Diabetes Update

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Dear Doctor,

Greetings from Micro Labs Limited. We are happy to bring you "DIABETES UPDATE" which contains latest and interesting news in the field of Diabetes and Endocrinology.

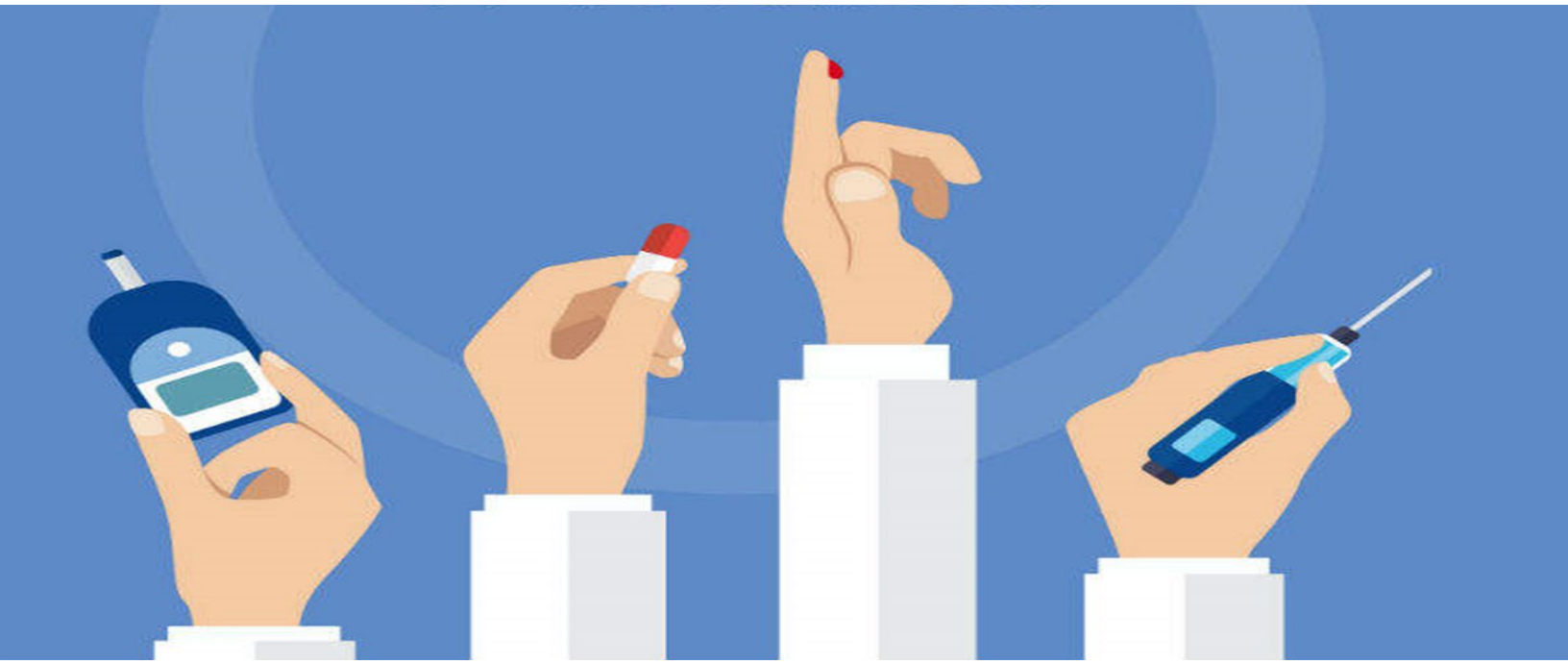
This issue contains

Should you require any specific article or medical information, please feel free to contact us at medicalservices@microlabs.in

Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Limited



Screening of Women With Gestational Diabetes at Delivery Hospitalization for Type 2 Diabetes

As a majority of women do not return for postpartum diabetic screening, an oral glucose tolerance test during the delivery hospitalization may be of use in certain circumstances in which postpartum follow-up is challenging.

Gestational diabetes mellitus (GDM) is a major public health problem and threat to maternal and child health. Less than one-half of women with gestational diabetes mellitus are screened for type 2 diabetes postpartum. Other approaches to postpartum screening need to be evaluated, including the role of screening during the delivery hospitalization. This study combined analysis of patient-level data from 4 centers (6 clinical sites) assessing the utility of an immediate postpartum 75-g oral glucose tolerance test during the delivery hospitalization (PP1) for the diagnosis of type 2 diabetes compared with a routine 4- to 12-week postpartum oral glucose tolerance test (PP2). Eligible women underwent a 75-g oral glucose tolerance test at both PP1 and PP2. Sensitivity, specificity, and negative and positive predictive values of the PP1 test were estimated for diagnosis of type 2 diabetes, impaired fasting glucose, or impaired glucose tolerance.

In total, 319 women completed a PP1 screening, with 152 (47.6%) lost to follow-up for the PP2 oral glucose tolerance test. None of the women with a normal PP1 oral glucose tolerance test (n=73) later tested as having type 2 diabetes at PP2. Overall, 12.6% of subjects (n=21) had a change from normal to impaired fasting glucose/impaired glucose tolerance or a change from impaired fasting glucose/impaired glucose tolerance to type 2 diabetes.

