The association between birthweight 4000g or greater and perinatal outcomes in greater and perinatal outcomes in patients with and without gestational diabetes

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Fetal macrosomia is associated with adverse perinatal outcomes.These include stillbirth, neonatal mortality secondary to birth asphyxia,shoulder dystocia, birth injury, and meconium aspiration syndrome andafter birth neonatal respiratory distress, hypoglycemia andhyperbilirubinaemia.The aim of this study was to evaluate the association between birthweight 4000g or greater and perinatal outcomes in mothers with andwithout gestational diabetes.This study was carried out on 100 neonates for either diabetic or nondiabetic mothers whom delivered in Kafr Alzayat General Hospital duringthe period from November 2011 to June 2012. The neonates divided intotwo groups to compare between perinatal outcomes (birth injury i.e.shoulder dystocia, and brachial plexus injury, neonatal respiratorydistress, hypoglycemia and Hyperbilirubinemia).The 1st group (patients) included 50 newborn with birth weight 4000g or more, while the 2nd group (control) included 50 newborn with birthweight less than 4000g.In present study maternal body mass index (BMI) has significanteffect on neonatal birth weight, the mothers with higher BMI have higherincidence to have macrosomic baby, the mothers with history ofmacrosomic baby have higher incidence to have macrosomic baby, themultiparous mothers have higher incidence to have macrosomic babythan primipara. GDM is risk factor for macrosomia and other neonatal complications.In the macrosomic group 34 out of 50 newborn (68%), had nocomplication, while the other 16 (32%) had complication in the form ofShoulder dystocia in 6%, jaundice in 10%, respiratory distress in 8%,hypoglycemia in 6%, and Erb’s palsy in 2% while In control 41 out of50 newborn (82%) had no complication , and 9 (18%) had complicationin the form of; jaundice in 12%, respiratory distress in 4%, andhypoglycemia in2%.In this study, we report that not only does birth weight of 4000 g orgreater increase the prevalence of adverse perinatal outcomes such ashypoglycemia, RDS, shoulder dystocia, and Erb’s palsy, but also thatGDM status increases this risk even further. When both birthweight of4000 g or greater and GDM are present, the effect estimates of theseoutcomes appear to be more than additive.Conclusion:· Maternal body mass index (BMI) has significant effect on neonatalbirth weight, mothers with higher BMI have higher incidence tohave macrosomic baby.· Antinatal ultrasound in the last trimester is very important

toexpect fetal weight and macrosomia.· The multiparous mothers have higher incidence to havemacrosomic baby than primipara.· The mothers with history of macrosomic baby have higherincidence to have macrosomic baby.· GDM is risk factor for macrosomia and other neonatalcomplications like birth injury, respiratory distress, and hypoglycemia · Respiratory distress in macrosomic group is 2 folds of it in normalbirth weight.· Neonatal hypoglycemia in macrosomic group is 3 folds of it innormal birth weight.· The macrosomic babies had higher incidence of birth injury thanbabies with normal birth weight.Recommendations:· Antinatal ultrasound in last trimester very important to expect fetalweight and macrosomia and to detect the optimal mode and timingof delivery to decrease the rate of birth injury and perinatalasphexia.· Antinatal screening of GDM is very important as it is risk factorfor macrosomia its related complications.· Our findings support that birth weight of 4000 g or greater isassociated with neonatal morbidity and the risks further increase inthe setting of gestational diabetes. Such neonates should bescreened by pediatricians for hypoglycemia and unrecognizedErb's palsy. Hypoglycemia should be screened in 1st 24 h of life at1h, 2hs and 4 hs after birth and then again until stabilization orsatisfactory oral feeding start and to start oral feeding as early aspossible.