G-CP-1

Interaction Between Diltiazem and Tacrolimus in Man?

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Background: Tacrolimus, a very potent, costly and increasingly preferred immunosuppressant used to prevent allograft rejection is probably metabolised by the same pathways as cyclosporin. As co-treatment with diltiazem (an inhibitor of liver & gut enzymes) is known to increase the bioavailability of oral cyclosporin, we undertook a pilot study to investigate whether it also interacted similarly with oral tacrolimus.

Patients and Method: With their informed consent, 6 clinically stable outpatients with renal allografts in receipt of oral tacrolimus and with stable tacrolimus blood levels (mean age 36 years; 5 males) were recruited. In the weeks prior to and following commencement of antihypertensive treatment with oral diltiazem, each patient's i) tacrolimus dosage, ii) corresponding blood level, and iii) clinical status (including renal function) were closely monitored. Ethics committee approval was obtained for the whole study.

Results: Over about 4 weeks just prior to starting diltiazem and in the weeks (mean of 30 and range 21-34) after its commencement, mean ± SD tacrolimus blood levels were 9.2 (± 3.6) and 10.8. (± 3.6) microgram/l respectively ($p=0.087$) and mean prescribed tacrolimus dosages/day were 10.0 (± 3.4) and 8.4 (± 3.7) mg respectively ($p = 0.046$). Corresponding values for plasma creatinine were 220 (± 134) and 200 (± 92) microM, indicating that renal function had remained stable over that period.

Conclusions: Despite the small number of patients in our pilot study, against a background of tacrolimus dosing guided by clinical status and corresponding blood levels, anticipated trends in dosage and blood levels were observed after institution of diltiazem therapy.

G-CP-2

Elevated Plasma Homocysteine is Associated with Ischaemic Heart Disease in Hong Kong Chinese

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Background: Homocysteine (HCY) is increasingly recognized as an important risk factor for cardiovascular disease. We sought to determine if this risk factor is relevant in the Chinese who have a relatively low prevalence of ischaemic heart disease (IHD).

Subjects and Methods: 104 Hong Kong Chinese subjects (25 patients with IHD, 64 patients without IHD but had cardiovascular risk factors including hypertension and 15 healthy volunteers) were studied with their consent. Venous blood was taken for the measurement of plasma HCY.

Results: Plasma HCY was 12.1± 1.0 micromol/L in patients with IHD, which was markedly higher than in patients without IHD (9.2± 0.4 micromol/L, $p<0.001$) and healthy volunteers (8.1± 1.0 micromol/L, $p<0.001$). There was no correlation between plasma HCY and hypertension ($r = -0.08$, NS), diabetes ($r = 0.05$, NS) or hypercholesterolaemia ($r = 0.08$, NS), confirming its independence from the other classical cardiovascular risk factors.

Conclusions: High plasma HCY is strongly related to IHD in the Chinese as much as in Caucasians. As plasma HCY can be modified by diet and vitamin supplements, correcting this risk factor is a promising strategy of reducing the risk of IHD in the population.