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Universal Screening of Gestational Diabetes Mellitus: Prevalence and Diagnostic Value of Clinical Risk Factors

Darin Arora, Rajin Arora, Siriwan Sangthong, Wanpen Leelaporn, Julaporn Sangratanathongchai

Abstract

Objective: To estimate the prevalence of Gestational Diabetes Mellitus (GDM) by using universal screening and to show the diagnostic value of the clinical risk factors at Lampang Hospital.

Material and Method: This is a cross sectional study. Data were collected prospectively at the antenatal care clinic of Lampang Regional Hospital between January 4 and September 30, 2010. All pregnant women of appropriate gestational age (GA) were screened by glucose challenge test (GCT) then by oral glucose tolerance test (OGTT) if the GCT result was abnormal. Data were calculated for the prevalence of GDM and the diagnostic value of clinical risk factors.

Results: Six hundred thirteen pregnant women enrolled into the present study with 593 women left for the analysis. The prevalence of GDM at antenatal care clinic of Lampang Hospital was 9.3%. Among GDM cases, 21.8% had no risk factor. Having one risk factor double the chance of having GDM, while having three risk factors gives 42.9% chance of having GDM. Having at least one risk factor could allow better detection with sensitivity of 78.2, specificity of 49.8, PPV of 13.7, NPV of 95.7, LR+ of 1.6 and LR- of 0.4. This would produce 52.8% of pregnant women at risk.

Conclusion: With GDM prevalence of 9.3%, our population should be classified to the high prevalence group. Among GDM cases, 21.8% had no risk factor. Moreover, with 95.7% NPV and 0.4 LR-, this would make this set of risk factors merely a fair screening test. This should prompt the re-evaluation of risk-based screening policy that is generally adopted throughout the country. Cost-effectiveness is the only major concern for the deployment of the universal screening program. It has to be further studied in an evidence-based manner.

Keywords: Gestational diabetes mellitus, Universal screening

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The Medical Association of Thailand

Address: 4th Floor, Royal Golden Jubilee Building, 2 Soi Soonvijai, New Petchburi Road, Bangkok 10310, Thailand

Telephone: 0-2716-6102, 0-2716-6962 press 0 Fax: 0-2314-6305

E-mail: jmedassocthai@yahoo.com, math@loxinfo.co.th