

Anxiety disorders in pregnancy and the postnatal period

There is now growing realisation that many women suffer from either new onset or worsening of existing anxiety disorders during pregnancy and postnatally.

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There is a growing realisation that many women suffer from either new onset or worsening of existing anxiety disorders during pregnancy and postnatally (the perinatal period).¹ The occurrence of an anxiety disorder during this time has important consequences – it not only impacts on the woman's mental health, but also increases the risk of other postnatal disorders, as well as having possible effects on the unborn child.²

In this article I will briefly discuss the epidemiology of anxiety disorders in pregnancy and postnatally. I will then focus on the clinical presentation of these disorders and management issues that are specific to pregnancy and the postnatal period.

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Epidemiology

Studies of anxiety in pregnancy show that a significant portion of women are affected. Heron *et al.*, in a large community sample of pregnant women, found that 21% had clinically significant anxiety symptoms and, of these, 64% continued to have anxiety postnatally. Other studies have also shown higher prevalence rates of anxiety disorders in the postnatal period compared with the general population.^{1,3}

Panic disorder

The risk of new-onset panic disorder in pregnancy *per se* is not known. However, recent data suggest that pregnancy may confer some kind of protection against new-onset panic disorder.⁴ In contrast, the early postpartum period is reported to be a time of increased vulnerability to panic disorder, with figures ranging from 0.5% to 1.5% at 6 weeks postpartum.⁴

Obsessive compulsive disorder

Current data suggest that the perinatal period is a time of high risk for the onset of OCD, with studies reporting that up to 40%

of women of childbearing age have onset of symptoms during this period.⁵ Data on the course of OCD during pregnancy show conflicting results.^{1,5}

Post-traumatic stress disorder (PTSD)

There are no data on the course of existing PTSD during pregnancy. Perinatal PTSD, that is PTSD related to medical procedures, childbirth or other obstetric events, has been reported.⁶ One study found that 20% of women reported traumatic pregnancy-related procedures, and of these 6% met criteria for PTSD.⁶ Controversy exists as to whether medical procedures during pregnancy and/or childbirth meet DSM IV criteria for a traumatic event.¹ Risk factors for traumatic stress following childbirth include previous adverse reproductive events such as ectopic pregnancy, miscarriage, stillbirth, unwanted pregnancy and abortion, history of sexual trauma, past traumatic experience, prior psychiatric history, obstetric interventions or complications, and poor social support.⁶

Generalised anxiety disorder (GAD)

There are few data on the epidemiology of GAD during pregnancy and postnatally. The data that do exist suggest that it is common – Wenzel and colleagues found that 4.4% of the women in their study met diagnostic criteria for GAD and that over 30% reported subsyndromal symptoms.⁷ There are no data on the course of pre-existing GAD in pregnancy. Diagnosing GAD poses special challenges in pregnancy – it is normal to have a degree of worry and anxiety in pregnancy. There are no data on specific worry domains that may be linked to GAD in pregnancy. Functional impairment and worry without a trigger may be useful in making a diagnosis.

Clinical features

The clinical features of anxiety disorders in pregnancy and postnatally are similar to those in non-pregnant women. However, concerns over the pregnancy and the infant may present as the predominant feature. For example, in panic disorder, women may interpret panic attacks as something being wrong with the fetus.⁸ Women with anxiety disorders also commonly present with physical complaints, with studies showing an increased frequency of nausea and vomiting, disability days and physician

visits in women with anxiety and/or mood disorders.¹ Indeed, frequent physical complaints with no discernable physical cause should prompt the clinician to screen for an anxiety disorder.

Risk of anxiety disorders in pregnancy and postnatally

Maternal risks

The majority of anxiety disorders in pregnancy have a continued postnatal course.² Further, several prospective studies have shown that a prenatal anxiety disorder is one of the strongest risk factors for developing postnatal depression.⁹ An anxiety disorder in pregnancy may therefore be associated with significant maternal morbidity.

Fetal effects of maternal anxiety

Both animal and human studies suggest that antenatal stress/anxiety causes poorer obstetric outcomes and a range of neurobehavioural problems in exposed infants.¹⁰ Women reporting high levels of subjective stress have been found to be at doubled risk for delivering a preterm or growth-restricted baby. Antenatal anxiety or stress has been linked with physical defects in the child and low birth weight. More worryingly, prenatal maternal anxiety has been linked with persisting neurobehavioural problems, including poorer performance on tests of neurodevelopment, increased fearfulness and conduct problems.

