

SARS-CoV-2 infection in pregnancy during the first wave of COVID-19 in the Netherlands: a prospective nationwide population-based cohort study

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Abstract

Objective: Description of characteristics, risk factors, management strategies and maternal, obstetric and neonatal outcomes of SARS-CoV-2 infected pregnant women in the Netherlands. Design: Multi-centre prospective nationwide population-based cohort study. Setting: Nationwide. Population: All pregnant women in the Netherlands with confirmed SARS-CoV-2 infection in home-isolation or admitted to hospital between March 1st, 2020 and August 31st, 2020. Methods: Pregnant women with positive PCR or antibody tests were registered using the Netherlands Obstetrics Surveillance System. Testing occurred according to national guidelines (selective testing). Data from the national birth registry (Perined) and Dutch National Institute for Public Health and the Environment (RIVM) were used as reference. Main Outcome Measures: Incidence of pregnant women with SARS-CoV-2 infection. Maternal, obstetric and neonatal outcomes including hospital and critical care admission, clinical management and mode of birth. Results: Of 312 registered women, 65 (20%) were admitted to hospital, of whom 5 (2%) to intensive care and 9 (14%) to obstetric high care units. Risk factors for admission were non-Caucasian background (n=28; OR 6.67, 95%CI 4.08-10.90) and being overweight or obese (n=38; OR 2.64, 95%CI 1.51 to 4.61). Hospital and intensive care admission were higher compared to age-matched infected women (respectively, OR 14.57, 95%CI 10.99-19.03 and OR 5.02, 95%CI 2.04-12.34). One maternal death occurred. Caesarean section after labour onset was increased (OR 2.50; 95%CI 1.57-3.97). Conclusions: Pregnant women with SARS-CoV-2 infection are at increased risk of hospital admission, ICU admission and caesarean section. Funding: No funding was received. Keywords: Pregnancy, COVID-19, SARS-CoV-2, Pregnancy complications, Pregnancy outcome, Obstetric surveillance system.

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