Incidence of fetal congenital malformations in women with type 1 and type 2 diabetes in pregnancy in a large multi-ethnic UK region.

N.K. Shah, P. Brydon, C. Shuter, J. Gardosi - West Midlands Perinatal Institute, Birmingham, UK.
F. Dunne – University College Hospital and National University of Galway, Ireland.

Background: West Midlands Cohort Analysis

Out of the National UK CEMACH diabetes in Pregnancy Programme the West Midlands commissioned its own regional analysis of the outcomes & care provided in pregnancies complicated by maternal type 1 & 2 diabetes in 2002-03. The West Midlands (WM) is a large central region of the UK with a diverse ethnic population mix including 17.5% Asian ethnicity. Major congenital malformations were coded according to ICD10 and using EUROCAT classification. Minor anomalies were excluded.

Key Population Results

405 women with type 1 or 2 diabetes registered between 01/03/02 and 28/02/03. 426 babies of which 370 were alive at 28 days. 32 pregnancies with a major congenital abnormality (CA).

35% of the cohort in WM were affected by type 2 diabetes, a significantly greater proportion than nationally (p<0.01). The majority of these women are Asian, multiparous and almost completely located in the areas of highest social deprivation.

Congenital Malformations

Major Congenital Malformation rate = 82.1/1000 livebirths.

Outcomes: 7 early fetal losses
5 perinatal losses
20 babies alive at 28 days.

Conclusions and Recommendations

1. Type 2 diabetes - WM has a significantly higher prevalence of type 2 diabetes in pregnancy mainly occurring in Asian minority groups.
2. The major CMR in the West Midlands is twice that of the national UK figures in pre-gestational diabetic women and four times that of the general population in UK.
3. The majority of malformations (53%) were cardiac or CNS abnormalities.
4. Efforts to reduce the CMR are centred around optimization of pre-pregnancy and 1st Trimester glycaemic control and usage of folic acid.