

Hyperemesis gravidarum during the second trimester is more likely to cause placental complications

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Pregnancies complicated by hyperemesis gravidarum in the second trimester of pregnancy are at a much higher risk of associated placental dysfunction disorders such as placental abruption and small for gestational age babies (SGA), finds a new study published today (30 January) in *BJOG: An International Journal of Obstetrics and Gynaecology*.

Hyperemesis gravidarum occurs in 0.5-3% of pregnancies and is generally defined as severe illness or vomiting before 22 weeks gestation, usually requiring [hospitalisation](#) for intravenous fluid. The condition is caused by high levels of human chorionic gonadotrophin (hCG), the [pregnancy](#) hormone, and a woman's sensitivity to it.

This study, which monitored the Swedish Medical Birth Register between 1997 and 2009, looked at women who had first admissions to hospital for treatment of hyperemesis gravidarum and the risk associations with later placental dysfunction disorders, compared to women with no admissions.

The study was again stratified to further look at the different [risk factors](#) in the first and second trimesters, defined as first admission to hospital before 12 weeks and first admission to hospital between 12-22 weeks.

The placental disorders monitored included pre-eclampsia, placental

abruption (the premature separation of the placenta), stillbirth ([fetal death](#) at >28 weeks) and small for [gestational age](#) babies (SGA). Of the total study population (1,155,033) 1.1% of women (12,270) were exposed to hyperemesis gravidarum before 22 weeks gestation.

Compared to pregnancies without hyperemesis gravidarum, pregnancies with hyperemesis gravidarum in the [first trimester](#) showed a slightly increased risk of pre-eclampsia, but no significant associations with placental abruption and SGA birth.

The strongest risk associations were found in pregnancies with hyperemesis gravidarum in the second trimester, when compared to pregnancies without hyperemesis gravidarum. The study found that there was a doubled risk of preterm pre-eclampsia (0.6% vs 1.4%), a threefold risk of placental abruption (0.4% vs 1.1%) and a 39% increased risk of a SGA baby (2.4% vs 4%).

No strong associations were found between hyperemesis gravidarum and stillbirth risks.

Marie Bolin, Department of Women's and Children's Health at Uppsala University, and co-author of the study said:

"Our study found clear associations in the risk of pre-eclampsia, placental abruption and SGA birth in women presenting with hyperemesis gravidarum, particularly those presenting in the second trimester.

"The results indicate that pregnancies with hyperemesis gravidarum in the second trimester demand an increased alertness and supervision during the pregnancy for development of any adverse outcomes associated with abnormal placentation.

"Further research is needed to consider the best treatment and techniques for surveying blood pressure and fetal growth in these high risk women."

John Thorp, *BJOG* Deputy-Editor-in-Chief added:

"While the findings of this large study are compelling with strong associations found between hyperemesis gravidarum in the second trimester and placental dysfunction disorders, hyperemesis gravidarum remains a rare condition.

"As shown in the study, the time of onset of [hyperemesis gravidarum](#) influences the risks of abnormal placentation disorders, therefore women presenting during their first trimester of pregnancy should not be concerned that they will go on to experience adverse complications.

"Women presenting in the second trimester should be more aware of the risks and consult with their obstetrician for any concerns."

More information: M Bolin, H Akerud, S Cnattingius, O Stephansson, AK Wikstrom. Hyperemesis gravidarum and risks of placental dysfunction disorders: a population-based study. *BJOG*, 2013, [dx.doi.org/10.1111/1471-0528.12132](https://doi.org/10.1111/1471-0528.12132)

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