Association between Maternal Obesity and Neonatal Mortality: A Brazilian Population Based Study.

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INTRODUCTION: Obesity is a condition related to the occurrence of reproductive outcomes, including mortality. We aimed to estimate the association between maternal obesity and neonatal mortality in the Brazilian population using secondary data from the last Demographic Health Survey (DHS), conducted in 2006.

METHODS: This is a cross-sectional study using secondary data of a representative sample of the Brazilian women of reproductive age (15–45 years old) from the National Demographic and Health Survey in 2006. Maternal anthropometric indexes used were maternal body mass index (BMI) and waist circumference (WC). Logistic regression modeling of the survey data was used to evaluate the relationship between obesity and the offspring neonatal mortality. Data analysis considered the complex sample design: strata, cluster and weights in order to produce population estimates.

RESULTS: Neonatal mortality was more frequent among women with obesity. Children whose mothers were abdominally obese had higher chance of death in the neonatal period (OR = 3.19; 95% CI 1.25–8.12). Mothers with overweight and obesity (BMI ≥ 25 kg/m²) also presented higher chance of neonatal death (OR = 2.45; 95% CI 1.16–5.18). These associations remained statistically significant after adjusting for sociodemographic characteristics and smoking status.

CONCLUSIONS: These findings suggest that obesity is a potential determinant of neonatal death and women would benefit from weight control counseling prior to pregnancy.