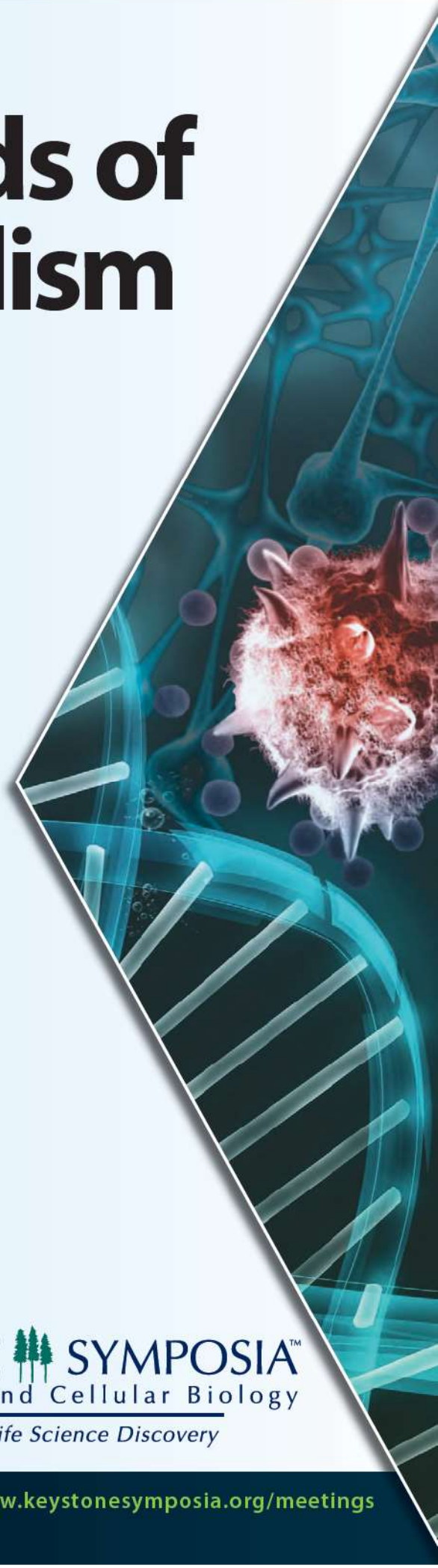
The Crossroads of Lipid Metabolism and Diabetes



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3012 Structural and functional status of target organs in patients with essential hypertension and obesity

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Recent studies have shown that the metabolic disorders associated with obesity (O), at the same time are the key link in the progression of essential hypertension (EH). Effecting the increasing severity of endothelial dysfunction and remodeling processes of vital organs, they close the vicious circle in the progression of these two related diseases, which increases the risk of cardiovascular complications. The aim of the study: evaluation of structural and functional state of the target organs in patients with EH, and initial stage of O. We examined 40 patients aged 41 to 59 years old with EH stage II, grade 2 and O degree I; 20 patients with EH stage II, grade 2 and normal body weight (NBW); 20 healthy people with NBW. The comparative results of average values of integral remodeling of target organs in patients with EH and healthy individuals showed that the progression of EH is accompanied by a breach of endothelial function, increasing thickness of the intima-media (TIM) of the carotid arteries (CA), myocardial stiffness, great vessels ($p<0,01$), and the presence of concomitant O is associated with even more significant disorders in structural and functional condition of the heart and blood vessels ($p<0,05$). Considerable correlation values of body mass index with the values of integral parameters of structural and functional state of patients with EH and O (the ratio E/e Doppler study of the heart ($p=0,59$; $r=0,00$), TIM CA ($p=0,54$; $r=0,00$), pulse wave velocity (PWV) CA ($p=0,53$; $r=0,04$), PWV in the abdominal aorta ($p=0,44$; $r=0,03$), endothelium-dependent vasodilation of brachial arteries ($p= -0,64$; $r=0,00$)) showed the importance of increasing the body mass in target organs remodeling. Conclusions: Even the initial stage of O in patients with EH is associated with progressive remodeling of the heart and blood vessels.