Impact of pre-pregnancy overweight and obesity on perinatal and neonatal outcomes

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ABSTRACT

Introduction: Overweight and obesity affect a large proportion of the child-bearing women population. Obesity has been defined by the WHO as a body mass index (BMI) ≥30 kg/m^2, and overweight as BMI of 25-29,99 kg/m^2. Maternal improper body weight prior to pregnancy represents one of the most important factors causing perinatal and neonatal complications.

Aim of the study: The aim of the study was to determine the associations between maternal pre-pregnancy BMI, gestational weight gain and the offspring's condition.

Material and methods: Two groups of patients who delivered at the Department of Obstetrics and Perinatology of the Independent Public Clinical Hospital No. 4 in Lublin, Poland in the period from July 2021 to October 2021 were assessed. The first group consisted of healthy controls, i.e., women with normal values of pre-pregnancy BMI and uncomplicated course of pregnancy. The second group included mothers with pre-pregnancy overweight and obesity (i.e. BMI ≥ 25,0 kg/m^2). Data regarding, inter alia, gestational weight gain, Apgar's score and neonatal birth weight were collected.

Results: Overweight and obesity in the pre-pregnancy period were associated with the risk of preterm delivery and lower Apgar's score in comparison to the healthy controls. Maternal pregestational BMI ≥ 25,0 kg/m^2 was also linked to increased neonatal birth weight in case of newborns who were born at term.

Conclusions: Maternal overweight and obesity seem to be significant predictors of neonatal complications. Reduction of maternal weight prior to pregnancy as well as optimizing of gestational weight gain may minimize the occurrence of fetal macrosomia**.**



BIOGRAPHY

Aleksandra Łomża is a fifth-year medical student at the Medical University of Lublin. Furthermore, she studies Italian philology as a second field of study. For over the year, she is a President of Young Medics Organisation – members od European Medical Student's Association (EMSA). She is interested in italian culture, jogging and among medical topis: oxygen therapy and perinatology.

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