

**Metro Daily Eng Info**

**Gestational Diabetes Mellitus – Maternal Risk Factors and Perinatal Outcome**

Women with pre-gestational diabetes mellitus (PGDM) are known to have increased risk of fetal anomalies, large-for-gestational age (LGA) and macrosomic infants, neonatal hypoglycaemia, hyperbilirubinaemia, hypocalcaemia, respiratory complications, birth trauma, and perinatal mortality, and that satisfactory glycaemic control during pregnancy can significantly reduce these risks. However, PGDM is infrequently encountered in Hong Kong, being found in 0.14% of the parturients according to the HKCOG 1994 Territory-Wide Audit. Gestational diabetes mellitus (GDM) is far more common and it can be found in about 12% of pregnant women.

While the causes of this phenomenon remains to be elucidated, a number of previously unknown risk factors have been identified in our studies. These include maternal  $\alpha$ -thalassaemia carrier status, increased maternal serum ferritin at the beginning of the third trimester, and a high haemoglobin concentration and high systolic blood pressure at booking in the first trimester. Furthermore, even mild GDM in the form of the World Health Organization category of impaired glucose tolerance (IGT) is associated with different maternal characteristics such as increased age, weight and body mass index, as well as increased incidence of pregnancy induced hypertension and preterm birth.

For the fetus, there is now evidence that GDM was one of important causes of stillbirth in Hong Kong, and that it was associated with increased perinatal morbidity overall. Despite treatment, increased incidence of preterm birth, large-for-gestational age (LGA) and macrosomic infants, and neonatal jaundice requiring treatment, were still found in association with GDM. Among LGA infants, the

presence of maternal IGT also increased the risk of overall morbidity, Erb's palsy, shoulder dystocia, meconium aspiration syndrome, treatment for jaundice, and sepsis. These findings, together with the rising incidence of GDM, therefore suggest that GDM is likely to become the leading cause of perinatal morbidity in our population.

The adverse effects of GDM on pregnancy and perinatal outcome found in local studies were demonstrated on women who have already been treated. The literature indicates that with more vigorous management and stricter control of maternal glucose level, the incidence of adverse perinatal outcomes can be reduced to those approaching the general population. It is therefore clear that the perinatal outcome would have been much worse if pregnancies complicated by GDM have not been identified or treated in the first place. The identification and appropriate management of diabetic, especially gestational diabetic, pregnancies is therefore one of the most important means of improving pregnancy outcome in Hong Kong.