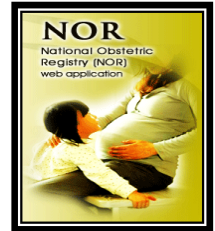# UNIVERSAL VERSUS SELECTIVE SCREENING FOR GESTATIONAL DIABETES IN MALAYSIA

Ganeshan Muniswaran[1], H Soltanjono[1], SA Soelar[2], SD Karalasingam[2], R Jeganathan[3]
1-Sarawak General Hospital, Kuching, Sarawak, Malaysia
2- Clinical Research Centre, Kuala Lumpur, Malaysia
3- Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

INTRODUCTION

Gestational Diabetes (GDM) is common in Malaysia. The obstetric implications and the subsequent risk of Diabetes is significant.

Pregnancy is an opportunistic time for screening. This allows active intervention for treatment and may reduce the impact of the disease.

An ideal screening tool should not be based on complications of the disease or following an adverse event. Despite recommendations for universal screening in a high risk population, Malaysia has opted for selective screening, due to concerns with cost and resources.

The objective is to review the effectiveness of the current practice of selective screening as compared to universal screening for GDM in Malaysia.

METHODS

This is a retrospective cohort study. The study period was from 1st January 2011 till 31st December 2012 and 22, 044 patients with GDM were analyzed.

Specific variables were extracted from the National Obstetric Registry of Malaysia (NOR) from all the participating hospitals, which totalled to 260,959 patients.

RESULTS

Guidelines	Variable	Gestational Diabetes				Crude OR (Simple Logistics Regression)	
		Yes		No			
		Number	Percentage	Number	Percentage		
	Age					(95% CI)	P value < 0.006
Universal	<25	1,750	8.6	141	8.3	**0.98 (0.81-1.18**)	
Malaysian	25-34	11,903	58.5	938	55.0	1.00 (ref)	
NICE	35 and beyond	6,687	32.9	625	36.7	0.84 (0.76-0.94)	
	Booking BMI (kg/m^2)						P value < 0.001
Universal	<27	8,588	42.4	631	37.2	**1.08 (0.94-1.24)**	
Malaysian	27-29	4,085	20.2	324	19.1	1.00 (ref)	
NICE	30 and more	7,572	37.4	741	43.7	0.81 (0.71-0.93)	
	Booking weight (kg)						P value < 0.001
Universal	<80	16,074	79.1	1,249	73.3	**1.00 (ref)**	
Malaysian	80 and beyond	4,240	20.9	454	26.7	0.73 (0.65-0.81)	
	Parity						P value 0.717
Universal	<5	16,747	82.4	1,409	82.7	**1.00 (ref)**	
Malaysian & NICE	5 and more	3,580	17.6	294	17.3	1.02 (0.90-1.17)	
	Hypertension						P value <0.001
Universal	No	17,967	88.3	1,368	80.3	**1.00 (ref)**	
Malaysian	Yes	2,373	11.7	336	19.7	0.54 (0.47-0.61)	
	Previous Stillbirth						P value 0.063
Universal	No	20,109	98.9	1,676	98.4	**1.45 (0.98-2.16)**	
Malaysian & NICE	Yes	231	1.1	28	1.6	1.00 (ref)	

CONCLUSIONS

The current practice of selective screening in Malaysia is inappropriate. A significant number of patients were identified following complications of GDM which contradicts the benefits of screening.

Universal screening for GDM in Malaysia is a more accurate measure.

REFERENCES

Management of Type 2 Diabetes Mellitus (4th Edition), Clinical Practice Guidelines, May 2009.

National Institute for Health and Clinical Excellence (NICE), Diabetes in Pregnancy, March 2008 (revised reprint July 2008)

American College of Obstetricians and Gynaecologist Committee Practice Bulletin, GDM, No 30, September 2001. Obstet Gynecol. 2001;98(3):525-538

Diagnosis and Treatment of Gestational Diabetes, Scientific Impact paper 23, January 2011, Royal College of Obstetrician & Gynaecologist.