A 4-Year Prospective Study on Long-Term Complications of Type 2 Diabetic Patients: The Thai DMS Diabetes Complications (DD.Comp.) Project

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Abstract

Objective: To assess the clinical course of long-term diabetic complications; diabetic retinopathy, nephropathy, and foot problems in Thai patients with type 2 diabetes.

Material and Method: Patients with type 2 diabetes were followed for four years between March 2006 and September 2010. Seven hospitals in all levels of care under the Ministry of Public Health Thailand were included in the present study. A physical examination and a diabetic complications assessment were performed each year during the study period, by physician specialists in the related areas.

Results: Among 1,120 patients who participated in the present study, 705 (62.95%) patients completed the 4-year follow-up time. There were 88 (7.86%) patients reported deaths during the present study period. The mean age was 59.14±10.12 years. The average duration of diabetes was 7.30±6.14 years. Approximately 57.32% of patients had a family history of diabetes. The average plasma glucose level and HbA1C were 153 to 160 mg/dl and 8.25 to 8.75%. Moreover, less than one-fourth of patients had HbA1C below 7%. The prevalence for diabetic retinopathy and nephropathy were approximately 23.7% and 38.3%. In addition, more than 15% of patients had diabetic foot problems, loss of protective sensation and pedal pulse deficit. Finally, the incidence rates were 80.1 per 1,000 person-years (95% CI 69.7, 91.8) for diabetic retinopathy, and 91.1 per 1,000 person-years (95% CI 78.8, 105.1) for diabetic nephropathy.

Conclusion: Problems regarding poor diabetes control exist in Thai diabetes patients. It results in high prevalence and incidence of diabetic complications. As such, it is crucial to establish the country’s diabetes management plan as well as evaluate the long-term complications in diabetic patients annually, in order for patients to receive the benefits of early treatment and prevent further complications.

Keywords: Diabetes, Microvascular complication, Retinopathy, Nephropathy, Thailand