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"Immediate Postpartum Glucose Tolerance Test: A Comparison with the Gold Standard"

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The goal of our study is to determine the accuracy of the immediate postpartum 2-hour glucose tolerance test (GTT) on postpartum day 1 or 2 for diagnosing impaired glucose intolerance (IGT) or type 2 diabetes mellitus (T2DM) in patients with gestational diabetes when compared to the gold standard 2-hour GTT performed at 6-12 weeks postpartum. Performing the GTT immediately postpartum during a patient's hospital stay would likely increase patient compliance with completing this test and provide an opportunity for early diagnosis of IGT/T2DM which would have implications for future pregnancies and long-term maternal health.

Our study has two arms for enrollment: an inpatient GTT group and a chart review group. The inpatient GTT group contains patients who agree to complete the immediate postpartum GTT during their hospital stay on postpartum day 1 or 2 in addition to completing the standard 6 to 12-week postpartum GTT for comparison. For patients who are not interested in completing the immediate postpartum GTT, they may opt to enroll in the chart review arm of the study and is purely observational, in which we abstract the results of their standard outpatient 6 to 12-week postpartum GTT. The purpose of this chart review group is to establish the baseline compliance rate for patients with gestational diabetes at our medical center for comparison.

We began patient recruitment for our study on January 1, 2020. However, with the advent of the coronavirus pandemic, we decided to temporarily pause patient recruitment on March 16, 2020 out of concern that outpatient compliance rates would decline much lower than the anticipated 40-50% dropout rate, which we had accounted for with our funding. At the beginning of the pandemic, we observed several local clinics reducing their hours of operation or temporarily ceasing to offer any non-urgent appointments, which would make it difficult for our study participants to obtain their outpatient GTT. As Telemedicine and screening practices became implemented into these clinics, we later observed a re-establishment of postpartum outpatient visits. Thus, we decided to resume patient recruitment for our study beginning on July 6, 2020.

Despite this setback, we have maintained a relatively high patient recruitment rate. A total of 83 patients with gestational diabetes who met our study criteria were approached during our active recruitment months, of which 74 of these patients agreed to enroll in the study and only 9 declined participation. Our goal is to enroll 300 patients for the inpatient GTT group and 100 patients for the chart review group.

With the impact of the coronavirus pandemic has had on outpatient clinic attendance and the increasing use of Telemedicine, it is now even more important to complete this study to investigate the utility of immediate postpartum glucose tolerance testing to help detect IGT/T2DM in an at-risk population.