THE EFFECT OF WEIGHT GAIN IN PREGNANCY ON THE GLYCEMIC CONTROL OF OBESE DIABETICS AND THE BIRTH WEIGHT OF THEIR OFFSPRINGS

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Nineteen obese/overweight diabetics were studied in relation to their caloric intake, glycemic control and weight gain during pregnancy along with the birth weight and morbidity peculiar to the infant of the diabetic mother (IDM).

Group I comprised of nine patients with a pre-gestational body weight of 70±7.7kg (123 ±10%). This group was advised a meal plan in keeping with the current dietary conventions aimed at achieving and maintaining euglycemia and gaining the desired weight recommended during the period of gestation. They received 2000+200 kcals/day (CHO: 275-325G; Protein: 75-100G; Fat: 40-60G/day). Euglycemia was maintained during the period of observation (Fasting Plasma glucose: 103±28mg/dl and Glycohemoglobin Al: 7 5±1%) gained a total amount of 14.0±2.5 kg weight at term. They delivered large for gestational age infants at 38 weeks weighting 4.0±0 5 kg (greater than 90th percentile). Two infants suffered from respiratory distress, neonatal hypoglycemia and hyperbilirubinemia.

Group II comprised of ten obese patients with a pregestational weight of83±11.2kg (15±18%). This group was treated with a controlled calori meal plan devised for achieving and maintaining euglycemia and restricting the nett weight gain in pregnancy without the ill effects of starvation. These diets were introduced as a therapeutic option to conventional diets (Group I) which failed to obviate the morbidity encountered in IDM's. The patients received 1450±350 kcals/day (CHO: 180—250G; Protein: 60—80G; Fat: 30—40G/ day). The patients maintained euglycemia (Fasting plasma Glucose; 95± 18mg/dl; Glycohemoglobin Al: 7.0 ±1%) and gained 4.0 ± 3.0kg during gestation. They delivered normal birth weight infants (3.0 ±0.4 kg., i.e. 10— 90th percentile) at 38 weeks of gestation. None of the infants suffered from the morbidity peculiar to the 1DM.

Conclusion: A restriction of weight gain in obese pregnant diabetics by a controlled calori meal plan is associated normoglycemia during pregnancy and delivery of normal weight infants.

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