

# Does Twin Pregnancy In Women With Type 2 Diabetes & Gestational Diabetes Require Higher Insulin Doses Versus Singleton Pregnancy?

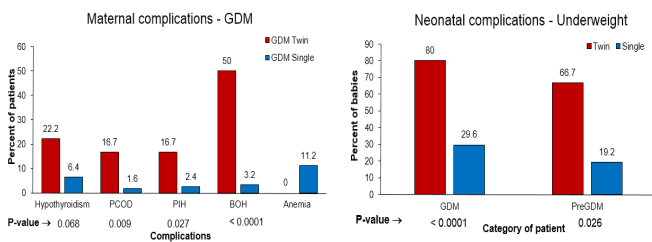
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## OBJECTIVE

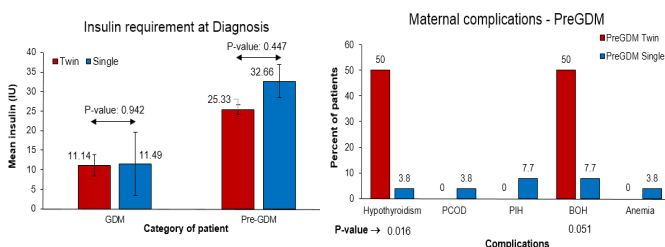
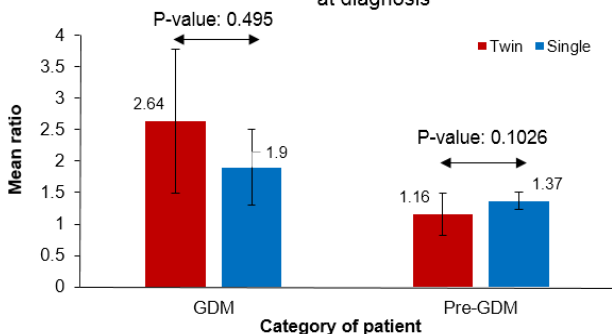
To evaluate the insulin requirements in type 2 Pre-gestational Diabetes Mellitus (Pre-GDM) & Gestational Diabetes Mellitus (GDM) with twin versus singleton pregnancy.

## METHODOLOGY

**Methodology:** In this retrospective observational study, 915 women with hyperglycemia in pregnancy attending tertiary care centre, 24 (2.6%) had twin pregnancy. Out of which 18 were GDM and 6 were Pre GDM women. Age, BMI, HbA1c & weeks of diagnosis matched subjects of GDM (125), type 2 Pre-GDM (26) with singleton pregnancy were considered for comparison of insulin requirement, maternal complications & fetal outcome. The significance of difference in the mean insulin levels required at diagnosis and full terms between single and twin pregnancies was determined using t-test for independent samples, while the association between complications and delivery types was determined using Pearson's Chi-square test.



Ratio of per day total insulin dose at full term vs. dose at diagnosis



## RESULTS

Out of 24 twin pregnancies, 18 were GDM and 6 were Pre-GDM. Out of 18 GDM, 9 were on diet and remained euglycemic on diet only. One twin pregnancy remained euglycemic on Metformin only throughout her pregnancy. One twin pregnancy had stopped Insulin on her own after few weeks and delivered prematurely. Remaining 8 GDM and 6 Pre-GDM were evaluated for Insulin therapy. Amongst GDM, difference in the mean insulin requirement at diagnosis in twin [11.14 (11.67)] and singleton pregnancy [11.49 (13.84)] was statistically insignificant (P-value 0.942). In Pre-GDM, difference in insulin requirement at diagnosis of twin [25.33 (19.79)] and singleton pregnancy [32.66 (21.26)] was statistically insignificant (P-value 0.4466). Increase in insulin dose amongst twin vs. singleton pregnancy from diagnosis to delivery in GDM & Pre-GDM was statistically insignificant (P-value: 0.4948 & P-value: 0.1026 respectively). In GDM women, PCOD, PIH and BOH were significantly higher in twin vs. singleton pregnancy with P-values 0.0098, 0.0273 and < 0.0001 respectively. In pre-GDM, hypothyroidism in twin pregnancy was significantly higher than singleton (P-value: 0.0165). Low birth weight was statistically significantly higher in twin versus singleton pregnancy in both GDM and Pre-GDM (P-values < 0.0001 and 0.026 respectively). Neonatal macrosomia & hypoglycaemia didn't show any significant association.

## CONCLUSION

GDM or Type 2 pre-GDM women with twin pregnancy don't require higher insulin doses versus singleton. GDM with twin pregnancy are at higher risks to have PCOD, PIH & BOH. Macrosomia is uncommon in twin pregnancy.

## ABBREVIATIONS

Pre-GDM-Pre-gestational Diabetes Mellitus, GDM- Gestational Diabetes Mellitus, PCOD-Polycystic Ovarian Disease, PIH-Pregnancy induced hypertension, BOH- Bad obstetric history.

## REFERENCES

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