

Gestational diabetes mellitus: National interests using evidence based information

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This issue of the MJM includes one article on gestational diabetes mellitus (GDM) drawn from the National Obstetric Registry (NOR) of Malaysia by Muneswaran G. et al.¹ The National Obstetric Registry, Malaysia provides descriptive statistical data but does not include data from all health facilities in Malaysia. Mooted in 2007, the NOR as a clinical 'disease' database, only captures data from 14 tertiary public hospitals which reflect on less than 40 per cent of deliveries in Malaysia.² Although the information shared in the article published, drawn from one of the NOR reports is not new, it reinforces the objectives of the Ministry of Health to continue to develop better strategies to both screen for, and manage GDM in Malaysia and also to prevent the development of type 2 diabetes mellitus in these pregnant women. The 3rd Health Morbidity Survey Report clearly shows increasing trends of diabetes mellitus and obesity in Malaysia with a prevalence rate of diabetes in the general population to be 11.6%. The prevalence of GDM from selected public tertiary hospitals is reported to range from 8-9 per cent (National Obstetric Registry Report of 2011-2012)³ with Indians having a higher prevalence than other ethnic groups. However, such limited hospital based data needs scrutiny as to its value in health planning.

National Birth Registries should reflect the complete picture of patient care in the country, both public and private, so as to tract patient management and care and to make recommendations that are implementable based on strong local evidence. This would lend to the development of appropriate evidence based guidelines for practice of obstetrics in Malaysia especially in the short and long term management of GDM. Interesting data are drawn from the NOR report of 2010, that the incidence of GDM was 9.9% with Indian ethnic groups constituting 14.4%. The macrosomia rate had doubled and caesarean section rate was three times higher with increasing parity and age being risk factors for development of GDM.² A similar pattern was seen in the 2011/2012 NOR Reports despite recommendations of better glycaemic control in the previous report.

It is imperative that the quality of care of GDM rendered to the afflicted population fall on both primary care physicians and all other health providers, whether in private or public sector. It makes little sense if the NOR continues to produce similar data on GDM and other obstetric morbidity information if only 14 tertiary hospitals in the public sector are covered. Current controversies in screening of GDM, categorisation of subgroups of GDM and the proper management of GDM throughout the country needs to be

standardised. As increasing age and parity of mothers are contributing to GDM, follow up of affected mothers throughout their life with simple measures like diet modification, lifestyle changes and exercise through patient empowerment should be strong recommendations.

The recommendations of the NOR Reports of 2010 and 2011/2012 are rather generic in nature and is not based on robust evidence. This could be improved if the processes of obstetric care including risk based screening for GDM based on evidence currently available in populations similar to Malaysia. Good glycaemic control, preconception counselling and universal screening have been alluded to in the NOR Report 2011/2012³ but reasons as to how and why these measures either will prevent the complications or could be prevented have not been shown.

The American Diabetic Association/ IADPSG suggestion for screening has been reviewed by Seshiah et al. as presenting practical problems in the local context in India which has a high incidence of GDM as in Malaysia.⁴ They hypothesize that ethnic Asians have higher insulin resistance in pregnancy and may need new cut points in diagnosis of GDM. Pregnant women who attend antenatal clinics rarely come in the fasting state for an oral glucose tolerance test. Glycosylated HbA1C, recommended as one of the screening tools by some, is not a cheap test to perform routinely in developing countries. Concerned about the high incidence of GDM in India, the Diabetes in Pregnancy Study Group India (DIPSI) recommends a 'single step' screening as a convenient means of testing mothers at risk of GDM. A 75 gm glucose load is administered, irrespective of her fasting state or timing of previous meal. GDM is present if the 2hour blood glucose level exceeds 140 mg/dl (7.7 mmol/L). This screening test has been approved by the Ministry of Health, India.⁴

In establishing a NOR we should draw on the experiences of the Scandinavian countries. The Swedish Maternal Health Care Registry established in 1999 has, since 2013, established the Swedish Health Care Quality Register.⁵ Data in this register shows good to very good coverage of the births and has excellent internal validity for most variables. The Swedish Maternal Health Care Register and the Medical Registry of Norway take pride in their timely release and consistently reinforce internal validity of these reports. Since 2013 the Swedish Register provides National Quality Register for Prenatal Care. A similar pattern is seen in the Medical Registry of Norway (Birth Registry of Mother, Fetus and Newborn).⁶

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REFERENCES

1. Ganeshan M, Soelar SA, Karalasingam SD, Bujang MA, Jeganathan R, Suharjono H. Effectiveness of selective risk based screening for Gestational Diabetes (GDM) in Malaysia: A retrospective cohort study based on the National Obstetric Registry (NOR) of Malaysia. *Med J Malaysia* 2017; 72(1): 46-9.
2. National Obstetrics Registry (NOR): 2nd report 2010: [cited January 2017]. Available from http://www.acrm.org.my/nor/doc/reports/20130508_Final_NATIONAL_OBSTETRICS_REGISTRY_Report.
3. National Obstetrics Registry (NOR) 3rd Report of the National Obstetric Registry: [cited January 2017]. Available from http://www.acrm.org.my/nor/doc/reports/NOR_REPORT_2012.pdf.
4. Seshiah V, Sahay BK, Das AK, Balaji V, Shah S, Banerjee S. Diagnosis and management of gestational diabetes mellitus: Indian guidelines. In: Muruganathan A, Ed. *Medicine Update 2013*. Jaybee Brothers Publishers, New Delhi: The Association of Physicians of India. 2013: 201-4.
5. Petersson K. The Swedish Maternal Health Care Register: internal validity, user perspectives and register outcomes; and experiences by midwives in antenatal care. Umeå University Medical Dissertations, New Series No 1837: [cited January 2017]. Available from https://www.medscinet.com/GR/app/Uploads/hemsida/dokumentarkiv/15370_Avh_K%20Petersson_s5_C.pdf.
6. Moth FN, Sebastian TR, Horn J, Rich-Edwards J, Romundstad PR, Åsvold BO. Validity of a selection of pregnancy complications in the Medical Birth Registry of Norway. *Acta Obstet Gynecol Scand* 2016; 95(5): 519-27.