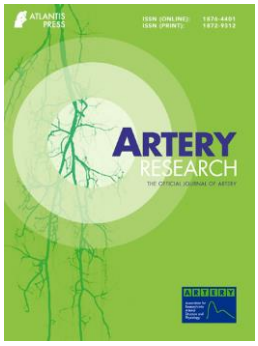

Artery Research

ISSN (Online): 1876-4401 **ISSN (Print): 1872-9312**
Journal Home Page: https://www.atlantis-press.com/journals/artres

P1.41: COULD MEASUREMENT OF ARTERIAL STIFFNESS PROVIDE BETTER APPROACH IN RISK ASSESSMENT THAN THE CONVENTIONAL RISK FACTOR-BASED STRATIFICATION?

B. Benczur, R. Bocskei, F. Molnar, M. Illyes

To cite this article: B. Benczur, R. Bocskei, F. Molnar, M. Illyes (2008) P1.41: COULD MEASUREMENT OF ARTERIAL STIFFNESS PROVIDE BETTER APPROACH IN RISK ASSESSMENT THAN THE CONVENTIONAL RISK FACTOR-BASED STRATIFICATION?, Artery Research 2:3, 102–102, DOI: https://doi.org/10.1016/j.artres.2008.08.348

To link to this article: https://doi.org/10.1016/j.artres.2008.08.348

Published online: 21 December 2019

acute reduction of blood pressure by baroreceptor stimulation lowers apparent but not intrinsic stiffness in hypertensives.

doi:10.1016/j.artres.2008.08.347

P1.41

COULD MEASUREMENT OF ARTERIAL STIFFNESS PROVIDE BETTER APPROACH IN RISK ASSESSMENT THAN THE CONVENTIONAL RISK FACTOR-BASED STRATIFICATION?

B. Benczur [1], R. Bocskei [2], F. Molnar [2], M. Illyes [2].
[1] *Hetenyi Geza County Hospital, Dept of Cardiology, Szolnok, Hungary*
[2] *TensioMed Arterial Stiffness Centre, Budapest, Hungary*

Although traditional risk factors may account for 90% of the attributable cardiovascular risk their prediction of CVD is weak based on SCORE Chart. We need to find new established risk factors and to detect subclinical arterial disease to predict future coronary events. Stiffening of the aorta is one of the earliest surrogate marker of vascular damage and measurement of arterial stiffness has a growing interest in risk assessment. *Aim*: Authors investigated the correlation between the high risk state characterized by SCORE $>=5\%$ and elevated aortic pulse wave velocity (PWVao, increased arterial stiffness) measured by arteriograph.
Subject and Methods: 2243 adults were included to the analysis in which SCORE could be calculated. Sensitivity, specificity and predictive values of SCORE in detecting increased PWVao were calculated by SPSS software.
Results: Elevated PWVao (>9,62 m/s) was detected in 38% of patient population but sensitivity of SCORE high risk category ($>=5\%$) to detect elevated PWV was poor (33%) despite high specificity (88%) while false negative cases were in 26%. Sensitivity of SCORE was a little bit better in males (65%) but much poorer in females (17%). 10% of males and 36% of females are underestimated by SCORE assessment. The ROC curve of SCORE at the cut-off value of 5% has shown 33% sensitivity but 89% specificity.
Conclusions: If PWVao is a good surrogate of preclinical atherosclerosis SCORE risk assessment seems to be quiet acceptible in men but not in women because it markedly underestimates females CV risk.

doi:10.1016/j.artres.2008.08.348

P1.42

PRECLINICAL ATHEROSCLEROTIC DISEASE: IS IT A MARKER OF RISK OF CARDIOVASCULAR EVENTS?

P. Forcada [1], C. Kotliar [1], O. Montana [2], C. Schulte [2], S. Obregon [1], G. Millet [1], J. Guerrieri [1], D. Turri [1].
[1] *Hospital Universitario Austral, Pilar, Buenos Aires, Argentina*
[2] *Clinica Dim, Buenos Aires, Argentina*

Aim: We compared the severity of vascular disease (VD)by ultrasonography in patients (p.) with and without cardiovascular events (CVE), to detect high risk asymptomatic individuals.
Methods: We did in the same procedure 1) CIMT 2) Plaques characterization, 3) PWV and 4) FMD with a strict quality control. We set a score (VS) from 0 to 5 according to the severity of the VD. The CV Risk using Framingham score (FS) was also obtained from medical records.
Results: We performed a cross sectional, observational study on 581 p. (75 with CVE (AMI, Stroke, TIA, vascular thrombotic events) 62 + 10 y.o., 73 % males and 506 non CVE controls 52 + 14 y.o. p .001, 64% males p NS).FS was high (>20%)for 216p.(30,8%),moderate (10-20%)for 204p.(29%), and low (<10%)for 282p.(40,2%).

