

- 17 **METFORMIN (M) VS. INSULIN (I) IN A2 DIABETICS; A RANDOMIZED CLINICAL TRIAL** LISA MOORE¹, CHRISTIAN BRIERY², RICK MARTIN², ELIZABETH HOOD², JAMES BOFILL², JOHN MORRISON², ¹University of New Mexico, Obstetrics and Gynecology, Albuquerque, New Mexico, ²University of Mississippi Medical Center, Obstetrics & Gynecology, Jackson, Mississippi

OBJECTIVE: To compare the biguanide, M (Glucophage) to I therapy for pregnant A2 diabetic women.

STUDY DESIGN: Women with A2 gestational diabetes were offered participation if they did not have IDDM, liver/kidney disease, chronic hypertension or seizure disorders. Patients ≥ 11 weeks, < 36 weeks' gestation were randomized to achieve euglycemia by receiving I, 0.7 units/kg subcutaneously or M 500 mg bid to achieve postprandial blood glucose's of < 120 mg/dL, fasting blood glucose 60-90 mg/dL.

RESULTS: Sixty-three patients entered the study; I (n = 31), M (n = 32). Maternal age, gravidity, parity, ethnicity, and gestational age at entry (P = .087-.173) were all similar. M women were heavier (weight 229.9 ± 56.1) than I patients (198.8 ± 43.1 , P = .016). Glucose levels were similar between the two groups (Table). The rate of abdominal delivery, gestational age at delivery, shoulder dystocia, and postpartum hemorrhage were similar (P = .102-0.321). Neonatal statistics were not different between I and M groups; birthweight, apgar score 5 min., respiratory distress syndrome, hyperbilirubinemia, neonatal hypoglycemia, and NICU admission (P = .144-.373). There were no cases of maternal hypoglycemia or diabetic ketoacidosis.

CONCLUSION: M compared favorably to I for A2 diabetic women in blood glucose control, maternal and neonatal outcome parameters.

Table

Glucose (mg%)	Insulin Group (mean \pm SD)	Metformin Group (mean \pm SD)	P
Fasting	96.8 \pm 12.2	92.6 \pm 10.0	.400
2 Hr. pp Breakfast	104.4 \pm 19.4	104.6 \pm 5.1	.983
2 Hr. pp Lunch	112.5 \pm 32.9	106.0 \pm 13.9	.545
2 Hr. pp Dinner	109.2 \pm 22.5	108.1 \pm 13.8	.887