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MULTIPLE PREGNANCIES: RISK FACTORS OF PRETERM BIRTH, HYPERTENSIVE DISORDERS OF PREGNANCY AND SMALL FOR GESTATIONAL AGE, IN TWO FRENCH URBAN AREAS

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The objective of this study was to analyze risk factors of preterm birth, hypertensive disorders of pregnancy and small for gestational age in a population of multiple pregnancies in two French urban areas. We included all 249 multiple pregnancies of women who lived in Besancon and in the urban unit of Dijon and delivered in one of the university hospitals of the two cities between 2005 and 2009. A retrospective data collection was conducted in obstetrical records to collect obstetrical history, individual socioeconomic factors and comorbidities during pregnancy, and characteristics of the delivery and newborns. Preterm birth was defined as birth before 36 weeks of gestational age. Small for gestational age was defined as birth weight less than the 10th percentile of birth weight for gestational age in France. Environmental exposures to noise and air pollution (NO₂) were modeled at home buildings. A neighborhood socioeconomic index was calculated at the census block groups scale. The associations between potential risk factors and preterm birth, hypertensive disorders of pregnancy and small for gestational age were analyzed by logistic regression models. Preterm birth was observed in 152 pregnancies and hypertensive disorders in 30 pregnancies. Among 506 newborns, 122 were small for gestational age. Preterm birth was associated with infection ($p=0.01$) and major infant congenital abnormalities ($p=0.007$). A high pre-pregnancy body mass index was associated with the occurrence of hypertensive disorders during the pregnancy ($p=0.002$). A small weight for gestational age was less frequent with girls ($p=0.04$), the absence of pre-existing hypertension ($p=0.02$), and diabetes ($p=0.03$). In order to optimize the management of multiple pregnancies, risk factors of adverse pregnancy outcomes should be more precisely identified in this specific population.

Biography

Anne Sophie Mariet is a Public Health Medical Doctor and a PhD student in Environmental Epidemiology and Biostatistics. She works in the Biostatistics and Medical Informatics unit of Dijon University Hospital. Her themes of research are the study of the effects of environmental multi-exposure to noise and air pollution on health particularly in the perinatal period, and the utilization of the hospital Medical Information System Program in epidemiology.

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