Advanced glycation and ROS: A link between diabetes and heart failure

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Despite many advances achieved to date, heart failure (HF) remains a leading cause of morbidity and mortality. There is a widely-accepted consensus that HF and diabetes are strongly linked by at least 3 mechanisms: associated comorbidities, coronary atherosclerosis or a specific diabetic cardiomyopathy. For the last 2 mechanisms, advanced glycation end-products may contribute to trigger key processes relevant to HF by affecting cardiac function through cross-linking or receptor engagement. This review focuses on the main effects of advanced glycation end-products on cardiomyocytes and endothelial cell function. Some pharmacological approaches are also discussed. © 2008 Bentham Science Publishers Ltd.