



**Gestational diabetes, obesity and pregnancy outcomes in
Sweden**

av

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Akademisk avhandling

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Abstract

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The overall aim of the thesis was to evaluate maternal and fetal outcomes in relation to gestational diabetes mellitus (GDM) in both a short and long term perspective.

Study I was a population based cohort study including 1 249 908 pregnancies during the years 1998-2012. Maternal outcomes and fetal size were studied in relation to BMI and presence/absence of GDM. The conclusions were that maternal overweight and obesity are associated with similar increments in risks of adverse maternal outcomes and delivery of large-for-gestational-age infants in women with and without gestational diabetes. Study II was a population based cohort study using the same cohort as in study I. Fetal outcomes were studied in relation to GDM-status and BMI. Interaction between GDM and BMI for the outcomes was also analyzed. Conclusions were that excess maternal weight and GDM were, both major independent risk factors for adverse, perinatal outcomes, there were no interaction. In study III the same cohort was used to study time trends 1998-2012 in maternal and perinatal outcomes in women with GDM. Trends were also analyzed in women without GDM for comparison. This study showed that there have been improvements in fetal outcomes for women with GDM. But since the improvements were similar or less than the changes in the background population this was probably not due to better medical care for women with GDM alone. The conclusion is that there is still a lot to do to improve outcomes for women with GDM. Study IV was a case control study aiming to evaluate if there was an interaction between GDM and preeclampsia (PE) or if the conditions were independent risk factors for later cardiovascular disease (CVD). We also wanted to analyze how BMI influenced the association between PE and later CVD. We showed that GDM and PE are independently associated with elevated risk for CVD. The association of PE and CVD is not affected by BMI to a great extent as is the case in GDM and CVD.

Keywords: gestational diabetes, obesity, maternal and perinatal outcomes, maternal health, pregnancy, cardiovascular disease

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