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G-CP-5

Cost-Effectiveness and Cost-Utility of Statins in Patients with CHD and Average Cholesterol Levels Applied to Hong Kong

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Background: The Cholesterol and Recurrent Events (CARE) study has shown the clinical benefits of statins for patients with myocardial infarction (MI) and average cholesterol levels. Since the economic implication of the study is unknown and there is a lack of similar local clinical trials in Hong Kong (HK), the extrapolation of the CARE results to HK patients is relevant.

Objective: To determine the cost-effectiveness of secondary prevention with pravastatin in HK patients with coronary heart disease (CHD) and normal cholesterol levels.

Methods: Cost-effectiveness and cost-utility analysis for HK patients were performed based on findings from the CARE study. We assumed that, over 5 years, treatment of 2081 Hong Kong patients would have resulted in identical benefits as in the CARE study. Gross costs (excluding indirect costs), including drug treatments and lipid measurements, were estimated using local figures. The primary endpoint of cost-effectiveness analysis was cost per life saved. Gross cost per quality-adjusted life year (QALY) gained was calculated using a unified (and alternative) models in cost-utility analysis.

Results: The gross cost of 10,405 patient years of treatment was HK$71,077,596 without discounting and $60,512,876 and $63,727,284 if discounted at 6 and 4% respectively. Cost per life saved was estimated as $4,442,350 before discounting and $3,782,055 when costs were discounted at 6%. Gross cost per QALY gained amounted to $258,878 (and $230,801) before discounting and $220,399 (and $196,496) when discounted up to 6%.

Conclusions: For HK patients with MI and average cholesterol levels, the gross cost per CHD event prevented and the gross cost per QALY gained from pravastatin treatment provide yardsticks for making comparisons. The results of this study assist in prioritizing the use of scarce resources and policy making provided that they must also be viewed in relation to other benefits and savings.

G-CP-6

Reducing Sodium Intake Reduces Ambulatory Blood Pressure in Hypertensive Patients

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Background: We previously reported in untreated hypertensive patients that 24 hour urinary sodium excretion correlated with diastolic pressure ($r = 0.52$, $p = 0.0003$) and ambulatory diastolic pressure ($r = 0.53$, $p = 0.01$). We aimed to study the effect of a low sodium diet on blood pressure.

Methods: Thirty-six patients (M:F, 18:18; age 45± 12 yrs) with untreated mild essential hypertension were randomised to drug treatment (hydrochlorothiazide 25 mg daily [n = 12] or metoprolol 100 mg daily [n = 8]) or diet (n = 16) for 6 months. Ambulatory blood pressure measurements were performed.

Results: There was a significant decrease in ambulatory systolic and diastolic blood pressure in the drug treatment (19± 3 mmHg and 11 ± 2 mmHg) and diet group (10 ± 2 mmHg and 6 ± 1 mmHg). In the non-pharmacological group, there was a significant decrease in sodium intake (43 ± 14 mmol/day), which correlated with the decrease in systolic ($r = 0.78$, $p = 0.001$) and diastolic blood pressure ($r = 0.78$, $p = 0.001$). Overall, the change in sodium excretion also correlated with systolic blood pressure ($r = 0.49$, $p = 0.003$) and diastolic blood pressure ($r = 0.44$, $p = 0.01$)(fig.).

Conclusion: Blood pressure reduction is related to the reduction in sodium intake. Reducing salt intake may therefore be very useful in hypertensive patients.