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REDUCTION IN STROKE BY STATIN THERAPY MARKEDLY INCREASES ITS COST-EFFECTIVENESS

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Background: Three large clinical trials, the Scandinavian Simvastatin Survival Study (4S), the Cholesterol and Recurrent Events (CARE) and the Long-Term Intervention with Pravastatin in Ischaemic Disease (LIPID), suggested that treatment with statins led to significant reductions in stroke in addition to reductions in coronary heart disease. Our aim was to analyse the impact of stroke reduction on the cost-effectiveness of lipid lowering therapy using the CARE criteria (age 21-75 years, LDL 115-174 mg/dl).

Methods: Costs of drug treatments and lipid measurements were determined. Benefits included potential increase in earnings from longer life expectancy and better health as indicated by quality-adjusted life years (QALYs) gained from the prevention of myocardial infarction (MI). Savings included prevention of acute admission after MI as well as the reduction of revascularisation procedures. QALYs gained from lives saved and non-fatal MI prevented were considered. Net cost per QALY gained was calculated before and after the inclusion of additional benefits, savings and QALYs gained from reducing strokes. The benefits and savings from stroke prevention were derived from longer life expectancy (potential increase in earnings), prevention of deaths, mild disabilities (loss of earnings and decrease in quality of life) and severe disabilities (long term care).

Results: Costs amount to HK$6,919 per patient per year, which are less than the benefits and savings. Benefits and savings are estimated to be $7,346 per patient per year ($17,135 per QALY gained) without considering stroke prevention. This figure increases to $11,509 per patient per year ($137,223 per QALY gained) when the prevention of stroke is taken into account.

Conclusions: There is net benefit in treating patients with coronary heart disease with a statin according to CARE criteria. Reduction in the risk of stroke significantly magnifies the cost-effectiveness of statin therapy in patients after myocardial infarction.

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COMPARISON OF THE UTILISATION OF ANTIHYPERTENSIVE DRUGS IN A HYPERTENSION OUTPATIENT CLINIC IN 1996 AND 1998

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We undertook a drug utilization study of 246 hypertensive patients in the Hypertension Clinic at Sai Ying Pun Hospital in 1996. Since then, JNC VI guidelines, Syst-Eur and HOT studies had been published. Therefore, 104 hypertensive outpatients (52 men, 52 women; age 55 ± 13 yrs) were surveyed in Sept-Oct 1998. They were interviewed and completed questionnaires. Case notes were reviewed and data on current medications and blood pressure were collected. 57% received calcium channel blockers (CCB); 54%, beta-blockers (BB); 35%, angiotensin-converting enzyme inhibitors (ACEI); 23%, thiazide diuretics and 3%, alpha-blockers. In 1996, the respective figures were 51% CCB, 47% BB, 32% ACEI, 15% thiazide diuretics and 5% alpha-blockers. The percentage of patients prescribed no drugs (life-style modification), one drug (monotherapy), two, three and over 3 drugs were 9%, 31%, 43%, 13% and 4% respectively (7%, 48%, 35%, 7% and 2% respectively in 1996). The leading regimes were, in decreasing order, CCB+BB, BB monotherapy, CCB monotherapy and ACEI monotherapy (CCB monotherapy, CCB+BB, BB monotherapy, ACEI monotherapy in 1996). Compared to 1996, fewer patients were on monotherapy, but CCB and BB remained the most popular drugs. The mean blood pressure on treatment for all patients was 142.7±1.8 / 83.5±1.1 mmHg. Patients treated with a CCB had lower diastolic blood pressure than those on a regime without CCB (81.1±1.3 mmHg vs. 86.4±1.7 mmHg, p = 0.01). 12% were taking aspirin.

The prescribing pattern reflected contemporary views on the management on hypertension. In 1998, combination therapy was frequently used to control blood pressure. The mean blood pressures achieved in our patients were remarkably close to the ideal blood pressures proposed by the investigators of the HOT study. Aspirin was however not prescribed in as many patients as it should be.