Diabetes Asia Journal
Vol. 2, Issue 1, April 2025, Edition: Online
Publisher: Diabetes Asia Journal under JHRC
eISSN: 3048-8192
Cross Ref DOI: https://doi.org/10.62996/daj.53042025
Journal Homepage: https://diabetesasia.org/journal/

Letter to Editor

Gestational Diabetes Diagnosis by DIPSI & IADPSG Criteria in observational study in Italian Population

Sanjev Dave,

Submitted: 12 April 2025; Accepted: 21 April 2025; Published: 28 April 2025

Corresponding Author: [1]Prof Dr Sanjev Dave, HOD Community Medicine, Autonomous State Medical College, Auraiya (UP-206244). sanjeevdavey333@gmail.com

There is non-universal consensus for Diagnosis of Gestational Diabetes Mellitus around the Globe, even in same country two guidelines are followed; one observational retrospectively study done in Italy, of the 1015 pregnant women who studied, 80% were (811) Italian [1]. Gestational diabetes mellitus (GDM) was identified in 113 cases (11.1%) using the International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria, while the Indian Diabetes in Pregnancy Study Group (DIPSI) criteria diagnosed 105 patients (10.3%).

Notably, women diagnosed with GDM according to the Indian criteria, defined as those with two-hour Oral Glucose Tolerance Test (OGTT) glucose levels of 140 mg/dL (or 7.8 mmol/L), tended to be older and exhibited significantly higher pre-gestational body mass indices (BMIs). They also demonstrated elevated fasting blood glucose levels in the first trimester, as well as higher fasting, one-hour, and two-hour glucose levels following glucose ingestion during the OGTT. Furthermore, these women were more likely to have a familial history of diabetes and a past diagnosis of GDM, distinguishing them clearly from their counterparts without GDM (those with two-hour OGTT glucose levels < 140 mg/dL or 7.8 mmol/L). In contrast, women diagnosed with GDM per the IADPSG criteria showed higher pre-gestational BMIs, increased rates of previous macrosomia, and elevated fasting glucose levels during the first trimester. They also had higher levels of fasting and one-hour glucose after the glucose load, although their two-hour glucose results during the OGTT were lower than those of the women identified through the Indian criteria.

When comparing the two diagnostic criteria regarding fasting glucose levels at the OGTT, as well as one and two hours after the glucose load (measured in mg/dL), the findings were striking. The IADPSG group recorded values of 88.1 ± 9.0, 175.9 ± 28.2, and 140.9 ± 25.8, while the DIPSI criteria indicated values of 82.3 ± 9.5, 169.4 ± 27.8, and 155.5 ± 12.3, respectively. These differences underscore the critical importance of understanding the varying diagnostic approaches to GDM and their implications for maternal health.
Fasting and hour Blood sugar levels were significantly higher in the IADPSG criteria compared to DIPSI Criteria, whereas 2-hour OGTT was substantially lower in the IADPSG group. Hence, two measures were able to identify two different Pregnant women Groups where fasting and 1 hour was higher in the IADPSG group and 2-hour OGTT higher in the DIPSI group but lower in IADPSG; the DIPSI Group identified 140-153 mg/dl group, which is vital for maternal and fetal complication in the Indian study[2,3], whereas IADPSG group were not able to pick up and fasting 92 and more were able to pick up as GDM which DIPSI fail to recognize, so around 5% GDM Group identified by two Criteria differently 4.9 in DIPSI and 5.4 % in IADPSG and both Criteria identified 5.6%.

We need to see whether IADPSG Criteria for 2-hour OGTT need to be lowered to 140 mg/dl to pick up those cases missed and check if >140 mg/dl have adverse maternal and neonatal outcomes as DIPSI Criteria show negative effects in the Indian large population study. Even in Non-Pregnant women,>±140 mg/dl is abnormal (at

Risk), and pregnancy is the diabetic intolerant state; it should be odd in even the Caucasian population; Seshiah et al [4] and Defrozo [7].