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Postnatal effects of maternal anxiety

Intense postnatal anxiety impairs maternal functioning, causes significant distress and may seriously disturb mother-infant interaction, with consequences ranging from maternal neglect and failure to thrive to infanticide.¹¹

Screening for anxiety disorders in pregnancy

Screening for depression in pregnancy has been well validated, and several established screening programmes exist.¹² A strong case can be made for extending these programmes to detect anxiety disorders

in pregnancy and postnatally as well. The most commonly used screening tool for depression during the perinatal period is the Edinburgh Postnatal Depression Scale (EPDS), called the Edinburgh Depression Scale (EDS) when used during pregnancy.¹³ It is probable that the EDS can also identify a number of women with anxiety disorders.¹³ It has been recommended that use of the EDS in combination with a risk questionnaire (assessing alcohol and drug use, partner and social support and domestic violence) is the optimal model for screening for both anxiety and depression in pregnancy.¹³

Management of anxiety disorders in pregnancy

Preconception counselling

Ideally all women known to have an anxiety disorder should have preconception psycho-education. This should include discussing the risk of relapse during pregnancy and the postnatal period, the risks versus benefits of medications if the patient were to become pregnant and/or breastfeed, and a discussion around partner and psychosocial support during pregnancy and once the baby is born. It is essential to ask about the contraception the patient is using.

Psychotherapy

Psychotherapy is considered the first-choice intervention for mild to moderate anxiety disorders in the perinatal period. It poses minimal risk to the infant. While there are no studies addressing the efficacy of psychotherapy in pregnancy, studies in non-pregnant women show efficacy of both interpersonal and cognitive behavioural therapy (CBT). Relaxation and supportive therapy is also effective in treating anxiety disorders in the perinatal period.¹⁴

Pharmacotherapy

When considering medication in pregnancy and postnatally, one needs to consider possible effects on the infant. Two classes of medication are commonly used to treat anxiety – antidepressants (including selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs)) and benzodiazepines.

Selective serotonin reuptake inhibitors

Selective serotonin reuptake inhibitors are the first-line pharmacotherapy for anxiety disorders in the general population. Large population-based studies have found no increase in the rates of major congenital malformations in infants exposed to SSRIs, with the exception of paroxetine, which

has been associated with an increased risk for fetal ventricular and/or atrial septal defects with first-trimester exposure.¹⁵ Paroxetine is consequently best avoided during pregnancy. Furthermore, no long-term behavioural effects have been found in exposed infants.¹⁵

A concern around SSRI use in pregnancy is the possible increased risk of persistent pulmonary hypertension of the newborn (PPHN), which occurs in 1 - 2 infants per 1 000 live births. Third-trimester exposure to fluoxetine was associated with an increased rate of PPHN (OR 6.1) in a study that controlled for maternal smoking, body mass index, and diabetes.¹⁵ It is not clear whether this risk is specific to fluoxetine or is associated with all SSRIs.

Infants of women who need to take SSRIs just before delivery can develop toxicity or withdrawal syndromes.¹⁵ Discontinuation syndromes can occur within a few hours or days after birth and last up to 1 month after delivery, depending on the infant's susceptibility. Most suspected SSRI-induced neonatal withdrawal syndromes have been associated with paroxetine, although all SSRIs appear to be associated with some risk. Affected infants are tremulous, jittery, irritable, have poor sucking, high-pitched cries and show sleep and gastrointestinal disturbances.

Tapering and stopping SSRI use prior to the third trimester is an option that would prevent these syndromes and also decrease the risk for PPHN. However, this must be weighed up against the risk of relapse if medication is stopped. Benzodiazepine cover may be useful during this period. Medication should be started immediately after delivery to decrease risk of postpartum relapse. If a withdrawal syndrome is present, breastfeeding may help ameliorate this, by providing smaller regular exposures to SSRIs.

SSRIs are excreted in breastmilk, though in very small amounts, and breastfeeding poses little risk to the infant. Mothers who do breastfeed on SSRIs should be warned to seek help if the infant becomes excessively sleepy or lethargic.

Tricyclic antidepressants (TCAs)

Clomipramine and imipramine are the most commonly used drugs of this class in the management of anxiety. No increased teratogenic risk has been found with these agents.¹⁵ However, due to their more adverse side-effect profile, particularly postural hypotension, which can be a significant problem in a pregnant patient, and lethality in overdose, they are generally used as second-line agents. TCAs are generally considered safe during breastfeeding.

Anxiety

Benzodiazepines

Benzodiazepines provide immediate symptomatic relief and can be used alone or in conjunction with an antidepressant for long-term treatment, but the risk of dependence must be borne in mind.

Benzodiazepine teratogenicity remains controversial.¹⁵ Some, but not all, data show a small but significant increased risk for major malformations/oral cleft malformations with first-trimester benzodiazepine exposure.

Benzodiazepines also have fetal effects. Neonatal toxicity ('floppy infant syndrome'), characterised by hypothermia, lethargy, poor respiratory effort and feeding difficulties, occurs after maternal benzodiazepine use just before delivery.¹⁵ Neonatal withdrawal may be caused by very late, third-trimester exposure to benzodiazepines. Symptoms (which can persist ≤ 3 months after delivery) include restlessness, irritability, abnormal sleep patterns, suckling difficulties, growth retardation, hypertonia, hyperreflexia, tremulousness, apnoea, diarrhoea and vomiting.¹⁵ It is not clear however whether this is entirely due to withdrawal *per se* or whether ongoing exposure via breastmilk plays a role in these symptoms.

Benzodiazepines also have fetal effects.