Parameter	CVE (n= 75)	No CVE (n= 506)	p
SBP (mmHg)	139 ± 17	140 ± 17	NS
DBP (mmHg)	82 + 11	85 ± 10	.03
HR (bpm)	69 ± 11	70 ± 10	NS
Left IMT(mm)	0.87 ± 0.20	0.74 ± 0.19	< 001
Right IMT (mm)	0.82 ± 0.17	0.71 ± 0.18	< 001
% abnormal IMT	32	27	NS
% Plaques	77	49	< 001
%Abnormal FMD	32	36	NS
PWV (mts / sec)	12 ± 6	10 ± 4	.02
%Abnormal PWV	34	37	NS
FS (mean)	24 ± 9	13 ± 11	< 001
VS (mean)	3,2 ± 1,3	2,3 ± 1,4	< 001

Conclusions: 1- The severity of the VD is higher in patients with CVE even when the cut off points of normality may need to be adjusted.2- The presence of a combination of vascular structural and functional disarrangements in asymptomatic subjects may suggest an increased risk of CVE. 3-A score of severity of VD

doi:10.1016/j.artres.2008.08.349

P1.43

FRAMINGHAM SCORE UNDERDIAGNOSES VASCULAR DISEASE IN PATIENTS UNDER CARDIOVASCULAR PREVENTION

P. Forcada [1], C. Kotliar [1], S. Obregon [1], O. Montana [2], C. Schulte [2], G. Millet [1], J. Guerrieri [1], D. Turri [1].
[1] *Hospital Universitario Austral, Pilar, Buenos Aires, Argentina*
[2] *Clinica Dim, Buenos Aires, Argentina*

Aim: Framingham score (FS) is used in clinical practice to estimate the CV risk of complications and is used as reference to evaluate new markers of CV risk. Recently ESH/ESC 07 guidelines stressed on the evaluation of subclinical vascular disease (VD). We analyzed, using an integrative ultrasound evaluation, the severity of VD according to increasing FS levels of risk.
Methods: We did in the same procedure 1) CIMT 2) Plaques characterization, 3) PWV and 4) FMD with a strict quality control. We set a score (VS) from 0 to 5 according to the severity of the VD. The FS was obtained from medical records.
Results: We performed a cross sectional, observational study on 702 p.(54 + 13y.o.,448(64%) males).FS was high(>20%)for 216p. (30,8%), moderate(10-20%)for 204p.(29%), and low (<10%)for 282p.(40,2%).

Parameter	FS Low	FS Moderate	FS High	p
Age	44 ± 12	57 ± 8	64 ± 9	< 001
Sex (% males)	53	68	74	< 001
SBP	134 ± 16	150 ± 15	145 ± 18	< 001
DBP	82 ± 10	85 ± 10	86 ± 10	< 001
Left IMT (mm)	0.66 ± 0.16	0.78 ± 0.17	0.87 ± 0.2	< 001
Right IMT (mm)	0.63 ± 0.13	0.75 ± 0.15	0.84 +v0.2	< 001
% Plaques	30	55	31	< 001
%Abnormal FMD	32	36	44	.02
PWV (mts / sec)	9 ± 3	10 ± 3	13 ± 6	< 001
Vascular Score (mean)	1,9 ± 1,3	2,5 ± 1,3	3,1 ± 1,3	< 001

Conclusions: 1- The higher the FS, the more the severity of the VD increases.2- Although, we have found 54,2% with a low FS with moderate to severe VS and 18% of pts. with severe VD classified as low to moderate clinical risk.

doi:10.1016/j.artres.2008.08.350

P1.44

EARLY DETECTION OF ATHEROSCLEROTIC DISEASE IN MILD HYPERTENSIVE PATIENTS: A STRONG REASON TO REEVALUATE CARDIOVASCULAR RISK

P. Forcada [1], C. Kotliar [1], O. Montana [2], C. Schulte [2], G. Millet [1], S. Obregon [1], J. Guerrieri [1], D. Turri [1].
[1] *Hospital Univedrsitario Austral, Pilar, Buenos Aires, Argentina*
[2] *Clinica Dim, Buenos Aires, Argentina*

Aim: To analyze the incidence and severity of subclinical vascular disease (VD) using ultrasonography in patients (p.) with essential hypertension (HT).
Methods: We did in the same procedure 1) CIMT 2) Plaques characterization, 3) PWV and 4) FMD with a strict quality control. We set a score (VS) from 0 to 5 according to the severity of the VD. The CV Risk using Framingham score (FS) was also obtained from medical records.
Results: We did a cross sectional, observational study on 604 p. (479 with stage I-II HT (ESH 07) 53,2 + 13 y.o., 63% males and 125 normotensive NT controls 51,7 + 14 y.o. p.003, 62% males p NS)

Parameter	HT (n= 479)	NT (n= 125)	p
SBP (mmHg)	143 ± 16	128 ± 15	< 001
DBP (mmHg)	86 ± 9	77 ± 8	< 001
HR (bpm)	70 ± 10	69 ± 9	NS
Left CIMT (mm)	0.75 ± 0.19	0.72 ± 0.10	NS
Right CIMT (mm)	0.72 ± 0.19	0.70 ± 0.19	NS
% abnormal CIMT	29	19	.02
% Plaques	49	46	NS
%Abnormal FMD	39	26	.006
PWV (mts / sec)	10,5 ± 4,3	10 ± 4	< 001
%Abnormal PWV	34	42	NS
FS (mean)	12 ± 8	8 ± 6	.001
VS (mean)	2,4 ± 1,4	2,1 ± 1,4	< 001