

**BACKGROUND**

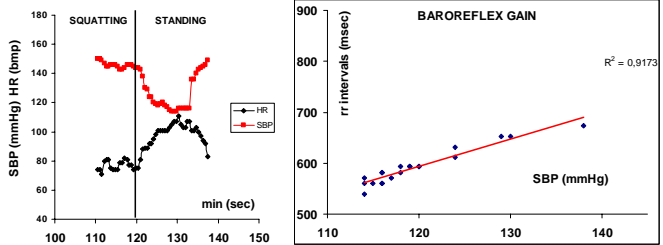
Arterial pulse pressure (PP) is an independent cardiovascular risk factor, even in nonhypertensive individuals. We compared PP and PPxHR (heart rate) double product ("pulsatile stress") during an active orthostatic test in overweight/obese patients and in lean individuals matched for age (40-60 years) and gender (sex ratio 1/1)..

**PATIENTS & METHODS**

• 40 overweight/obese patients (mean age 50 years, BMI 28.6 kg/m<sup>2</sup>), without hypertension or diabetes, were compared to 40 lean subjects (50 years, BMI 22.2 kg/m<sup>2</sup>).

• All patients were evaluated with a continuous arterial blood pressure monitoring (Finapres®) during a 3-phase 3-min postural test

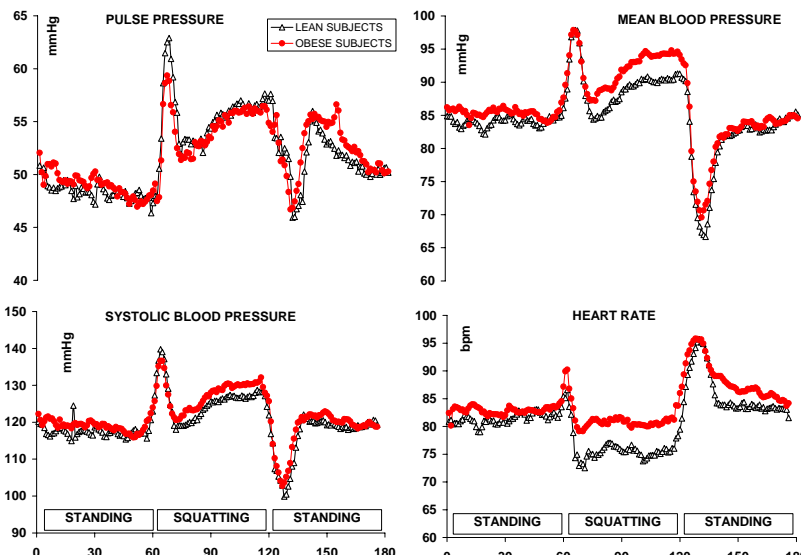
• Baroreflex sensitivity was measured by analysing the relationship between HR and systolic blood pressure (SBP) changes during the transition from squatting to standing.



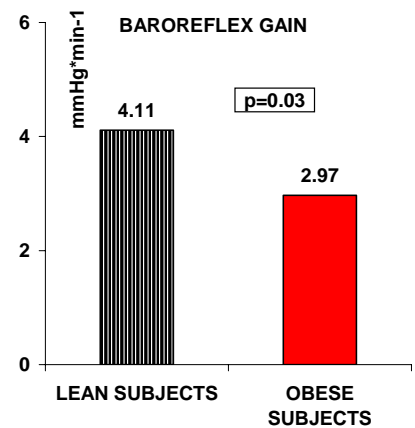
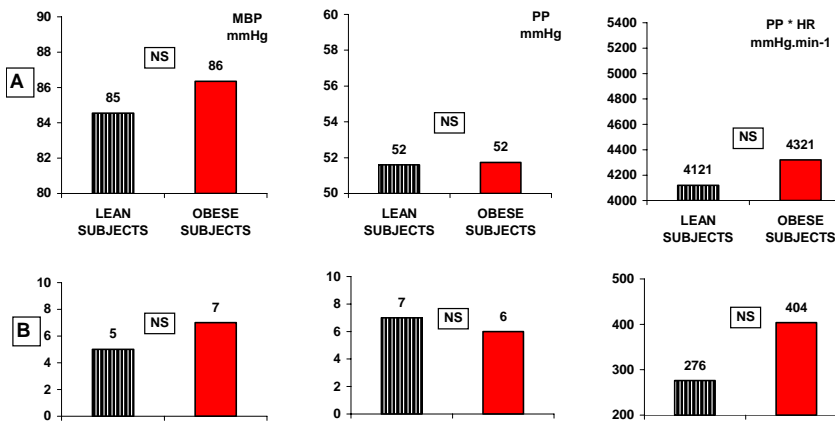
• Baroreflex gain : slope of the regression line relating R-R intervals to SBP changes  
 • Considered as a marker of cardiovascular autonomic neuropathy (CAN)

**RESULTS**

Changes of PP , MBP, SBP and HR during a squatting test



• Overall, overweight/obese patients showed similar mean BP, PP and PPxHR product as compared to lean controls.  
 • Squatting-induced rises in mean BP and PP were also similar in both groups  
 • Squatting-induced bradycardia was less pronounced in obese subjects (p=0.02)



• Post-squatting baroreflex gain was lower in overweight/obese nondiabetic patients than in lean subjects

**A** : Mean values during the whole test      **B** : Changes from standing to squatting

**CONCLUSION :**

Middle-aged overweight/obese patients have similar markers of arterial stiffness and pulsatile stress as compared to lean controls, suggesting that obesity per se has no or only a modest impact on these parameters, in absence of chronic hyperglycaemia and hypertension. In contrast, some autonomic dysfunction may be detected even in absence of diabetes.