IMPAIRED CAROTID BARORECEPTOR FUNCTION IN OBESE PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE (GERD) AND OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS)

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Obesity is a risk factor for gastroesophageal reflux disease (GERD) and for obstructive sleep apnea syndrome (OSAS). OSAS and GERD have been linked: the existence of an increased prevalence of GERD in patients with OSAS is well-known and some authors have tried to argue a causal interrelation. GERD is also a risk factor of OSAS independently of body mass index. The two pathologies seem to coexist in a significant number of cases either secondary to a causal relationship, because of shared risk factors, or most likely because one condition aggravates the other. OSAS and GERD have a common consequence: impaired sleep and daytime sleepiness. Impaired sleep evokes the disturbances of cardiovascular reflex control.. The aim of the present study was to evaluate the cardiac response to carotid baroreceptor activation. 10 healthy men aged between 40 and 50, and 9 obese (BMI >30) with diagnosed GERD and OSAS were included in the study. The selective activation of carotid baroreceptors was induced by generating a negative pressure -40 mmHg for 5 s in two capsules placed bilaterally on the neck over the bifurcation of the carotid arteries. This method was compared with continuous analysis of relationship between changes of blood pressure (measured noninvasively using Portapres) and R-R intervals. The obese subjects showed a decrease in baroreceptor reactivity in comparison with controls. We conclude that in patients with GERD and OSAS impaired sleep seems to be related to the reduced cardiac reflex control. Continuing this study should enable us to evaluate a relationship between GERD and arterial hypertension.