



## Artery Research

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### **P1.22: REDUCED BAROREFLEX-SENSITIVITY IS NOT RELATED TO INCREASED CAROTID ARTERY STIFFNESS IN PATIENTS WITH SCHIZOPHRENIA**

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**P1.20**  
**PRESENCE OF INTRACRANIAL STENOSIS IN CORONARY PATIENTS IS ASSOCIATED WITH DETERIORATION OF ENDOTHELIAL FUNCTION**

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**Objectives:** The objectives of this cross-sectional study was to determine the prevalence of extra-/intracranial stenosis in patients with severe coronary artery disease (CAD) and to analyze how endothelial function and arterial stiffness are related to the presence of intracranial stenosis.

**Methods:** We examined 57 patients with three vessels and/or left stem (LS) CAD. Brachiocephalic arteries were examined with extracranial and transcranial color-coded duplex sonography (ECCS, TCCS) and magnetic resonance angiography (MRA). Endothelial function was assessed as reactive hyperaemia index (RHI) by peripheral arterial tonometry (EndoPAT). Carotid to femoral pulse wave velocity (cfPWV) and augmentation index (Alx@HR75) were assessed by applanation tonometry (Sphygmocor). **Results:** From 57 pts (age 65±9, 44-82; 33% female), 30 pts (53%) were diagnosed with three vessels disease, 27 pts (47%) with LS disease with/without three vessels damage (21 and 6). ECCS revealed carotid plaques and stenoses in 105/114 vessels (92%). TCCS revealed at least one intracranial stenosis in 61.4% pts (35/57). Patients with intracranial stenosis had significantly lower RHI (1.82±0.38 vs. 2.19±0.59, p=0.029) and higher Alx@HR75 (35.72±7.83% vs. 28.06±12.18%). However, there was no significant difference in cfPWV between the patients with and without intracranial stenosis (10.38±2.18 m/s vs 10.43±2.98 m/s, ns).

**Conclusions:** Patients with severe CAD are at high risk to have a silent intracranial stenosis. In our study group, presence of intracranial stenosis was associated with worse endothelial function but not higher arterial stiffness. Our finding suggests that in patients with generalized atherosclerosis endothelial dysfunction further contributes to the development of intracranial stenosis.

**P1.21**  
**CAROTID ATHEROSCLEROSIS EXPRESSED BY INCREASED INTIMA MEDIA THICKNESS IS ASSOCIATED WITH LOW ADHERENCE TO MEDITERRANEAN DIET IN ERECTILE DYSFUNCTION PATIENTS**

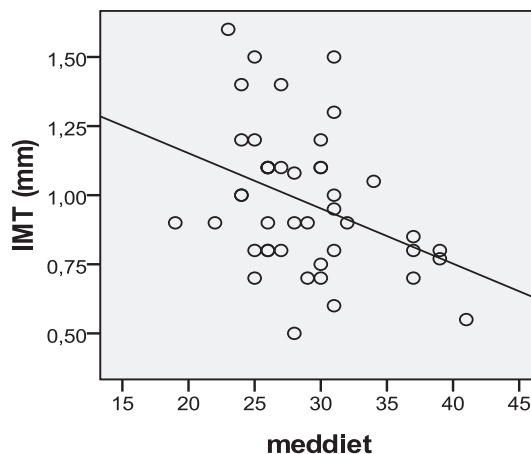
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**Objective:** The Mediterranean diet, rich in fruits, legumes and vegetables is a healthy dietary pattern, gaining widely recognition as a non-pharmaceutical mean of cardiovascular disease prevention, due to antioxidant and anti-inflammatory properties. Erectile dysfunction (ED), represents an early marker of vascular damage, reflecting endothelial dysfunction and subclinical inflammation. Increased carotid IMT (>0.9mm) relates to traditional risk factors and associates with an unfavorable cardiovascular outcome. Our study aims to investigate the association of Mediterranean diet to carotid atherosclerosis in ED patients.

**Methods:** 45 ED patients (aged 56±11 years) underwent carotid ultrasound for evaluation of intima media thickness (IMT) in the common carotid artery. Assessment of dietary habits was evaluated through the Med-Diet Score (theoretical range 0–55). Higher values on the score indicate healthier dietary habits.

**Results:** Med-diet score was significantly associated with age (r=-0.215, P<0.05) systolic and pulse pressure (r=-0.198, r=-0.277 respectively, all P<0.05). Multiple linear regression analysis was applied and revealed that Med Diet Score was inversely associated with IMT (r=-0.43, P<0.001, figure) after adjustment for history and treatment of hypertension, diabetes mellitus, hypercholesterolemia, as well as use of statins and smoking. Patients with a mean IMT >0.9 mm had significantly lower Med-Diet Score as compared to subjects with lower IMT values (27±4 vs 33±5, P<0.05).

**Conclusions:** The inverse association between Med-Diet Score and carotid IMT, indicates an unhealthy dietary life style in ED patients that contributes to an adverse cardiovascular profile and may help in preventing further vascular damage by adapting healthier dietary habits.



**P1.22**  
**REDUCED BAROREFLEX-SENSITIVITY IS NOT RELATED TO INCREASED CAROTID ARTERY STIFFNESS IN PATIENTS WITH SCHIZOPHRENIA**

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**Objectives:** Baroreflex function was found to be impaired in schizophrenia and reduced baroreflex-sensitivity (BRS) was associated with increased mortality. Stiffening of the baroreceptor vessel wall, such as the carotid artery, may lead to reduced activation of the baroreceptors and blunt the baroreflex. We tested the hypothesis that reduced BRS is associated with increased carotid artery stiffness in schizophrenic patients.

**Methods:** 24 first-episode schizophrenic patients and 24 age- and gender-matched controls were enrolled. Carotid artery was examined by echo wall-tracking and tonometry. Carotid artery distensibility coefficient (DC) and stiffness index  $\beta$  (Stiffness  $\beta$ ) were calculated. ECG and beat-to-beat blood pressure recordings were used to determine BRS (BRSsp).

**Results:** DC was reduced, Stiffness  $\beta$  was increased in patients compared with controls (3.90±0.96\* vs. 5.06±0.98 10<sup>-3</sup>/mmHg; 6.15±1.49\* vs. 5.01±1.02). BRSsp was reduced in patients compared with controls (9.42±6.88\* vs. 22.27±7.50 ms/mmHg). No relation was found between the BRSsp and the carotid elastic parameters in patients, but BRSsp was related to carotid DC in healthy controls (r=0.67\*). (mean±SD; \*p<0.05)

**Conclusions:** Carotid artery distensibility is markedly reduced in schizophrenic patients. It has been shown that schizophrenia was associated with increased oxidative stress which may explain stiffening of the elastic vessel wall. The increased carotid artery stiffness does not play a dominant role in the reduction in BRS in schizophrenic patients. It appears that the attenuation of baroreflex may be due to damaged neural elements of the reflex arch.

**P1.23 Withdrawn by author**

**P1.24**  
**DOSE-DEPENDENT INWARD ARTERIAL REMODELLING AND DE STIFFENING AFTER OLMESARTAN IN HYPERTENSIVES WITH METABOLIC SYNDROME: THE VASCULAR MECHANISM STUDY**

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**Background:** Whether angiotensin receptor blockers can dose-dependently remodel the arterial wall during long-term treatment has only been rarely studied. Olmesartan (OM) has previously shown a favourable pharmacodynamic profile for such an action.

**Methods:** In this phase 3, multi-centre, double-blind, randomized, parallel-group study, 133 subjects with hypertension and metabolic syndrome were assigned to three treatment groups and received either OM 20 mg (n=44),