Results: Pts with angina and NCA had decreased Ao strain and Ao dis and increased Ao stiffness compared with control subjects: Ao Strain 17.7±4.4% vs 24.8±10.8% (p<0.05), Ao Dis 078 ±0.3 vs 1,2±0,6cm2/dyne (p<0.05), Ao SI 3,4±1.8 vs 1.9 ±0.5 (p<0.05).

Ttd Ao wall velocity were decreased in pts group: SW 6.7±1.6 vs 10±1.9 cm/s (p<0.05, Anova), E’W 5.6±2,1 vs 9.4±2.7 cm/s (p<0.05), AW 7.1±2.3 vs 7.7±2.9 cm/s (p=0.4).

Ea and SVRI were increased and Ca decreased in patients with angina: Ea 2±1±0.5 vs 1.6±0.2 mmHg/ml (p<0.05), SVRI 2.9±1.8 vs 1.9±0.2 dynes *s^-1*m^2/cm^-5 (p<0.05), Ca 1.2±0.4 vs 1.6±0.3 ml/min Hg (p<0.05).

Conclusion: Vascular function proved to be altered in patients with angina and normal coronary arteries versus control subjects. These findings suggest a possible pathophysiological link between large arteries stiffening, increased afterload and angina symptoms, in the absence of coronary stenoses.

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Automated combination of the oscillometric ankle-brachial index and of the Edinburgh questionnaire for the screening and follow-up of Peripheral Arterial Disease
Patrick Laroche [Orateur] (1), Uwe Diegel (2)
(1) STACTIS, Paris, France – (2) GenNov, Paris, France

Objective: To evaluate the performance and acceptance of the Screening CardioVascular Lab (SCVL®, GenNov) as a screening and follow-up tool for peripheral arterial disease (PAD) in the general practitioner’s (GP) office. This electronic device combines the oscillometric determination of the ankle-brachial index (ABI) and the Edinburgh questionnaire (EQ).

Method: In a cross sectional study, 102 Belgian GPs recruited 505 patients of 250 years, hospitalized within the last year for any ischemic event. The electronic case report form was included in the SCVL®.

Results: The patients were 69±11 years old (maSD); men were 63%. Their other CVR factors were: hypertension in 75%; dyslipidemia in 74%; sedimentarily in 53%; abdominal obesity in 52%; familial history of CVD in 38%; smoking in 28%; diabetes in 22%. The arterial events, which induced the recent hospitalizations, were: acute in 71% of cases, planned for revascularization in 100 and those experienced with handheld Doppler preferred the SCVL® with a score of 76±24/79% for its combination with the EQ, while the specificity decreased from 67% sensitivity increased from 64% for the single determination of the patient ABI to 96%, ACEI or sartan: 75%

Conclusion: The education in a health network improved CV risk factors and recommended treatment but also arterial rigidity in a few weeks. This improvement was maintained although BP increased at M6 and heart rate did not change during the study. This depends probably on an intrinsic improvement of arterial rigidity of these coronary patients

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Determination of the best ankle brachial index threshold values to efficiently detect significant lower limb arterial plaques using an automated device in a population with risk factors
David Rosenbaum [Orateur] (1), Sandra Rodriguez-Carranza (1), Patrick Laroche (2), Philippe Giraud (1), Eric Bruckert (1), Xavier Girerd (3)

Objective: The aims of our study were to assess the prevalence of significant lower limb arterial stenosis in a population of patients with an increased cardiovascular risk and also to determine the best ankle brachial index threshold value for its detection.

Methods: In patients treated hypertension and/or another cardiovascular risk factor (dyslipidemia, current smoking, diabetes), ankle brachial index was measured using an automated oscillometric device with 2 synchronized cuffs. The presence of atherosclerotic plaques was assessed independently by a Doppler/ultrasound exam.

