

Treatment of heartburn and acid reflux associated with nausea and vomiting during pregnancy

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ABSTRACT

QUESTION In addition to suffering from nausea and vomiting of pregnancy, which is being treated with antiemetics, some of my pregnant patients complain of heartburn and acid reflux. Should these symptoms also be treated and, if so, which acid-reducing medications are safe for use during pregnancy?

ANSWER Increased severity of nausea and vomiting of pregnancy is associated with the presence of heartburn and acid reflux. Antacids, histamine-2 receptor antagonists, and proton pump inhibitors can be used safely during pregnancy, as large studies have been published with no evidence of adverse fetal effects.

RÉSUMÉ

QUESTION En plus de souffrir de la nausée et des vomissements de la grossesse, des malaises traités à l'aide d'antiémétiques, certaines de mes patientes enceintes se plaignent de brûlures d'estomac et de reflux acides. Devrait-on aussi traiter ces symptômes et, dans l'affirmative, quels sont les médicaments contre l'hyperacidité qui sont sans risque durant la grossesse?

RÉPONSE La gravité accrue de la nausée et des vomissements est associée à la présence de brûlures d'estomac et de reflux acides. Les antiacides, les antagonistes du récepteur H₂ de l'histamine et les inhibiteurs de la pompe à protons peuvent être utilisés en toute sécurité durant la grossesse, puisque d'importantes études publiées ne révèlent pas de données factuelles à l'effet qu'ils causeraient des effets indésirables chez le fœtus.

Gastroesophageal reflux disease (GERD) is reported in up to 80% of pregnancies.¹ It is likely caused by a reduction in lower esophageal sphincter pressure due to an increase in maternal estrogen and progesterone during pregnancy. Hormonal changes in pregnancy can also decrease gastric motility, resulting in prolonged gastric emptying time and increased risk of GERD.¹ The most common symptoms of GERD are heartburn and acid reflux. Treatment algorithms suggest stepwise progression of options, starting with lifestyle modifications (eg, eat smaller and more frequent meals, avoid eating near bedtime, elevate the head of the bed) and trying pharmacologic therapy if symptoms are not adequately managed by lifestyle changes.¹

Safety of acid-reducing agents

Antacids. Antacids containing aluminum, calcium, and magnesium were not found to be teratogenic in animal studies and are recommended as first-line treatment of heartburn and acid reflux during pregnancy.² High-dose and prolonged use of magnesium trisilicate is associated with nephrolithiasis, hypotonia, and respiratory distress in the fetus, and its use is not recommended during pregnancy.³ Bicarbonate-containing antacids are also not recommended owing to the risk of maternal

and fetal metabolic acidosis and fluid overload.³ There are also case reports of milk-alkali syndrome in pregnant women who used daily doses higher than 1.4 g of elemental calcium obtained from calcium carbonate.^{4,5}

Histamine-2 receptor antagonists (H₂RAs). Cimetidine, ranitidine, famotidine, and nizatidine are the H₂RAs approved for use in Canada. Details of studies on the use of each agent during pregnancy were reviewed elsewhere.¹ A recent meta-analysis involving 2398 pregnant women exposed to H₂RAs in at least the first trimester compared with 119 892 women in the control group showed an odds ratio of 1.14 (95% confidence interval [CI] 0.89 to 1.45) for congenital malformation. There was no statistically significant difference in risk of spontaneous abortion or preterm delivery between the exposed women and the control group.⁶

Proton pump inhibitors (PPIs). Proton pump inhibitors approved by Health Canada include omeprazole, pantoprazole, lansoprazole, esomeprazole, and rabeprazole. Safety of omeprazole, pantoprazole, esomeprazole, and lansoprazole use during pregnancy was reported elsewhere.⁷ Rabeprazole use in pregnancy has not been studied in humans; however, based on animal data on


rabeprazole and human data of other PPIs, it is expected that rabeprazole would be safe for use in pregnancy.⁸ A recent meta-analysis that compared 1530 pregnant women exposed to PPIs in at least the first trimester with 133410 unexposed pregnant women showed an odds ratio of 1.12 (95% CI 0.84 to 1.45) for congenital malformation. There was also no statistically significant difference in the odds ratios for spontaneous abortion or preterm delivery between the 2 groups.⁹

Why treat heartburn and acid reflux during pregnancy?

Heartburn and acid reflux are traditionally considered innocuous because they are common in pregnancy and are usually self-limiting. However, a recent study suggests that GERD is associated with an increase in the severity of nausea and vomiting of pregnancy (NVP), which can have serious negative effects on a woman's quality of life.¹⁰ In a prospective cohort study conducted by the Motherisk Program, 194 pregnant women with NVP and heartburn or acid reflux were compared with 188 pregnant women with NVP who did not have heartburn or acid reflux. The 2 groups were assessed for severity of NVP with the pregnancy-unique quantification of emesis and nausea (PUQE) score, which is a validated scoring tool based on frequency and duration of nausea, vomiting, and retching in the past 24 hours, with a high score indicating more severe NVP. Quality of life was measured by the well-being score, with 0 being the worst and 10 being the best. Forty-eight percent of women in the control group had severe NVP according to the PUQE, compared with 75% in the group with heartburn and acid reflux. The mean well-being score in the control group was significantly higher than that in the group with heartburn and acid reflux (4.9 SD [2.0] vs 3.9 [SD 2.1]; $P = .0004$).¹¹

Another prospective study also conducted by the Motherisk Program investigated the relationship between the use of acid-reducing medication and severity of NVP in 60 pregnant women. These women were counseled to continue their current antiemetics and to start acid-reducing agents; the PUQE and well-being scoring tools were administered before the start of acid-reducing therapy and at follow-up. The use of acid-reducing therapy was associated with a reduction in PUQE score (9.6 [SD 3.0] to 6.5 [SD 2.5]; $P < .0001$) and an increase in the well-being score (4.0 [SD 2.0] to 6.8 [SD 1.6]; $P < .0001$).¹² The results of these 2 studies suggest that treatment of heartburn and acid reflux is associated with improvement in NVP and quality of life.

Conclusion

Heartburn, and acid reflux during pregnancy should be treated, as recent studies report that symptoms of GERD have been associated with an increased severity of pregnancy-related nausea and vomiting. Antacids, H₂RAs, and PPIs are safe for use in pregnancy, so if lifestyle modifications fail to manage GERD symptoms, these medications can be added to the antiemetic treatment regimen. Physicians should always feel comfortable treating NVP aggressively, so as to improve the quality of life of pregnant women. 

Competing interests

None declared

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MOTHERISK

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