Effects of Losartan vs. Enalapril on the Markers of Metabolic Syndrome

Al-Thanoon et al. reported that several markers of metabolic syndrome (MetS) were improved by the administration of losartan (50 mg/day) or enalapril (20 mg/day). A significant increase in high density lipoprotein cholesterol (HDL-C) was noted only with losartan. Some comments may be of interest.

The Losartan Intervention for Endpoint reduction (LIFE) trial included 9,193 hypertensive patients with electrocardiographically documented left ventricular hypertrophy. These patients were randomized to losartan or atenolol and followed for 4.7 years. Losartan was superior to atenolol in reducing cardiovascular (CV) and total mortality. In this study, losartan blunted the decrease in HDL-C and this was associated with fewer composite endpoints compared with atenolol. Also, in the LIFE trial, the rise in serum uric acid (SUA) levels was attenuated by losartan and has been related to CV outcomes. Losartan is the only angiotensin II type 1 receptor blocker with a hypouricemic effect. SUA levels are raised in MetS, and may predict CV events. The decrease in SUA levels by drugs used for vascular disease prevention (e.g. atorvastatin) is associated with a reduced risk of CV events. Therefore, it would be useful to know if there were any changes in SUA levels in the Al-Thanoon et al. study.

Non-alcoholic liver disease (NAFLD) is considered a manifestation of MetS which is also associated with raised SUA levels. Even abnormal liver function tests (LFTs) have been linked with increased vascular risk. A post hoc analysis of the Greek Atorvastatin and Coronary Heart Disease Evaluation (GREACE) study included 437 patients with coronary heart disease and moderately elevated (<3 × the upper limit of normal) LFTs [alanine (ALT) and aspartate aminotransferase (AST) activities]. These patients experienced a greater CV benefit from atorvastatin compared with those with normal AST/ALT activities. Therefore, it would be interesting to know whether weight reduction together with antihypertensive treatment was associated with changes in AST/ALT activities in the Al-Thanoon et al. study.

The weight loss (4.2 and 3.0 kg in the losartan and enalapril group, respectively) was quite marked over this 2 month study. Did the patients receive lifestyle advice? Also, it is important to consider that any effects on SUA, HDL-C and LFTs might be weight-related.

Michael S. Kostapanos, Nikki Katsiki, Dimitri P. Mikhailidis

Department of Clinical Biochemistry, Royal Free Hospital campus, University College London Medical School, University College London (UCL), Pond Street, London, NW3 2QG, UK.
Email: mikhailidis@aol.com

Vasilios G. Athyros, Asterios Karagiannis
Second Propedeutic Department of Internal Medicine, Aristotelian University, Hippocrates Hospital, Thessaloniki, Greece.

References

© OMSB, 2012

DOI 10.5001/omj.2012.39

Received: 03 Mar 2012 / Accepted: 05 Mar 2012

To the Editor,