COST-EFFECTIVENESS ANALYSIS OF AN ACE-INHIBITOR FOR DELAYING PROGRESSION OF DIABETIC NEPHROPATHY IN NIDDM PATIENTS WITH MICROALBUMINURIA

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The purpose of this study was to assess the cost-effectiveness of administering an ACE-Inhibitor in NIDDM patients with microalbuminuria to delay progression of diabetic nephropathy. Markov models were used to determine lifetime medical costs and life expectancy in both conventional (without ACE-Inhibitors) and treatment groups using DATA TreeAGE software. Probability data were mainly derived from the study done by Ravid and colleagues. Medical costs including price and hemodialysis cost were based on medium government drug price, wholesale drug price, and hemodialysis cost from a previous study in Thailand. The main outcome measured was the incremental cost-effectiveness ratio, defined as changes in costs divided by the change in life expectancy. The incremental cost-effectiveness ratios of ACE-Inhibitor therapy were cost savings 37,776.74 baht and 29,169.72 baht using medium drug price and wholesale drug price respectively. This study showed that an ACE-Inhibitor has a favorable cost-effectiveness ratio for delaying progression of diabetic nephropathy in NIDDM patients. In addition, it is recommended that long-term studies on the effects of ACE-Inhibitors in Thai population should be conducted. However, ACE-Inhibitors can be considered as part of the preventive treatment program to reduce costly renal complication from diabetes.

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ABBREVIATIONS

ACE-Inhibitors	Angiotensin Converting Enzyme Inhibitors
CAD	Coronary Artery Disease
CEA	Cost-Effectiveness Analysis
CI	Cumulative Incidence
CVD	Cardiovascular Disease
DM	Diabetes Mellitus
DN	Diabetic Nephropathy
ESRD	End-Stage Renal Disease
IDDM	Insulin-dependent Diabetes Mellitus
Macro	Macroalbuminuria
Micro	Microalbuminuria
NIDDM	Non Insulin-Dependent Diabetes Mellitus
QALYs	Quality-Adjusted Life Years
QOL	Quality of Life
RCT	Randomized Controlled Trial
TP	Transition Probability