

Hyperuricaemia and cardiovascular disease

To the Editor—Li¹ recently presented an article which briefly commented on the putative relationship between hyperuricaemia and metabolic syndrome and ischaemic heart disease in the Journal. This issue has long been debated since it is difficult to prove a direct causation in the presence of other confounders, such as hypertension and diabetes, as the author rightly stated. The results of an important clinical trial published recently, however, shed light on this debate.

In the Losartan Intervention For Endpoint reduction (LIFE) study, the incidence of fatal and non-fatal stroke (over a mean follow-up period of 4.8 years) is significantly reduced in losartan-treated hypertensive subjects with electrocardiographic evidence of left ventricular hypertrophy, compared with atenolol-treated subjects for the same degree of blood pressure control.² Significantly, up to 29% of the reduction in the primary composite endpoint (death, myocardial infarction, or stroke) seen in the LIFE study was attributable to a fall in serum uric acid concentrations in the losartan-treated group.² This uricosuric effect of losartan appears to be a drug effect rather than a class effect because other angiotensin receptor blockers, such as irbesartan and eprosartan, do not have this property.^{3,4}

Whether raised uric acid can be regarded as a component of the metabolic syndrome is another subject for debate. We have recently conducted a retrospective survey and examined the case records of 153 consecutive hypertensive patients who attended our clinic over the past year (August 2003–August 2004) and who also had serum uric acid measured as part of their overall metabolic assessment. All patients fulfilling the criterion of having hypertension were treated with one or more anti-hypertensive drugs. Patients on diuretics were excluded. Serum uric acid was measured by a single laboratory. Raised serum uric acid was defined as a measurement of greater than 0.37 mmol/L and 0.43 mmol/L for female and

male, respectively, or those already on allopurinol therapy. The results of this uncontrolled clinic-based retrospective survey showed that 61 (39.9%) of 153 hypertensive patients had raised serum uric acid. Our preliminary findings show that many patients with hypertension (a component of the metabolic syndrome) have raised serum uric acid. This finding therefore supports the notion that uric acid is a component of the metabolic syndrome. Our findings have important clinical implications on cardiovascular risk factor screening and the choice of anti-hypertensive drugs. Clearly, randomised controlled outcome trials with a specific design on uric acid reduction are required to assess the pathogenic role of raised serum uric acid in cardiovascular disease. Realistically, this type of trial may never be conducted as the confounders may prove too difficult to control.

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