Add-on and withdrawal effect of pravastatin on proteinuria in hypertensive patients treated with angiotensin receptor blockers

張念中;李聰明
Lee Tsung-Ming;Lin Mei-Shu;Tsai Chang-Her;Chang Nen-Chung

摘要

Abstract

Add-on and withdrawal effect of pravastatin on proteinuria in hypertensive patients treated with AT₁ receptor blockers. Background. Although angiotensin receptor antagonists and 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors (statins) have been shown to attenuate proteinuria individually, it remains unclear whether proteinuria may be additionally improved by statin therapy in well-controlled hypertensive patients treated with angiotensin receptor antagonists-based regimen and whether withdrawal of chronic statin treatment may abrogate this beneficial effect in normolipidemic patients. Methods. A total of consecutive 82 proteinuric patients treated with antihypertensive agents, including losartan, were randomized 10 mg of pravastatin or placebo with a 6-month treatment. After completing 6 months of drug treatment, the pravastatin-treated patients were randomly assigned to continue (N= 19) or withdraw (N= 17) pravastatin for a further 6 months. Results. Subjects treated with pravastatin had significant further improvement of proteinuria at 6 months compared with placebo group (559 ± 251 mg/24 hours vs. 1262 ± 557 mg/24 hours) ($P < 0.0001$). Of 17 patients assigned to withdraw pravastatin, proteinuria returned to the pretreatment levels and was significantly higher than those who continued treatment. Multivariate analysis revealed that proteinuric improvement was significantly correlated with the continuous statin use. Urinary excretion of endothelin-1 (ET-1) is decreased in pravastatin-treated patients, but withdrawal of statin resulted in 27% up-regulation. The linear regression models in the initial statin-treated group showed that changes in urinary ET-1 correlated with urinary protein excretion ($r= 0.83$, $P < 0.0001$). Conclusion. We conclude that pravastatin administration is associated with improved proteinuria probably by inhibiting urine ET-1 levels in patients with losartan-based treatment. However,... [ABSTRACT FROM AUTHOR].