an adrenal cause is suspected although hormonal tests are recommended as first line.

**Methods:** On 134 hypertensive patients uncontrolled by at least a combination therapy and with a suspicion of secondary hypertension due to adrenal cause, an abdominal CT scan was performed in first intention. In all subjects, an exploration of the renin-aldosteron axis in standardized conditions, a 24-hour urinary cortisol and a WHO recommended biological analysis were also performed afterwards.

**Results:** An abnormal morphology of adrenal was detected in 57.5% of patients. Observed abnormalities were: bilateral hyperplasia (30.6%), unilateral adenoma (15.7%), unilateral hyperplasia (6.7%) and bilateral adenoma (4.5%). Abnormal adrenal hormonal tests were recorded in 16.4% of patients, with a primary aldosteronism (AR corrected> 23) found in 10.4% and increased urinary cortisol in 6%. Treatment implementation was decided upon morphologic and hormonal results. At 6 months of follow-up, a controlled blood pressure was observed in 73.1% of subjects, spironolactone had been prescribed in 41.8% of subjects and adrenal surgery performed in 3.7% of patients. If hormonal tests had only been performed, a retrospective analysis showed that treatment with spironolactone would have been prescribed only in 12.6% of subjects and an adrenal surgery been proposed only in 2.9% of patients.

**Conclusion:** In our population of patients with a resistant hypertension and adrenal disease suspicion, abdominal CT scan as a first line investigation leads directly to the conclusion of an adrenal aetiology in 45.5% of patients. In contrast, a specific treatment would have been undertaken only in 15.5% of patients if screened by hormonal examinations only. This study suggests that in subjects with uncontrolled hypertension and suspected to have an adrenal cause, adrenal CT scan is an efficient first line investigation.

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**Do vascular markers predict cardiovascular death in primary prevention?**

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**Purpose:** The purpose of the study was to determine the prognostic significance of vascular markers in apparently healthy subjects.

**Methods:** Analyses were based on the Third South-Western French MONICA Survey (1995-1996) carried out in participants aged 35-64. Vital status, date and cause of death were obtained 14 years after inclusion. In all, 1144 participants (587 (51%) men). Over the 14-year study period, there were 63 deaths, 21% due to a cardiovascular cause (Ischemic Heart Disease, Atherosclerotic Cerebrovascular Disease or Atherosclerosis). The median 10-year risk of coronary event according to the Framingham Risk Score (FRS) was 6.4%. PWV, PP, and carotid or femoral atherosclerotic plaques, and carotid Intima-Media Thickness (IMT) were assessed. Identification of the determinants of cardiovascular mortality was based on a multivariable survival analysis.

**Results:** There were 1144 participants (587 (51%) men). Over the 14-year study period, there were 63 deaths, 21% due to a cardiovascular cause (Ischemic Heart Disease, Atherosclerotic Cerebrovascular Disease or Atherosclerosis). The median 10-year risk of coronary event according to the Framingham Risk Score (FRS) was 6.4%. PWV, PP, and carotid or femoral atherosclerotic plaques were all significant and independent determinants of cardiovascular mortality, whereas carotid IMT was no longer associated with cardiovascular mortality after adjustment for FRS. The addition of PWV, PP or atherosclerotic plaques to FRS in a prediction model resulted in an improvement of the discriminatory value of the model as shown by the C statistic which was 0.76 [95% CI: 0.61-0.90] for FRS alone, 0.80 [95% CI: 0.64-0.95] for FRS and PWV, 0.80 [95% CI: 0.65-0.95] for FRS and PP, and 0.77 [95% CI: 0.60-0.94] for FRS and plaques. Using PWV, PP and plaques in the prediction model led to a Net Reclassification Improvement of 22, 19 and 25%, respectively.

**Conclusion:** Vascular markers are independent determinants of cardiovascular mortality risk in apparently healthy subjects in primary cardiovascular prevention and improve classification of subjects.

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**Long term prognosis value of ankle brachial index in coronary artery disease**


**Purpose:** Our objective was to assess the long term prognosis value of ABI in a contemporary large cohort of pts with known CAD.

**Methods:** Among 834 consecutive male pts hospitalized in 2001-2004 for coronary artery disease, ABI was measured in 776 pts. ABI <0.9 was considered as abnormal, ABI > 0.6 was considered as low and ABI<0.6 as very low. The median follow-up was 7.17 years. Total mortality was predicted with a Cox proportional hazard model.

**Results:** Mean age (SD) was 60.2 (8.1), 144 pts (18.4%) were diabetic, 155 pts (19.8%) were smokers, and median heart rate was 61 bpm [Interquartile range (IQR)] [57-70]. Mean left ventricular ejection fraction was 0.53 (0.13). 88.5% were on antiplatelet therapy, 75.2% on beta-blocker, 66% on statin therapy and 54.8% on ACE inhibitors or ARB.

The sample comprised 518 pts (67%) with normal ABI and 258 (33%) with abnormal ABI (215 (83.3%) pts had a low and 43 (16.7%) a very low ABI). The cumulative seven-year total mortality rate was 17.6%. In the normal ABI group, mortality rate was 13.9%, whereas it was 21.4% in the low and 44.2% in the very low ABI group (p<0.001).

After multivariate adjustment for age, diabetes, tobacco consumption (none; ≤40 pack-years; >40 pack-years), heart rate, duration of CAD, left ventricular ejection fraction (>50; 50-55 and > 55; 50-55, history of chronic obstructive pulmonary disease or stroke, statin therapy and coronary revascularization, hazard ratio (HR) for all-cause death was 1.36 (95% CI [0.92; 2.03] p=0.12) for low ABI and 2.48 (95% CI [1.41; 4.36] p=0.002) for very low ABI compared to pts with normal ABI. Including ABI in the prediction model significantly increased the C-statistic (from 0.80 to 0.82, p=0.03).

**Conclusion:** ABI is a strong and independent long term predictor factor of all-cause death in CAD. To better identify pts at very high risk, systematic ABI assessment should be promoted.

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**The relationship between vascular dysfunction and angina with angiographically normal coronary arteries**

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**Background:** Angina with angiographically normal coronary arteries (NCA) still has controversial pathophysiological mechanisms. Experimental studies have shown that coronary blood flow varies with aortic (Ao) stiffness, but clinical data are poor.

**Objective:** To assess Ao vascular function by different echocardiographic techniques in patients (pts) with angina and NCA vs asymptomatic pts.

**Methods:** Study group consisted of 15 pts with angina and NCA (mean age 60±9,5 yrs) and 15 age and gender- matched control subjects (normal and hypertensives pts).

As Ascending Ao diameters – derived stiffness indices were: Ao strain, Ao distensibility (Ao di), Ao stiffness index (Ao SI), Ao function was evaluated also by measuring tissue Doppler (TdI) systolic (SW), early and late diastolic (E/AW) velocities of the anterior Ao wall. Total afterload was defined by the effective arterial elasticance (Ea或0.9SBP/SV, SV-stroke volume); Systemic vascular resistance index (SVRI)= mean arterial pressure/cardiac index. Total arterial compliance (Ca)=SV/pulse pressure.

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