When possible, benzodiazepines should be avoided in the first trimester because of possible teratogenicity and then again late in the third trimester before delivery because of neonatal withdrawal syndromes. To minimise neonatal withdrawal, gradually taper the mother's benzodiazepine before delivery. Because the baby's due date is calculated to be ± 2 weeks before delivery, begin this taper 3 - 4 weeks before the due date and discontinue at least 1 week before delivery. If benzodiazepines cannot be tapered, it is best to use a short-acting agent and to advise the mother to discontinue benzodiazepine use as soon as she thinks she is going into labour. Breastfeeding while taking benzodiazepines is not recommended because of the risk of over-sedating the infant.

Psychosocial issues

Poor marital relationships and lack of social support are consistent psychosocial predictors of anxiety symptoms during pregnancy and postnatally. Family or marital therapy should therefore be considered when appropriate. In addition, antenatal childbirth education should be suggested as this has beneficial effects on mastery and maternal role satisfaction has been found. Antenatal education also provides an opportunity to link women with anxiety disorders to empathetic obstetric care providers who in turn are additional sources of support.

Conclusion

Anxiety disorders occur commonly in pregnancy and postnatally and have persisting consequences for both mother and baby. Effective treatments are available for the anxiety disorders and most can be used safely in the perinatal period. It is therefore important for practitioners to recognise these disorders, and to institute appropriate treatment.

References

1. Ross LE, McLean LM. Anxiety disorders during pregnancy and the postpartum period: a systematic review. *J Clin Psychiatry* 2006; 67(8): 1285-1298.
2. O'Connor TG, Theron J, Golding J, Beveridge M, Glover V. Maternal antenatal anxiety and children's behavioural/emotional problems at 4 years: report from the avon longitudinal study of parents and children. *Br J Psychiatry* 2002; 180: 502-508.
3. Heron J, O'Connor TG, Evans J, Golding J, Glover V, The ALSPAC Study Team. The course of anxiety and depression through pregnancy and the postpartum in a community sample. *J Affect Disord* 2004; 80(1): 65-73.
4. Bandelow B, Sojka F, Broocks A, Hajak G, Bleich S, R  ther E. Panic disorder during pregnancy and postpartum period. *Eur Psychiatry* 2006; 21(7): 495-500.
5. Neziroglu F, Anemone R, Yaryura-Tobias JA. Onset of obsessive compulsive disorder in pregnancy, the puerperium and premenstruum. *Am J Psychiatry* 1992; 149: 947-950.
6. Menage J. Post-traumatic stress disorders in women who have undergone obstetric and/or gynaecological procedures. *J Reprod Infant Psychol* 1993; 11: 221-228.
7. Wenzel A, Haugen EN, Jackson LC, Brendle JR. Anxiety symptoms and disorders at eight weeks postpartum. *J Anxiety Disord* 2005; 19(3): 295-311.

8. Northcott CJ, Stein MB. Panic disorder in pregnancy. *J Clin Psychiatry* 1994; 55: 539-542.
9. Milgrom J, Gemmill AW, Bilszta JL, et al. Antenatal risk factors for postnatal depression: A large prospective study. *J Affect Disord* 2007; 108: 147-157.
10. Van den Bergh BRH, Mulder EJM, Mennes M, Glover V. Antenatal maternal anxiety and stress and the neurobehavioural development of the fetus and child: links and possible mechanisms. A review. *Neuroscience and Biobehavioral Reviews* 2005; 29: 237-258.
11. Spinelli MG. Psychiatric disorders during pregnancy and postpartum. *JAMA* 1998; 279(4):165-169.
12. Buist AE, Barnett BE, Milgrom J, et al. To screen or not to screen - that is the question in perinatal depression. *Med J Aust* 2002; 177 Suppl: S101-105.
13. Matthey S. Using the Edinburgh Postnatal Depression Scale to screen for anxiety disorders. *Depress Anxiety* 2007; 26: 926-931.
14. Fani F, Hidarnia A, Montgomery KS, et al. Does relaxation education in anxious primigravid Iranian women influence adverse pregnancy outcomes? A randomized controlled trial. *J Perinat Neonatal Nurs* 2006; 20(2): 138-146.
15. Raphael DB, Ross J, Brizendine L. Treating anxiety during pregnancy: Just how safe are SSRIs? *Current Psychiatry* 2008; 7: ??

In a nutshell

- Anxiety disorders are common during pregnancy and postnatally.
- Women with perinatal anxiety disorders commonly present with excessive concerns about the pregnancy, fetus or infant.
- Perinatal anxiety disorders can be incapacitating
- They may have long-term effects on the infant, ranging from preterm delivery, poorer growth to neurobehavioural changes.
- Psychotherapy is the first-line treatment for anxiety in pregnancy and postnatally.
- SSRIs (other than paroxetine) and TCAs can be used during pregnancy.
- Benzodiazepines should be avoided in the first trimester, as well as during the late third trimester and while breastfeeding
- Psychosocial support for women with perinatal anxiety disorders is important.