Impact of maternal diabetes on early and long-term health of the offspring: implication of "metabolic memory"

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Impacts of maternal diabetes in pregnancy on the health of offspring are substantially documented. The main reported adverse outcome on progenies born to pregnancy complicated with maternal diabetes appears to be macrosomia, as it is commonly known that intrauterine exposure to hyperglycemia increases the risk and programs the offspring to develop diabetes and/or obesity at adulthood. This “fetal programming”, due to intrauterine diabetic milieu, is termed as “metabolic memory”. In gestational diabetes as well as in macrosomia, the complications include metabolic abnormalities, degraded antioxidant status, disrupted immune system and potential metabolic syndrome in adult offspring. Furthermore, there is evidence that maternal obesity may also increase the risk of obesity and diabetes in offspring. However, women with GDM possibly exhibit greater macrosomia than obese women. Obesity and diabetes in pregnancy have independent and additive effects on obstetric complications, and both require proper management. Management of gestational diabetes mellitus and maternal obesity is essential for maternal and offspring good health. Increasing physical activity, preventing gestational weight gain and having some qualitative nutritional habits may be beneficial during both the pregnancy and offspring future life.

Biography

Akadiri YESSOUFOU has completed his Ph.D at the age of 32 years from University of Bourgogne (Dijon, France) and postdoctoral studies from University of Lausanne at Centre for Integrative Genomics (Switzerland). He was the Laureate of the Best Thesis Price granted by the Ministry of High Education of Benin in the year 2008. He also won the Price of Best Communication from the Société de Physiologie (France in the year 2007) and Young Investigator Award from ISSFAL at Cairns 2006. He has published more than 17 papers in reputed journals.