Obsessive compulsive disorder (OCD) is relatively common. According to criteria in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition, it is characterized by recurrent and persistent thoughts; impulses, images (obsessions), or repetitive behaviour; or mental acts in response to an obsession (compulsions). These obsessions and compulsions cause distress or substantially interfere with a person’s normal, everyday life. Pregnancy and puerperium have a crucial role in the onset and course of the disorder, as they could affect the severity of pre-existing OCD or even trigger OCD onset. Diagnosis and treatment of OCD during and following pregnancy have a crucial role in the onset and course of the disorder, as they could affect the severity of pre-existing OCD or even trigger OCD onset. A recent meta-analysis found higher prevalence of OCD during pregnancy (2.07%) and the postpartum period (2.43%) compared with in the general population (1.08%). Fathers have seldom been reported to develop postpartum OCD.

Prevalence in the perinatal period
Current data suggest that the perinatal period is a time of high risk of OCD onset. This is consistent with a mean age between 23 and 35 years of OCD onset in the general population. A systematic review of retrospective uncontrolled studies indicates that up to 40% of childbearing OCD outpatients experience onset of the disorder during pregnancy and 30% during puerperium.
Causes of OCD
Several theories have been proposed, but the cause of OCD is still unknown. One theory expands on the “serotonin hypothesis” of OCD, proposing that serotonergic dysfunction leading to OCD symptoms is caused by fluctuations in estrogen and progesterone during pregnancy and puerperium. Another theory suggests that a rapid increase in oxytocin near the end of pregnancy and during puerperium might exacerbate or trigger the onset of OCD. As neurobiological mechanisms cannot account for OCD onset in male partners, a cognitive-behavioural theory was suggested. According to this theory, patients with OCD attach exaggerated importance to the unwanted, intrusive thoughts, which are, in fact, experienced universally, and misinterpret them catastrophically.

Clinical manifestations
Regardless of the timing of OCD onset, the most common obsessions in OCD patients during pregnancy or puerperium are fears of contaminating the neonate or infant, concerns about symmetry or exactness, and aggressive thoughts (such as intentionally or accidentally harming the infant), as well as associated cleaning and washing, checking, and avoidance compulsions.

Obsessive compulsive disorder during the perinatal period could interfere with the new mother’s functional behaviour, ranging from avoidance of the child to excessive involvement with the child. The affected maternal functioning might adversely affect developing mother-infant bonding and a mother’s ability to take care of her newborn, resulting in potential adverse cognitive-behavioural developmental effects in the newborn. In addition, obsessions and compulsions in the stressed new mother could seriously interfere with her social functioning with other family members. There are no documented cases in the literature of women with OCD as their sole diagnosis who intentionally harm their infants. By definition, patients with OCD have insight into their obsessions, identifying them as unwanted. In contrast, patients with postpartum psychosis typically lack insight and could cause harm to themselves or to their infants.

Untreated OCD has long-term effects on both mothers and their children; mothers admit that they are unable to enjoy their time with their children, and children have been found to suffer more from a range of internalizing disorders, including broadly defined OCD, compared with controls.

The course of OCD during pregnancy and puerperium has been investigated in several small studies, which have reported varied outcomes; 8% to 50% of women experienced exacerbated symptoms with pre-existing OCD, 31% to 69% showed no change, and 10% to 69% experienced improvements in their symptoms during the perinatal period.

In the general population, OCD coincides with anxiety, depressive, and bipolar disorders. However, major depressive disorder is the most common comorbid diagnosis in patients with OCD in both the general and perinatal populations. Women with pre-existing or postpartum onset OCD could be at increased risk of developing postpartum depression approximately 2 to 3 weeks following the onset of OCD symptoms.

Screening
Women who experience the initial onset of obsessional problems during pregnancy or postnatally might not recognize their symptoms as being part of a disorder and therefore might not seek help accordingly. Positive family history and avoidant and obsessive-compulsive personality disorder in addition to premenstrual mood symptoms were found to be predictors of perinatal OCD. Two options have been proposed for screening: ask “It’s not uncommon for new mothers to experience intrusive, unwanted thoughts and repetitive acts as a result of concerns of causing harm to their baby. Have any such thoughts or acts occurred to you?”; or use the Edinburgh Depression Scale in combination with a risk questionnaire (assessing substance abuse, social support, and domestic violence). Patients who have a positive screening result should receive a thorough psychiatric assessment for OCD and comorbid disorders, including depression.

