dl), Group2 (220>TC>=180), Group3 (TC<180). Normocholesterolemic patients (G2) were randomized to two subgroups 2a and 2b. 10mg of pravastatin was given to the patients in G1 and G2a. CAG was performed at baseline(BL), follow-up of 2 and 5 years. Coronary arteriograms were analyzed by QCA at the Core Laboratory. Intervention or CABG related coronary branches were excluded from analysis. Primary endpoint was angiographic coronary progression evaluated by mean segment diameter (MSD) and minimum obstruction diameter (MOD). Secondary endpoints were clinical events. Results: 188 patients had at least one coronary branch to be evaluated. 1021 segments for MSD and 849 segments for MOD were analyzed by QCA (data are shown in the table: * p<0.05, ** p<0.01 vs. G2b). Both changes in MSD and MOD in G2a were significantly less than those in G2b. Cardiac events (AMI, cardiac death, PTCA and CABG) were 31.3% in G1, 24.1% in G2a, 28.8% in G2b and 20.0% in G3. Conclusion: Five-years angiographic study revealed cholesterol-lowering therapy by pravastatin prevented progression of coronary atherosclerosis even in normolipidemic patients with CAD.

Five-Year Follow-Up QCA Results

Group	TC(mg/dl)	MSD				MOD			
		n	BL	5y F/U	Change	n	BL	5y F/U	Change
G1	>=220	505	2.630	2.592	-0.037	434	2.029	1.955	-0.074
G2a	180-219	199	2.715	2.690	-0.025*	158	2.128	2.091	-0.036**
G2b	180-219	205	2.679	2.610	-0.069	178	2.090	1.934	-0.156
G3	<=179	112	2.683	2.627	-0.055	79	2.068	2.015	-0.053

1130-76 **Effects of Lipid-lowering Therapy With Atorvastatin on Endothelial Function and Aortic Pulse Wave Velocity in Patients With Hypercholesterolemia**

Hideki Watanabe, Masaaki Kakihana, Kunio Nakagawa, *KINU Medical Association Hospital, Mitsukaido, Japan, Ibaraki Prefectural University of Health Sciences, Ami, Japan.*

To evaluate effects of atorvastatin and vitamin E on endothelial function and aortic stiffness, thirty-six patients with untreated hypercholesterolemia (total cholesterol>220 mg/dL) were randomized to receive atorvastatin (10mg/day, A group, n=12), vitamin E (600IU/day, E group, n=12) or placebo (P group, n=12). By using ultrasound system with a 7.5-MHz transducer, the brachial artery diameter was measured at rest and during reactive hyperemia, and then before and after 0.3 mg of sublingual nitroglycerin (NTG). We measured plasma TBARS (thiobarbituric acid reactive substances) to evaluate oxidative stress, and also measured aortic PWV (pulse wave velocity) by using a non-invasive technique to evaluate aortic stiffness. Measurements were performed at baseline and at 4 and 8 weeks after the treatments. At baseline, there was no difference in lipid parameters, TBARS (nmol/mL), flow-mediated dilatation (FMD, %increase in diameter during hyperemia), NTG-induced dilatation (NID, %increase in diameter after NTG), and PWV among three groups. Total cholesterol level was decreased in the A group (4 weeks: -19%; 8 weeks: -26%), and TBARS was decreased in the E group after 4 and 8 weeks (Baseline: 2.4±0.7, 4 weeks: 1.9±0.6, 8 weeks: 1.6±0.6). FMD was increased in the A and E groups after 4 and 8 weeks. PWV was decreased in the A group after 8 weeks. NID did not change during the study. Conclusion: Lipid-lowering therapy with atorvastatin restores endothelial function and PWV in patients with hypercholesterolemia.

		Baseline	4 weeks	8 weeks
FMD	Atorvastatin	3.2 ± 1.0	7.9 ± 2.0*†	9.3 ± 1.5*†
(%)	Vitamin E	3.2 ± 0.8	5.2 ± 1.7†	5.3 ± 1.7†
	Placebo	3.2 ± 0.6	3.3 ± 1.2	3.4 ± 1.2
NID	Atorvastatin	18.3 ± 1.5	17.6 ± 2.4	17.9 ± 1.3
(%)	Vitamin E	17.7 ± 1.5	17.9 ± 1.3	18.0 ± 1.4
	Placebo	18.5 ± 1.4	18.0 ± 1.6	18.4 ± 2.3
PWV	Atorvastatin	1803 ± 116	1738 ± 117	1427 ± 95*†
(cm/sec)	Vitamin E	1836 ± 118	1823 ± 115	1759 ± 104
	Placebo	1815 ± 118	1810 ± 138	1806 ± 125

Mean ± SD, *p<0.01 vs vitamin E, †p<0.01 vs placebo

POSTER SESSION

1131 Blood Pressure: Mechanisms and Control

Monday, March 18, 2002, 3:00 p.m.-5:00 p.m.
Georgia World Congress Center, Hall G
Presentation Hour: 3:00 p.m.-4:00 p.m.

