

Obesity during pregnancy affects sex steroid concentrations depending on fetal gender

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Background/Objective: It is not clear whether maternal obesity along with fetal gender affect sex steroid metabolism during pregnancy. Therefore, we compared sex steroid concentrations and placental expression of steroidogenic enzymes between non-obese and obese pregnant women with non-pathological pregnancies, and investigated the influence of fetal gender on these parameters. **Methods:** In 35 normal weight (body mass index (BMI) 20-24.9 kg m⁻²) (controls) and 36 obese women (BMI 30-36 kg m⁻²) (obese), a fasting blood sample was obtained at first and at third trimester of gestation to measure progesterone, dehydroepiandrosterone (DHEA), DHEA sulfate, androstenedione, testosterone and estradiol by liquid chromatography-tandem mass spectrometry and estrone by radioimmunoassay. In a subset of women, placental mRNA and protein expression of steroidogenic enzymes was measured by quantitative PCR and western b