Results: We included 201 patients. Fifty two percent were men, of 58 years old. Fifty 6 percent were treated for hypertension, 72% had dyslipidemia and 23% were treated for diabetes. There was 21% of current smokers and 33% of previous smokers. A clinical peripheral arterial disease was noted in 7% of the patients and the presence of a femoral stenosis >50% was 7.7%. The prevalence of an ankle brachial index <0.9 was 19.7% and 16.6% for an ankle brachial index <0.85. The ankle brachial index performance to detect a significant femoral plaque or a clinical peripheral arterial disease is detailed in the table. The best predictors of the presence a peripheral arterial disease or a significant plaque are one of the 3 following ankle brachial index values: <0.85 or >1.30 or missing signal.

Conclusion: In patients with increased cardiovascular risk, the prevalence of a significant inferior limb stenosis is 7.7%. The ankle brachial index is easily and quickly measured by the automated SCVL® device. Our study attests the feasibility of this approach to detect peripheral arterial disease and arterial stiffness in daily practice in this population.
Different arterial damage after an ischemic atherothrombotic stroke or an acute coronary syndrome

Gilles Barone-Rochette [Orateur] (1), Gérald Vanzetto (1), Olivier Detante (2), Marc Hommel (2), Jean-Michel Mallion (3), Baguet Jean-Philippe (3)

Hôpital Abderrahmen Mami, Cardiologie, Ariana, Tunisie

Context: Atherothrombotic cardiovascular disease has both functional and anatomic components that can be assessed non invasively.

Objectif: To compare arterial properties after two different acute atherothrombotic event.

Design, setting, patients: Usual cardiovascular risk factors, carotid parameters, pulse wave velocity, brachial flow mediated dilatation and ambulatory blood pressure monitoring were assessed in a cohort of 100 patients who presented either acute coronary syndrome (Group 1, N=50) or ischemic atherothrombotic stroke (Group 2, N=50) matched for age and gender.

Main outcome: Differences of arterial properties according to the type of acute vascular events.

Results: History of hypertension, diabetes, dyslipidemia, cardiovascular heredity, smoking and body mass index were similar in both groups. All blood pressure parameters (clinic and 24-hour ambulatory blood pressure monitoring) were higher in group 2 (p<0.01). Metabolic abnormalities were more often experienced after an acute coronary syndrome, with higher prevalence in metabolic syndrome (28% vs. 10%, p=0.02) and higher triglycerides (1,76±0.91 vs. 1,36±0.68 mmol/l, p=0.02) and glucose levels (5,89±2.16 vs. 4,92±0.74 mmol/l, p=0.003). Carotid intima-media thickness and carotid-to-femoral pulse wave velocity were significantly higher in group 2 than group 1 (769±180 vs. 701±136 μm, p=0.03; 12.5±3.5 vs.10.7±2.4 m/s, p=0.006). Prevalence of endothelial dysfunction and carotid plaques were similar in acute coronary syndrome and ischemic atherothrombotic stroke group (86% vs. 74%, p=NS and 80% vs. 78%, p=NS, respectively).

Conclusion: In stroke patients, aortic stiffness and carotid wall thickness were higher than in acute coronary syndrome patients. These structural and functional differences may have a direct involvement in the occurrence of the event.

Body mass index and autonomic nervous system in hypertensive patients

Afef Ben Halima [Orateur]. Mehdi Ben Miled, Mannel Ben Halima, Rym Chirgui, Samira Chine, Faouzi Addade, Sonia Marrakchi, Ikram Kamoun, Abdellatif Lefi, Salem Kachbou

Hôpital Abderrahmen Mami, Cardiologie, Ariana, Tunisie

Introduction: Heart rate variability (HRV) and heart rate turbulence (HRT) are valuable non invasive methods determining quantitatively the sympathetic and parasympathetic modulations of heart rate. The variation of HRV and HRT may be influenced by clinical parameters.

Aim: the aim of this study is to evaluate the impact of body mass index (BMI) on HRV and HRT in hypertensive patients.

Methods: 85 patients with hypertension (mean age 57±11 years) underwent 24 hour Holter recording. The following HRV parameters were studied: (SDNN, SDNN5, RMSSD, BF, HF and BF/HF). HRT parameters were also analysed (TO and TS). Patients were divided in three groups according to their BMI: group 1: BMI<25 kg/m², group 2: BMI between 25 and 30 kg/m² and group 3: BMI>30 kg/m².

Results: HRV and HRT parameters were comparable in the three groups.