1131-77 **The Prognostic Value of Ambulatory Blood Pressure in Treated Hypertension: The Office Versus Ambulatory (OvA) Blood Pressure Study**

Denis L. Clement, Marc De Buyzere, Dirk De Bacquer, Peter De Leeuw, Daniel A. Duprez, Robert Fagard, Peter Gheeraert, Eoin O'Brien, for the OvA Investigators, *University Hospital, Ghent, Belgium.*

Background. Prognostic value of ambulatory blood pressure recordings (ABP) in arterial hypertension has been studied in several large-scale event-based cohort studies mostly with ABP recordings made in untreated or placebo-treated subjects. The Office versus Ambulatory (OvA) European multicentre BP study examined whether ABP predicts cardiovascular (CV) events and mortality over and above office blood pressure (OBP) in treated hypertensive patients (ABP recordings at > 3 months treatment). **Methods**. We followed 1963 eligible patients (median follow-up 5 years). There were 157 patients with a well-documented validated first new CV event since enrolment. Total mortality comprised 78 cases. **Results**. Cases (n = 157) were older, had higher total cholesterol and triglycerides, had more diabetes and more previous CV history and comprised more men. Office and ambulatory (24-h, day- and night-time) systolic BP were higher in the cases. In Cox proportional hazards models adjusted for age, gender, risk factors, previous CV history and office BP systolic ABP still had independent significant predictive value over and above systolic OBP, while significance for diastolic ABP was not reached: systolic 24-h ABP 1.47[1.24-1.74], systolic day-time ABP 1.39[1.18-1.65], systolic night-time ABP 1.45[1.24-1.70] (hazard ratio for 1 SD BP increase, [95%CI]). Even in patients(25%) with systolic OBP < 140 mmHg, subjects with high systolic ABP (particularly at night) had a higher incidence of all CV events. Further subanalysis largely confirmed our results for CV mortality (n = 38). However in adjusted Cox proportional hazards models neither systolic or diastolic ABP could predict total mortality (n = 78) over and above OBP. **Conclusion**. The OvA study demonstrated that systolic ABP predicts CV events over and above systolic OBP; this is not the case for diastolic ABP. ABP was not predicting total mortality over and above OBP. The OvA study gives evidence that ABP monitoring improves CV risk stratification in treated hypertensive patients.

1131-78 **Patient Knowledge and Awareness of the Importance of Elevated Systolic Blood Pressure**

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Background: Improved recognition of the importance of systolic blood pressure (SBP) has been identified as one of the major public health challenges in the prevention and treatment of hypertension (HTN). This study assesses HTN knowledge and awareness in a hypertensive population, specifically focusing on SBP.
Methods: We identified patients with HTN (n=2,264) in the primary care setting of a large Midwestern health system using automated claims data (ICD-9 codes 401.0 through 401.9). We randomly selected 1,150 patients and report interim results on the initial 683 completed patient telephone interviews (59% response rate); data collection is ongoing.
Results: In this population of hypertensive patients, awareness was high, with 90% reporting that a healthcare provider had told them that they have HTN or high blood pressure (HBP); however, 39% of patients did not know their blood pressure (BP) level. Of patients who did know their BP, 54% reported levels that were ≥140 mm Hg and/or ≥90 mm Hg for SBP and diastolic blood pressure (DBP), respectively. Thirty-seven percent of these patients reported elevated systolic levels only (SBP ≥140 mm Hg and DBP <90 mm Hg). Interestingly, only 25% of patients with elevated SBP and/or DBP perceived that their BP was high. Eighty-two percent of all patients correctly identified the meaning of HTN as "high blood pressure." Thirty-two percent of patients correctly identified SBP as the "top" number of their reading; 29% correctly identified DBP as the "bottom" number; and, overall, only 27% of the patients were able to correctly identify both systolic and diastolic BP measures. Twenty-six percent and 24% did not know the optimal level for SBP and DBP, respectively. When asked whether the DBP or SBP level was more important in the control and prevention of disease, 43% reported DBP, 14% reported SBP, 28% reported that both were important, and 14% did not know.
Conclusions: These results suggest that although awareness of HTN is high, patients do not understand the importance of elevated SBP levels nor the current status of their BP control. An opportunity exists to focus patient education programs and interventions on the cardiovascular risk associated with elevated SBP levels.

1131-79 **A Comparison of Pressure and Time Characteristics Between Aortic and Radial Blood Pressure Waveforms**

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Background. It is well known that the shape of blood pressure waveforms varies over the arterial system. Differences in pressure wave shape and associated descriptive parameters between brachio-radial and proximal aortic sites are of interest due to suggestions that central blood pressure may be a more appropriate clinical indicator than traditional blood pressure assessment.
Methods. Simultaneous invasive ascending aortic (6 or 7Fr coronary catheter) and radial artery (applanation tonometry, Millar® Mikro-tip® catheter pressure transducer) pressure waveforms were recorded using Chart for Powerlab, sampling at 200Hz in 98 subjects (76male:22female) undergoing elective coronary procedures. Radial waveforms were scaled to aortic mean and diastolic pressures by linear interpolation. Parameters for comparison included systolic blood pressure (SBP), augmentation index (AI), diastolic (Ad) and systolic (As) pressure integrals and times to peak pressure (Tp) and to dichrotic notch (Ts).
Results. Results are expressed comparing radial with aortic sites. Scaled radial SBP was closely and linearly related to measured aortic SBP (y=0.9098x + 24.22; p<0.001, r^2=0.77) with an average difference over the physiological BP range of 12mmHg. Ad and As measured at the two sites were also closely associated (r^2=0.93 and 0.84respectively; both p<0.001), as were Tp and Ts (r^2=0.2, 0.6; both p<0.001). Although achieving conventional significance the association between radial and aortic AI was, as expected, weak (r^2=0.04, p<0.05). Regression slopes for SBP, Ts, Ad and As did not differ significantly from 1.
Conclusions. Despite substantial differences in shape between radial and aortic BP waveforms, with close linear relationships and regression slopes of 1, many time, pressure and pressure time integral parameters of the central aortic pressure waveform may be deduced simply from peripheral waveform data without the need for complex transformation of data. Our data suggest that blood pressure ranking, and cardiovascular risk, will be unchanged based on either central or peripheral SBP and thus derivation of central aortic waveforms may not improve upon conventionally available blood pressure data.