Predictive validity of Post Prandial Blood Sugar (PPBS) at booking visit and routine urine dip stick test (UDST) in detecting Gestational Diabetes Mellitus (GDM)

Ranasinghe ORJC¹, Dahanayaka NJ¹, Agampodi SB²
¹Taeching Hospital Anuradhapura and ²Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka

Background

Prevalence of GDM in Sri Lanka is estimated to be around 5-10%. Recommended screening methods for detection of GDM include risk based PPBS and routine urine dip stick test.

Objective

To determine the predictive validity of PPBS at booking visit and the validity of UDST to detect GDM among pregnant women in Anuradhapura district.

Methods

Pregnant women at 24-28 week POA, residing in Anuradhapura district and who had undergone PPBS during the first trimester were selected for the present study. GDM was defined using International Association of Diabetes and Pregnancy Study Group (IADPSG) criteria using 75g Oral Glucose Tolerance Test (OGTT). Screening results were extracted from the ante natal records. Ethical clearance was obtained from the ethics review committee of Faculty of Medicine & Allied Sciences, Rajarata University of Sri Lanka.

Results

Of the 405 women screened for the study, only 113 (27.9%) had PPBS either at booking visit or during the first trimester. Out of them, 19 (6.8%) were confirmed as having GDM. Sensitivity, specificity, positive and negative predictive values of PPBS was 10.5%, 100.0%, 100.0% and 84.6% respectively. Regular UDST was done for 389 (96.0%) pregnant women and of them, 43 (10.9%) were confirmed as having GDM. Out of them, only 3 had abnormal dipstick results. There were 7 false positive urine dipstick results at least once during the pregnancy showing a sensitivity of 6.8%.

Conclusion

Validity of the present recommended screening practice is highly doubtful. Alternative methods for screening should be employed to control the effects of GDM.