C-CP-5

Cyclosporin Dosage and Co-Treatment with Diltiazem in Renal Transplant Patients

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Introduction: Diltiazem (a relatively inexpensive antihypertensive) inhibits elimination of cyclosporin, the Hospital Authority's largest single item of pharmaceutical expenditure. We therefore studied whether co-treatment with the former would conserve cyclosporin (Neoral®) dosage in patients with renal allografts.

Methods: According to a double-blind randomized protocol, 115 renal transplant patients at Queen Mary, Princess Margaret and Queen Elizabeth hospitals received diltiazem (30 or 60 mg twice daily for those weighing < or ≥60 Kg respectively) or matching placebos, for an average of 44 weeks. Patients at each hospital were randomized in blocks: i) those transplanted at that hospital within 6 months, ii) those transplanted elsewhere within 3 months (mainly mainland China) and iii) the remainder. 10 patients were omitted from the analysis for various reasons, leaving 105.

Results: 37 men and 16 women received diltiazem and 36 and 16 respectively received placebo. Respective mean (SD) ages and body weights were 42 (10) and 42 (10) years, and 59 (9) and 62 (14) Kg. On the day trial medication was stopped (see table), mean (SD) cyclosporin blood levels were 157 (81) and 142 (46) ng/ml respectively Corresponding cyclosporin dosages were 175 (61) and 200 (62) mg/day; this difference of 25mg/day (1 tablet) was statistically significant ($p < 0.05$).

		Last record pre stopping		Day of stopping		1-3 wks after stopping	
		Diltiazem	Placebo	Diltiazem	Placebo	Diltiazem	Placebo
Creatinine alphaM/L	mean (SD)	126 (30)	127 (29)	131 (45)	127 (26)	127 (40)	128 (29)
Cy blood level ng/ml	"	155 (60)	144 (44)	157 (81)	142 (46)	118 (71)	132 (41)
Cy dosage mg/day	"	177 (64)	200 (63)	175 (61)	200 (62)	175 (56)	198 (60)

Cy = Cyclosporin

Conclusions: These findings are consistent with diltiazem co-treatment increasing cyclosporin levels and enabling dosage conservation. So long as clinically appropriate, greater reductions in dosage may have been feasible had drug levels been titrated to the same levels as in the controls.

C-CP-6

A Cost-Benefit Analysis – The Care Study applied to Hong Kong Patients

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Introduction: In secondary prevention, treating patients with coronary disease who have normal cholesterol levels with statins is currently not recommended in local guidelines. Therefore, studies on evaluating the costs and benefits of this practice in Hong Kong are not available.

Objective: This study is to perform a cost-benefit analysis of using pravastatin for the treatment of Hong Kong patients with myocardial infarction (MI) and average cholesterol levels.

Methods: Evaluation was based on using pravastatin 40mg daily to treat a hypothetical cohort of Hong Kong patients with the same demographics and prognosis as in the Cholesterol and Recurrent Events (CARE) study. The major endpoint was net benefit (if benefits and savings are larger than costs) or net cost (if costs are higher than benefits and savings). The costs and benefits were estimated by using local values. The costs of drug treatments and lipid measurements for a period of five years were estimated. The benefits and savings included were potential increase in earnings from employment due to longer life expectancy from life years gained; acute hospital admission saved from prevention of non-fatal MIs; reduction of revascularisation procedures; and health services for the disabilities saved from prevention of non-fatal strokes. The costs and benefits were also discounted at a rate of 6% per annum and therefore discounted net benefit or cost was estimated.

Results: The 10,405 patient years of treatment were costed at HK$71,077,596 and $60,512,876 when discounted. The potential increase in earnings was estimated as $43,439,256 from the 382 life years gained. The savings from acute admissions resulting from non-fatal MIs prevented amounted to $1,775,360. The reduction of procedures saved $2,209,000 including the use of fewer stents. The prevention of non-fatal strokes saved $42,720,615 of health care services. In total, benefits and savings were estimated as $90,144,231 before discounting and $75,944,058 when discounted. By comparing the estimated costs and benefits, a net benefit was obtained both before ($19,066,635) and after ($15,431,182) discounting.

Conclusions: Using the health service perspective with respect to costs and the societal perspective with respect to benefits, the results of the present cost-benefit analysis show that the benefits of using pravastatin for Hong Kong patients with MI and average cholesterol levels may outweigh its costs.