

# Diabetes Mellitus in Malaysia

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Diabetes mellitus is a common disease causing significant mortality and morbidity. It is a serious debilitating and deadly disease that has now reached epidemic proportions and the prevalence rates are expected to go even higher in the foreseeable future. Worldwide, in 1995 the number of people with diabetes was estimated to be 135 million; in the year 2000, it was 154 million and in the year 2025, it is expected to top 300 million people with the main increase being in the developing countries<sup>1</sup>. The projected increase in the developed countries is 42% but in the developing countries, the increase is estimated to be 170%. In Malaysia, the First National Health and Morbidity Survey (NHMS 1) conducted in 1986 reported a prevalence of diabetes mellitus of 6.3% and in the Second National Health and Morbidity Survey (NHMS 2) in 1996, the prevalence had risen to 8.2%<sup>2</sup>. In a study in Kelantan, the prevalence was reported to be higher at 10.5%<sup>3</sup>. The World Health Organisation (WHO) has estimated that in 2030, Malaysia would have a total number of 2.48 million diabetics compared to 0.94 million in 2000 - a 164% increase<sup>4</sup>.

Diabetes mellitus is strongly associated with obesity and the rise in the prevalence of diabetes is due to a rise in the prevalence of obesity<sup>5</sup>. In the NHMS 2, the prevalence of obesity was 4.4% and of overweight was 16.6%. Amongst those with diabetes mellitus, 18.8% were either obese or overweight<sup>2</sup>. In a study in Kelantan, 38.4% of diabetics were either obese or overweight compared to 24.1% in those with normal glucose tolerance<sup>3</sup>.

As for diabetes management, a study in major government hospitals in Malaysia in 1997 showed that the majority of patients had not been given adequate care. Only 10% had Alc measured, 22% had blood lipids measured and 30% had urine albumin checked<sup>6</sup>. A study in 2001 amongst general practitioners in

Peninsular Malaysia showed that the majority of patients were not well controlled with a high prevalence of complications. Only 20% had Alc of <7%, 12.3% had total cholesterol of <4.8 mmol/L and 44.1% had systolic blood pressure of <140 mmHg. Neuropathy was the most common complication (30.1%), followed by background retinopathy (23.5%), albuminuria (22.9%) and microalbuminuria (20.4%)<sup>7</sup>. In major public hospitals in Malaysia, a similar study was carried out in 1998<sup>8</sup> and 2003<sup>9</sup>.

Since 1998, the Ministry of Health, has taken major steps to improve the management and care of diabetic patients in its' clinics and hospitals including the setting up of Diabetes Resource Centres in many hospitals, training of more diabetic nurse educators, making Alc test more available and implementing standardized follow-up protocols. In the 2003 study, the majority of patients were still not satisfactorily controlled (59% had Alc > 7.0% and 82% had FPG > 6.1 mmol/L) and the majority also had poorly controlled hypertension (85% had BP > 130/80 mmHg) and dyslipidemia (68% had total cholesterol > 4.8 mmol/L). There was also a high prevalence of complications such as neuropathy (19.0%), albuminuria (15.7%) and background retinopathy (11.1%). As for lifestyle, 66.5% of the patients were either overweight or obese, and only 54.8% admitted to adhering to diabetic diet regularly and 38.9% exercised regularly. These factors could explain the poor control of diabetes in this study. Compared to the 1998 study, there was a slight improvement in the control and a slight reduction in the complication rates which showed that the steps taken by the Ministry of Health were beneficial.

However, the achievement of the goals is far from satisfactory and more should be done to improve the healthcare personnels' awareness of achieving the goals, provide adequate resources, improve patients'

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diabetes self-management skills and enhance the patient-healthcare personnel relationship to achieve the goals.

Efforts should also be taken to prevent diabetes as a few studies have shown that diabetes is preventable or the onset of diabetes delayed<sup>10-13</sup> in subjects with impaired glucose tolerance (IGT). This would involve an active screening programme for diabetes and impaired glucose tolerance in subjects with risk factors for diabetes such as obesity and those with a family history of diabetes mellitus. Healthcare personnel should be made aware of this and adequate resources should also be made available. Unless these issues are addressed seriously and urgently, the country will be

faced with an increasing burden of diabetes and its' complications. This will not only be in terms of more suffering for patients but also more costs to the nation in terms of healthcare expenditure and loss of productivity.

In summary, diabetes is a major problem in this country and is predicted to become a much bigger problem. Diabetes care is far from satisfactory with the majority of patients not achieving the clinical goals and the rate of complications being still high. Serious and urgent efforts are required to address these issues, otherwise the nation will be burdened by patients with diabetes and its' complications.

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