Barbara Hugonin, Pediatr Ther 2017, 7:4 (Suppl)
DOI: 10.4172/2161-0665-C1-044

Barbara Hugonin

University of Siena, Italy

The negative effects of pre-pregnancy and pregnancy diabetes on neurodevelopment and metabolism of newborn: Screening and foetal programming for the prevention

Diabetes and related complications are very problematic in a pregnancy for maternal and fetal health. This research is a focus on women in pre-pregnancy and pregnancy, in particulary the attention is about risk factors as obesity, genetic conditions, familiar preeclampsia and metabolic diseases. This research is divided into parts: first is the analysis of diabetes conditions and consequences, in a pregnancy, for neurodevelopment of newborn and the second is an educational foetal programming for prevention. The problems are related in seven cases on 10 to diabetes mellitus in pre-pregnancy. In a cohort study on 92 women, 45 in pregnancy and 47 in pre-conceptional age, only 10% of pregnant women and 3% of non- pregnant know their diabetic conditions. In pre-pregnancy the diabetes and malnutrion, in association with a bad lifestyle, create a pre-inflammatory conditions with oxidation reactions, dangerous for mitochondrial genomic and for regulation of gene expression in future fetal development. Infact in this study in women with pre-pregnancy diabetes as new condition, the related complications as hypertension and metabolic scompenses was evident in 15 women, with overweight or obesity too. After this study the screening revealed in 15 cases the diabetes condition and complications with hypertension and hyperglycemia, in particulary the consequence was the influences for fetal nutrition and neurodevelopment. The epigenetic effect of inflammatory status caused a vasoconstriction and damage against tissues in development in particulary neuromuscular structures. The foetal programming and educational diabetics screening is the purpose for improvement in the pre-pregnancy health for a future life.

Biography

Barbara Hugonin did her Bachelor of Biological Sciences in University of Naples, Master's degree in Human Genetics and Genomics on prenatal diagnosis, cytogenetics, screening for inherited inborn error of metabolism and screening programming in Children's hospital of Florence and one more Master's degree in molecular and medical genetics and genetic pathologies. Her research and training programme includes Counseling genetics (2015-now) and research in maternal fetal nutrition and metabolic conditions. She is working for a Preconceptional Health Education Programme, The National Institute of Health in Rome, the group GLISP (Group of work for preconceptional health). She is a Diabetes Pediatric, Maternal Educator as well as Genetic Counselor.

Barbara.hugonin12@gmail.com