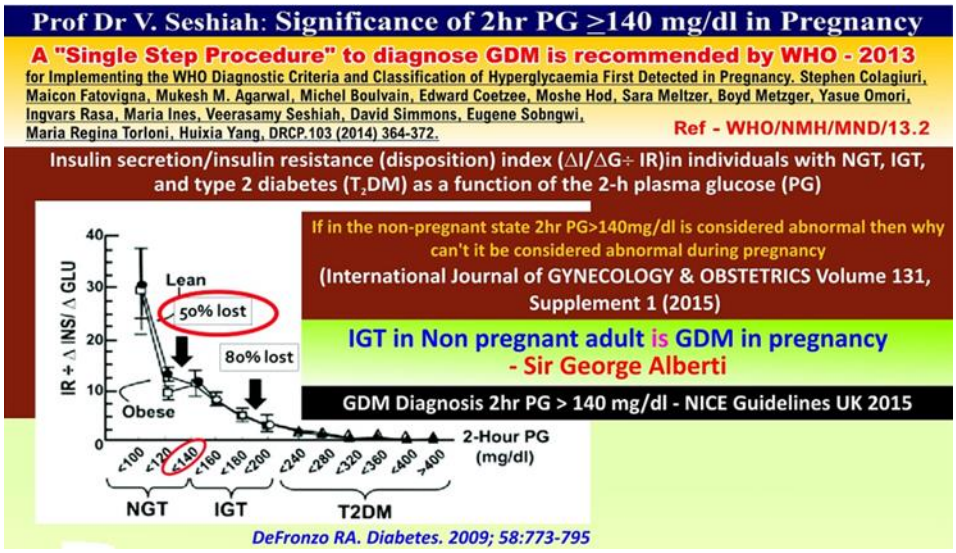

Figure 1. Credit DeFronzo RA

At fasting of 92 and higher, we have to identify those cases missed in the DIPSI criteria.
As already shown by Seshiah et al. that if we had taken a 1.5 odds ratio instead of 1.7 in IADPSG criteria, we would have almost identical prevalence as DIPSI [4,5]
If a Non-pregnant state >140 mg/dl is considered abnormal, then why cannot it be regarded as abnormal in pregnant women [6,7].

1. Corrado F, Di Benedetto A, Di Vieste G, La Fauci L, Martinelli C, D'Anna R, Pintaudi B. Diagnosing Gestational Diabetes with a Probably Too Simplified Diagnostic Procedure Compared to International Criteria: The Indian Case Study. J Clin Med. 2022 Jun 28;11(13):3745. doi: 10.3390/jcm11133745.

2. Balaji V, Balaji MS, Seshiah V, Mukundan S, Datta M. Maternal glycemia and neonates birth weight in Asian Indian women. Diabetes Res Clin Pract. 2006 Aug;73(2):223-4. doi: 10.1016/j.diabres.2006.04.010. Epub 2006 May 30. PMID: 16730842.

3. Jain R, Davey S, Davey A, Raghav SK, Singh JV. Can manage blood sugar levels in gestational diabetes mellitus cases indicate maternal and fetal outcomes? The results of a prospective cohort study from India. J Family Community Med. 2016 May-Aug;23(2):94-9. DOI: 10.4103/2230-8229.181002.

4. Seshiah V, Shah SS, Balaji V, Anjalakshi C, Jain R. When are we Going to Settle the Diagnostic Criteria of Gestational Diabetes Mellitus? J Assoc Physicians India. 2019 Oct;67(10):70-72. PMID: 31571457.

5. R. Jain, V. Shah, V. Balaji, H. Divakar, S. Banerjee, A. Das Kumar, N. Bhavatharini. Puzzle and Muddle in the Guidelines for Diagnosing Gestational Diabetes Mellitus-Efforts to Solve. DRCP Vol 186, Supplement 1, 109732, APRIL 01, 2022. DOI: https://doi.org/10.1016/j.diabres.2022.109732

6. Hod, M., Hadar, E. and Cabero-Roura, L. (2015), Prevention of type 2 diabetes among women with prior gestational diabetes mellitus. International Journal of Gynecology & Obstetrics, 131: S16-S18. https://doi.org/10.1016/j.ijgo.2015.02.010

7. Defronzo RA. Banting Lecture. From the triumvirate to the ominous octet: a new paradigm for treating type 2 diabetes mellitus. Diabetes. 2009 Apr;58(4):773-95. DOI: 10.2337/db09-9028.

- **Funding: Not received.**

- **Informed Consent** N/A

- **Conflict of Interest Statement**

  The author declared “No Conflict of Interest” with this publication.

- **Additional Information**

- **DOI:** https://doi.org/10.62996/daj.51042025

Cite this Article:
Sanjev dave. **Gestational Diabetes Diagnosis by DIPSI & IADPSG Criteria in observational study in Italian Population.** Diabetes Asia Journal; 2(1):18-20. https://doi.org/10.62996/daj.53042025