DOI: HTTP://DOI.ORG/10.22364/IDTCDD.2018.05

MATERNAL OBESITY AND CHILD HEALTH AT DIFFERENT AGES

Yu. V. Petrenko, V. P. Novikova, A. V. Polunina, N. E. Prokopjeva

Saint-Petersburg state pediatric medical university, Saint-Petersburg, Russia

Background

The prevalence of overweight and obesity is rapidly increasing across the world. Women of childbearing age and pregnant women are at higher risk. Maternal obesity can lead to adverse fetal complications.

Purpose

The aim of this study was to identify the influence of maternal obesity on a child's health in children of different ages born to these mothers.

Subjects and methods

We conducted a retrospective case review study of 76 children aged 6 to 17 years. Children were divided into two groups: the first group included 26 schoolchildren, which mothers were obese before and during pregnancy. 50 children of mothers with normal BMI during pregnancy presented comparison group.

Data Analysis

Statistical analysis was performed with SPSS Version 11.0 statistic software. Processing of categorical data was carried out using frequency tables, contingency tables, CIsquare analyses, and Fisher's exact test.

Results

Obese mothers were more likely to have children weighing more than 4 kg (8% and 4%, $p < 0.05$), and children weighing less than 2.5 kg (8% and 2%, $p < 0.01$)). In the first year of life, children born to obese mothers more likely to be overweight (15% and 2%, $p < 0.01$), develop rickets (35% and 16%, $p < 0.05$) and functional constipation (19% and 4%, $p < 0.05$). At school age, half of the children born to obese mothers also had obesity, which is more common than in the comparison group (50% and 10%, $p < 0.01$). They were also more likely to have euthyroid goiter (15% and 6%, $p < 0.05$), hypothalamic syndrome (19% and 2%, $p < 0.01$), other endocrinopathies (31% and 4%, p < 0, 01), chronic pancreatitis (8% and 4%, $p < 0.05$), hiatal hernia (8% and 2%, $p < 0.01$), iron deficiency anemia (8% and 4%, $p < 0.05$) , flatfoot (54% and 16%, $p < 0.05$). We found no differences in the incidence of diseases of the cardiovascular, respiratory, and urinary systems.

Conclusions

Maternal obesity may be a risk factor for low birth weight infants and newborns weighing more than 4 kg, as well as a risk factor for rickets, overweight and functional constipation in the first year of life. At school age, children born to obese mothers are more likely to have obesity, euthyroid goiter, hypothalamic syndrome and other endocrinopathies, chronic pancreatitis, hiatal hernia, iron deficiency anemia, and flat feet. It is necessary to prevent these diseases in children born to obese mothers.

Acknowledgements/Funding. The study was not funded.