors for depressive symptoms during pregnancy: a systematic review. *Am J Obstet Gynecol* 2010;202(1):5-14
 - 22 Beck CT. A meta-analysis of predictors of postpartum depression. *Nurs Res* 1996;45(5):297-303
 - 23 Wilson LM, Reid AJ, Midmer DK et al. Antenatal psychosocial risk factors associated with adverse postpartum family outcomes. *CMAJ* 1996;154(6):785-99
 - 24 Robertson E, Grace S, Wallington T, Stewart DE. Antenatal risk factors for postpartum depression: a synthesis of recent literature. *Gen Hosp Psychiatry* 2004;26(4):289-95
 - 25 Nielsen Forman D, Videbech P, Hedegaard M et al. Postpartum depression: identification of women at risk. *BJOG* 2000;107(10):1210-7
 - 26 Augusto A, Kumar R, Calheiros JM et al. Post-natal depression in an urban area of Portugal: comparison of childbearing women and matched controls. *Psychol Med* 1996;26(1):135-41
 - 27 Boyle FM, Vance JC, Najman JM, Thearle MJ. The mental health impact of stillbirth, neonatal death or SIDS: prevalence and patterns of distress among mothers. *Soc Sci Med* 1996;43(8):1273-82
 - 28 O'Brien M, Asay JH, McCluskey-Fawcett K. Family functioning and maternal depression following premature birth. *J Reprod Infant Psychol* 1999;17:175-88
 - 29 Boyce P, Hickey A. Psychosocial risk factors to major depression after childbirth. *Soc Psychiatry Psychiatr Epidemiol* 2005;40(8):605-12
 - 30 Chee CY, Lee DT, Chong YS et al. Confinement and other psychosocial factors in perinatal depression: a transcultural study in Singapore. *J Affect Disord* 2005;89(1-3):157-66
 - 31 Paulson JF, Bazemore SD. Prenatal and postpartum depression in fathers and its association with maternal depression: a meta-analysis. *JAMA* 2010;303(19):1961-9
 - 32 Wee KY, Skouteris H, Pier C et al. Correlates of ante- and postnatal depression in fathers: a systematic review. *J Affect Disord* 2011;130(3):358-77
 - 33 Sharma VK, Lepping P, Cummins AG et al. The Global Mental Health Assessment Tool - Primary Care Version (GMHAT/PC). Development, reliability and validity. *World Psychiatry* 2004;3(2):115-9
 - 34 Gelder MG, Lopez-Ibor JJ, Andreasen NC. New Oxford Textbook of Psychiatry. Oxford University Press. Oxford. 2000
 - 35 Viguera AC, Nonacs R, Cohen LS et al. Risk of recurrence of bipolar disorder in pregnant and nonpregnant women after discontinuing lithium maintenance. *Am J Psychiatry* 2000;157(2):179-84
 - 36 Jones I, Craddock N. Familiality of the puerperal trigger in bipolar disorder: results of a family study. *Am J Psychiatry* 2001;158(6):913-7
 - 37 Blackmore ER, Jones I, Doshi M et al. Obstetric variables associated with bipolar affective puerperal psychosis. *Br J Psychiatry* 2006;188:32-6
 - 38 Brockington IF. Motherhood and Mental Health. Oxford University Press. Oxford. 1996
 - 39 Kendell RE, Chalmers JC, Platz C. Epidemiology of

- puerperal psychoses. *Br J Psychiatry* 1987;150:662-73
- 40 Nager A, Johansson LM, Sundquist K. Are sociodemographic factors and year of delivery associated with hospital admission for postpartum psychosis? A study of 500,000 first-time mothers. *Acta Psychiatr Scand* 2005;112(1):47-53
 - 41 Bledose SE, Grote NK. Treating depression during pregnancy and the postpartum: A preliminary meta-analysis. *Res Soc Work Pract* 2006;16(2):109-20
 - 42 Udechuku A, Nguyen T, Hill R, Szego K. Antidepressants in pregnancy: a systematic review. *Aust N Z J Psychiatry* 2010;44(11):978-96
 - 43 Lanza di Scalea T, Wisner KL. Antidepressant medication use during breastfeeding. *Clin Obstet Gynecol* 2009;52(3):483-97
 - 44 Weissman AM, Levy BT, Hartz AJ et al. Pooled analysis of antidepressant levels in lactating mothers, breast milk, and nursing infants. *Am J Psychiatry* 2004;161(6):1066-78
 - 45 Llewellyn A, Stowe ZN, Strader JR Jr. The use of lithium and management of women with bipolar disorder during pregnancy and lactation. *J Clin Psychiatry* 1998;59 Suppl 6:57-64; discussion 5
 - 46 Viguera AC, Newport DJ, Ritchie J et al. Lithium in breast milk and nursing infants: clinical implications. *Am J Psychiatry* 2007;164(2):342-5
 - 47 Galbally M, Roberts M, Buist A. Perinatal Psychotropic Review G. Mood stabilizers in pregnancy: a systematic review. *Aust N Z J Psychiatry* 2010;44(11):967-77
 - 48 Chaudron LH, Jefferson JW. Mood stabilizers during breastfeeding: a review. *J Clin Psychiatry* 2000;61(2):79-90
 - 49 Piontek CM, Baab S, Peindl KS, Wisner KL. Serum valproate levels in 6 breastfeeding mother-infant pairs. *J Clin Psychiatry* 2000;61(3):170-2
 - 50 Gentile S. Antipsychotic therapy during early and late pregnancy. A systematic review. *Schizophr Bull* 2010;36(3):518-44

Useful information

Association for Post-Natal Illness

Has a network of volunteers who have experienced postnatal illness. Provides information leaflets and advice
www.apni.org
 Helpline: 020 7386 0868
 (Mon-Fri 10am-2pm)
 Parentline (24 hours): 0808 800 2222

Family Action

Support and practical help for families affected by a range of problems including mental illness. Provides 'Newpin' services offering support to parents of children under 5 whose mental health is affecting their ability to provide safe parenting
 Tel: 020 7254 6251
www.family-action.org.uk

Depression Alliance

Information and support for people who suffer with depression, and their families
 Tel: 0845 123 23 20
www.depressionalliance.org

We welcome your feedback

If you would like to comment on this article or have a question for the authors, write to:
editor@thepractitioner.co.uk