The PP1 oral glucose tolerance test had 50% sensitivity (11.8-88.2), 95.7% specificity (91.3-98.2%) with a 98.1% (94.5-99.6%) negative predictive value and a 30% (95% confidence interval, 6.7-65.3) positive predictive value for type 2 diabetes vs normal/impaired fasting glucose/impaired glucose tolerance result. The negative predictive value of having type 2 diabetes at PP2 compared with a normal oral glucose tolerance test (excluding impaired fasting glucose/impaired glucose tolerance) at PP1 was 100% (95% confidence interval, 93.5-100) with a specificity of 96.5% (95% confidence interval, 87.9-99.6).

A normal oral glucose tolerance test during the delivery hospitalization appears to exclude postpartum type 2 diabetes mellitus. However, the results of the immediate postpartum oral glucose tolerance test were mixed when including impaired fasting glucose or impaired glucose tolerance. As a majority of women do not return for postpartum diabetic

screening, an oral glucose tolerance test during the delivery hospitalization may be of use in certain circumstances in which postpartum follow-up is challenging and resources could be focused on women with an abnormal screening immediately after the delivery hospitalization.

Waters TP *et al* Am J Obstet Gynecol. 2020;222(1):73.e1–73.e11..

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Screening of Glycemic Profile in Dysglycemic Patients With Coronary Artery Disease

Among common cardiovascular risk factors, type 2 diabetes and its preceding state, impaired glucose tolerance (IGT), designated together as dysglycemia, increase the risk for CVD by two to four times

It is imperative to improve both screening and management of patients with CAD and dysglycemia

Dysglycemia, in this survey defined as impaired glucose tolerance (IGT) or type 2 diabetes, is common in patients with coronary artery disease (CAD) and associated with an unfavorable prognosis. This European survey investigated dysglycemia screening and risk factor management of patients with CAD in relation to standards of European guidelines for cardiovascular subjects.

The European Society of Cardiology's European Observational Research Programme (ESC EORP) European Action on Secondary and Primary Prevention by Intervention to Reduce Events (EUROASPIRE) V (2016–2017) included 8,261 CAD patients, aged 18–80 years, from 27 countries. If the glycemic state was unknown, patients underwent an oral glucose tolerance test (OGTT) and measurement of glycated hemoglobin A1c. Lifestyle, risk factors, and pharmacological management were investigated.

A total of 2,452 patients (29.7%) had known diabetes. OGTT was performed in 4,440 patients with unknown glycemic state, of whom 41.1% were dysglycemic. Without the OGTT, 30% of patients with type 2 diabetes and 70% of those with IGT would not have been detected. The presence of dysglycemia almost doubled from that self-reported to the true proportion after screening. Only approximately one-third of all coronary patients had completely normal glucose metabolism. Of patients with known diabetes, 31% had been advised to attend a diabetes clinic, and only 24% attended. Only 58% of dysglycemic patients were prescribed all cardioprotective drugs, and use of sodium–glucose cotransporter 2 inhibitors (3%) or

glucagon-like peptide 1 receptor agonists (1%) was small.

It is imperative to improve both screening and management of patients with CAD and dysglycemia, in the expectation of a substantial reduction in risk of further cardiovascular events and in complications of diabetes, as well as better health outcomes and quality of life.

Ferrannini G *et al.* Diabetes Care 2020 Apr; 43(4): 726-733

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Indian Diabetic risk score (IDRS) in the Diabetes Management

Indian Diabetes Risk Score (IDRS) is a good indicator of high risk diabetic subjects.

This study was conducted to evaluate the Indian population for Type 2 Diabetes Mellitus (DM) based on Indian Diabetes Risk Score (IDRS).

This was a multi-centric nationwide screening for DM and its risk in all populous states and Union territories of India in 2017. It is the first pan India DM screening study conducted on 240,000 subjects in a short period of 3 months based on IDRS. This was a stratified translational research study in randomly selected cluster populations from all zones of rural and urban India. Two non-modifiable (age, family history) and two modifiable (waist circumference & physical activity) were used to obtain the score. High, moderate and low risk groups were selected based on scores.

In this study 40.9% subjects were detected to be high risk, known or newly diagnosed DM subjects in urban and rural regions. IDRS could detect 78.1% known diabetic subjects as high risk group. Age group 50–59 (17.4%); 60–69 (22%); 70–79 (22.8%); >80 (19.2%) revealed high percentage of subjects. ROC was found to be 0.763 at CI 95% of 0.761–0.765 with statistical significance of $p < 0.0001$. At >50 cut off, youden index showed the sensitivity of 78.05 and specificity of 62.68. Regression analysis revealed that IDRS and Diabetes are significantly positively associated. Data reveals that IDRS is a good indicator of high risk diabetic subjects.

Nagarathna R et al. Diabetes Res Clin Pract. 2020;162:108088.