Treatment
Obsessive compulsive disorder is challenging to treat; only 20% of patients in the general population are estimated to achieve full remission. Obsessive compulsive disorder during pregnancy and breastfeeding is even more challenging because obsessions during these periods often involve the safety of the fetus; patients might be more concerned because of fetal exposure to psychotropic agents.

To date, no controlled studies have been conducted to examine the effectiveness of different treatment regimens on perinatal OCD. Decision making is based on the severity and chronicity of the obsessions and compulsions, as well as the degree to which the disorder impairs patient and family functioning.

Cognitive-behavioural therapy. This therapy has been suggested as a first-line treatment of OCD in the...
general population as well as for pregnant and postpartum women.\textsuperscript{5,7}

**Pharmacotherapy.** Selective serotonin reuptake inhibitors (SSRIs) are the most commonly indicated pharmacologic treatment of OCD or OCD with comorbid disorders such as major depression.\textsuperscript{8} Augmentation with atypical antipsychotic medication is used for refractory cases.\textsuperscript{19}

Exposure to antidepressants during pregnancy has been shown to be associated with a small increased risk of spontaneous abortion\textsuperscript{20,21} and premature births\textsuperscript{22-24}; however, it is unknown whether this increase is due to the medication exposure or the underlying psychopathology. Late exposure to SSRIs might also be associated with self-limited poor neonatal adaptation symptoms, such as jitteriness and difficulty feeding and breathing. Therefore, exposed neonates near term should be closely monitored after birth for at least 48 hours.\textsuperscript{25}

Large population-based studies have not found an increase in the rates of major congenital malformations in infants exposed to SSRIs or atypical antipsychotic medications,\textsuperscript{26-29} nor have infants exposed to SSRIs been found to have any long-term behavioural effects.\textsuperscript{30,31} However, recent controversial reports have suggested an association between SSRI administration during pregnancy and “persistent pulmonary hypertension of the newborn,” which occurred in less than 1% of cases but with no associated mortalities.\textsuperscript{32,33} Moreover, other meta-analyses have reported an increased risk of cardiac malformation with paroxetine (relative risk = 1.43, 95% CI 1.08 to 1.88; odds ratio = 1.72, 95% CI 1.22 to 2.42),\textsuperscript{34,35} however, this could have been owing to detection bias. Therefore, management should be assessed on an individual basis, weighing the benefits of treatment against the potential risks.

With the exception of fluoxetine, all SSRIs were found at low levels in breast milk and would not be expected to cause adverse effects in breastfeeding infants. The average amount of fluoxetine in breast milk is higher than most other SSRIs, and adverse effects such as colic, drowsiness, and decreased infant weight gain have been reported in some breastfed infants.\textsuperscript{36-38}

Prophylactic treatment might be indicated if a patient has a history of postpartum onset or worsening of OCD following her previous pregnancies, given that recurrences might arise with later pregnancies.\textsuperscript{39}

Similar to OCD in nongravid patients, pharmacotherapy should be maintained for at least a year in postpartum OCD patients following therapeutic response. If medication is discontinued prematurely, the relapse episode is associated with poor response to treatment.\textsuperscript{5} There are no recommendations in the literature for the treatment of OCD during pregnancy, but in our opinion, it should follow the same guidelines as for nongravid patients. Nonetheless, risk-benefit analysis should be applied individually.

**Conclusion**

A growing body of literature suggests that OCD is common in pregnancy and puerperium with risks of persisting consequences for both the mother and her child if untreated. Cognitive-behavioural therapy and pharmacologic therapy have been shown to be effective in nongravid women. The importance and benefit of treatment options along with their associated small risk of adverse events should be discussed, and management strategies should be tailored individually.

**Competing Interests**

None declared.

**References**


**MOTHERISK**

Motherisk questions are prepared by the Motherisk Team at the Hospital for Sick Children in Toronto, Ont. Drs Nameouz-Haddad and Nulman are members of the Motherisk Program.

Do you have questions about the effects of drugs, chemicals, radiation, or infections in women who are pregnant or breastfeeding? We invite you to submit them to the Motherisk Program by fax at 416 813-7562; they will be addressed in future Motherisk Updates. Published Motherisk Updates are available on the Canadian Family Physician website (www.cfp.ca) and also on the Motherisk website (www.motherisk.org).