cerebrovascular disease (age 61±8 years, 12% women, 29% diabetics). Carotid- femoral pulse-wave velocity (PWV) and analysis were used to assess arterial stiffness and wave reflection indices, respectively. Carotid ultrasound examination included assessment of atherosclerotic plaques in the extracranial carotid arteries.

Results: According to the degree of stenosis, people affected with carotid occlusive disease were classified into three groups: < 50% (n=20); 50-70% (n=17); and >70% (n=19). Carotid-femoral PWV, augmentation index (AIX), augmented pressure (AP) and aortic pressures (systolic and pulse pressure) were found to have a strong positive association with severity of plaques in the carotid artery (P<0.001 for all associations). These results were similar after adjustment for age, sex and cardiovascular risk factors and after exclusion of subjects with diabetes (analysis by ANCOVA). On post hoc analysis, PWV and wave reflection indices were significantly higher in patients with >70% carotid stenosis compared with the values of subjects with <50% and 50-70% carotid stenosis (figure).

CVS disease vs its (MRF) & 40 age matched healthy men as a control group. For all participants, assessment of LV function, aortic strain (AS), distensibility (AD) & aortic wall systolic velocity (AWSV) was done using conventional echocardiography & Doppler tissue imaging. B-mode ultrasonography of common carotid & brachial arteries was performed for measurement of carotid intima-media thickness (CIMT), brachial artery flow-mediated (FMD) & nitroglycerine-mediated vaso- dilation (NTGMD). Ultrasound elasticity was measured using thehints - CRP.

Results: CIMT & hs-CRP were significantly higher in patients than controls (0.82±0.22 mm vs. 0.53±0.31 mm & 6.72±1.5 mg/L vs. 2.1±0.78 mg/L respectively, p<0.001 for all), whereas AWD/SV & AD were significantly lower in pa- tients compared to controls (6.1±2.1 cm/sec vs. 9.1±1.6 cm/sec, 10.6±6.1% vs. 17.9±7.5% & 7.3±5 cm/dyn/103 vs. 12.5±5 cm/dyn/103 respectively, p<0.001 for all). FMD & FMD that reflect endothelial function status were significantly im- paired in patients when compared to controls (0.67±0.33 mm vs. 2.1±0.29 mm & 21% vs. 50% respectively, P<0.001 for each) while NTGMD and NTGMD did not differ significantly between the two groups (2.1±0.73 mm vs. 2.3±0.59 mm & 49% vs. 51% respectively, P=0.05 for each). A strong positive correlation was found between ED severity & CIMT (r=0.85), hs-CRP (r=0.69) while the correlation was negative between ED & AWDV (r=0.83), AS (r=0.63), AD (r=0.65), FMD (r=0.85), P<0.001 for all correlations.

Conclusion: Aortic, carotid & brachial artery functional parameters are all impaired in addition to elevated hs-CRP levels in patients with ED without CVS disease or its (MRF), suggesting that ED would represent an early clinical mani- festation of a diffuse systemic subclinical VD. It is, therefore, crucial to identify asymptomatic patients with ED who may be at risk of occult CVS diseases. Their early recognition may lead to treatment of risk factors & conditions associated with endothelial dysfunction, hopefully reducing the rate of major CVS events.

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Determinants of change in arterial stiffness in a general population in Northern Italy. The Vobarno study


Background: Carotid-femoral pulse wave velocity (cPWV) is an independent predictor of cardiovascular events and its measurement is recommended by current hypertension guidelines. Very few data are available on the progression of PWV over time.

The aim of the present longitudinal study was to compare the progression of arterial stiffness over a 5-year period in a general population in Northern Italy (Vobarno Study).

Methods: 227 subjects, 42% males (age 50±4 years and hypertension in 51% at baseline visit), underwent a baseline (BL) and a follow up (FU) visit, after 5.1 years. In all subjects laboratory examinations, measurement of clinic and 24 hours blood pressure (BP) and of PWV were performed at BL and at FU.

Results: In the overall population cPWV increased from 8.28±1.27 at BL to 8.51±3.2 m/s at FU (p<0.05), change: 0.22±1.26, cPWV significantly increased from BL to FU in hypertensive subjects (HT) (from 8.61±1.40 to 9.1±1.60, p<0.01) but not in normotensives (NT) (from 7.97±1.03 to 8.11±1.11, p ns). The absolute change in cPWV from BL to FU progressively increased from 0.052±0.108 in NT, to 0.480±0.163 in treated HT and to 0.483±0.103 in un- treated HT (p for linear trend<0.01); after adjustment for possible confounders (age, gender, BMI, baseline cPWV and change in mean BP from baseline) the difference remained statistically significant. At multivariate analysis the variables independently related to the progression of cPWV were age (beta 0.16, p<0.01) and cPWV. mean BP at BL (beta -0.55, p=0.01, and beta 0.18, p=0.01, respectively, p<0.05 for both). The progression in mean BP during follow-up (beta 0.20, p<0.001).

Conclusions: In a general population sample in Northern Italy the main determinants of the increase in arterial stiffness during a 5 years FU were age, cPWV and mean BP at BL and change in mean BP over time.

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Subclinical vascular disease in patients with erectile dysfunction: correlation with high sensitivity C-reactive protein levels

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Background: Erectile Dysfunction (ED) may be the early clinical manifestation of a generalized vascular disease (VD) & carries an independent risk for Car- diovascular (CVS) events. Low-grade subclinical inflammation affects endothelial function & is involved in all stages of atherosclerotic process.

This study is the first study to show that arterial stiffness and cen- tral pressures are strongly associated with carotid atherosclerosis severity. The nature of the independent positive association between carotid atherosclerosis and arterial stiffness should be thoroughly investigated.

Cases: 190 men, age >40, ED & no history of cardiovascular disease, hypertension, diabetes, peripheral arterial disease were recruited from men with ED in men without CVS disease or its Major Risk Factors (MRF) may be the earliest sign of generalized vascular disease (VD) & correlate with high sensitivity C-reactive protein (hs-CRP) levels.

Patients and methods: This study enrolled 115 men with ED without