Early Life Opportunities for Diabetes Prevention in China

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Opinion

Maternal hyperglycemia brings health issues for both mothers and offspring. Offspring exposed to intrauterine hyperglycemia have a higher birth weight and are prone to develop type 2 diabetes in adult life. The concept of ‘DOHaD’ (Developmental Origins of Health and Disease) emphasizes the importance of intrauterine environmental exposures and brings new insights into the pathogenesis and progression of diabetes. Thus, hyperglycemia management is meaningful for type 2 diabetes prevention in next generation.

In China, the problem of the primary and secondary prevention of diabetes is lacking [1]. We would like to emphasize that pregnancy could provide a critical window for prevention of type 2 diabetes in China [2]. Women who had gestational diabetes mellitus (GDM) have at least a seven-fold increased risk of developing type 2 diabetes compared with those who had a normoglycemic pregnancy [3]. Thus, GDM management could prevent diabetes in the early stage.

China is a country with an estimated 16 million births per year, and the increasing prevalence of GDM has become a huge burden. According to our study [4], about one in five pregnant women had GDM in 2013 in China. Controlling GDM will be even more challenging after the implementation of two-child policy, as more and more women with advanced maternal age are trying to conceive their second child. Although we have achieved a lot of progress in GDM management in the past few years, such as setting up the uniform diagnostic criteria for GDM, promoting public education via one-day GDM clinic model and launching health workers training programmes [2], there are several issues concerning GDM management. Firstly, there is still lacking long-term follow-up programmes for GDM women and their infants. Secondly, GDM management is rather difficult in areas with low-resource settings. Thirdly, more studies are needed to evaluate effects of different intervention strategies in the setting of China such as exercise.

To further improve the GDM health care and prevention in China, integrated care is indispensable. Now together with general practitioners, we are establishing integrated care system for diabetic women before, during and after pregnancy to improve outcomes. In addition, obstetricians can and should play a key role in identifying high-risk pregnant women and delivering evidence-based intervention such as medical nutritional therapy and physical activity, and raise the GDM awareness in the public. Relative simplified GDM diagnostic protocols should be applied in rural or low-resource settings. Above all, effective GDM management in China will not just beneficial for pregnant women, but also prevent diabetes for the future generations of China.

References
