



## Artery Research

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### **P4.09: EFFECT OF VARDENAFIL ON ARTERIAL STIFFNESS AND WAVE REFLECTION**

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group. Large arterial stiffness was assessed by automatic noninvasive measurement of the brachial-ankle pulse wave velocity (baPWV). Endothelial function was calculated based on flow-mediated dilatation (FMD) parameters. RESULTS. The 3 months treatment of ACE inhibitor produced a significant reduction in systolic (-26,6 mmHg) and diastolic BP (-10,2 mmHg), baPWV (-1,1 m/s) and increase of FMD (+1,5%). Administration with ISMN of 20 pts, without reaching BP target level on treatment of ACE inhibitor, did not lead to significant decreasing of SBP(-1,3 mmHg), DBP(-2,1mmHg) and baPWV (+0,3 m/s). There was no difference in BP and baPWV in ISMN+ACEI treatment group compared with control group (ACEI only). CONCLUSION. Addition of ISMN to ACE inhibitor has no beneficial impact on BP and improvement of arterial stiffness in patient with essential hypertension.

#### P4.08

##### ARTERIAL HYPERTENSION AND CORONARY REVASCULARIZATION SURGERY: A CLINICAL CHARACTERIZATION OF 90 PATIENTS

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**Objectives:** evolution of hypertensive patients during their stay in the CCU after myocardial revascularization surgery (MRS).

**Methods:** retrospective study with 90 patients.

**Results:** prevalence of AHT before surgery was 86.7%; 61.3% were treated with BB, 39% received ACEI, 11% calcium antagonists and 14.4% diuretics. From hypertensive patients, 56% presented AHT during the stay in the CCU (65 % of men and 41.3% of women) ( $p < 0.05$ ). In the CCU the patients with AHT were treated with nitroglycerin in the 95.6% of the cases. BB were used in 48% of the patients, and only 13% needed sodium nitroprusside. The most frequent early postoperative complications were taquiarrhythmias and mayor bleedings but we did not find a relation between these complications and AHT in the early postoperative. Bleeding was found in 21 % of the patients that developed AHT postoperatory vs. 10 % of the patients that did not (NS). 21% of the patients that developed AHT presented taquiarrhythmias vs. 16% of the patients that did not (NS). Almost all patients were sent home with BB, 60% of patients with ACEI and 3.3 % with calcium antagonists.

**Conclusions:** 1. AHT was more frequent in previously hypertensive men than in women in the early postoperatory of MRS. 2. AHT was not significantly associated with bleeding or taquiarrhythmias 3. Most of the cases of HTA responded to the treatment with nitroglycerin and BB. 4. BB and ACEI were the drugs more prescribed to patients after acute phase of MRS.

#### P4.09

##### EFFECT OF VARDENAFIL ON ARTERIAL STIFFNESS AND WAVE REFLECTION

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**Introduction:** While vardenafil is widely prescribed for erectile dysfunction, its effect on arterial function is not established. Arterial stiffness and wave reflections are markers of cardiovascular disease and predictors of cardiovascular risk. We assessed the acute effect of vardenafil on arterial stiffness and wave reflections on patients with erectile dysfunction.

**Methods:** Ten patients (mean age  $58 \pm 10$  years) with erectile dysfunction received vardenafil 20 mg in a randomized, placebo-controlled, double-blind, 2-way cross-over design. Aortic elastic properties were evaluated with carotid-femoral pulse wave velocity (cfPWV); wave reflection was evaluated with augmentation index (AIx) of the aortic pressure waveform.

cfPWV and wave reflection indices were measured at baseline and for 3 hours after the vardenafil intake or placebo.

**Results:** cfPWV decreased significantly (by 0.502 m/s,  $p < 0.01$ ), denoting a decrease in aortic stiffness. AIx decreased significantly (by 3.11%,  $p < 0.01$ ), denoting a decreased effect of wave reflection from the periphery. Aortic pulse pressure decreased significantly (by 5.09 mmHg,  $p < 0.01$ ). The effect of vardenafil lasted throughout the study (3 hours), being evident 30 to 60 minutes after drug intake.

**Conclusion:** This study shows, for the first time, that vardenafil has a favorable effect on aortic stiffness and wave reflection in patients with erectile dysfunction.

#### P4.10

##### EFFECT OF SHORT-TERM PERINDOPRIL THERAPY ON ARTERIAL STIFFNESS AND ENDOTHELIAL FUNCTION IN DIASTOLIC HEART FAILURE PATIENTS

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**Background:** Vascular load is an important determinant of ventricular function. Understanding the physiologic basis of vascular load is central to the development of new strategies and drugs to treat HF. Aim: to evaluate arterial stiffness, endothelial function, clinical status at baseline and in 6 months follow-up period of perindopril therapy in diastolic HF.

**Methods:** 40 patients with exertional dyspnea, I-II NYHA, EF > 45%, aged 62(8,4) years, F/M = 27/13, history of CHF 29(16) months, BMI 29,4 kg/m<sup>2</sup>. Arterial stiffness was assessed by measuring carotid-femoral PWV and central: mean BP(MAP), pulse pressure(CPP), AIX using applanation tonometry (Sphygmocor) at the baseline and in 6-months f-up. Endothelial dysfunction using FMD during reactive hyperemia (HDI 5000), clinical status with MQLHF were assessed at the baseline and in 6-months f-up period. All patients were on perindopril therapy, mean dose 8 mg/day.

**Results:**

	Baseline	6months f-up	p
PWV	10(8,6;11,9)	9(8,3;11,5)	=0.06
CSBP	135(123;152)	132(124;140)	ns
CDBP	85(79;93)	82(80,5;90)	ns
SBP	145(134;154)	131(126;142)	<0.05
DBP	85(80;91)	80(76;86)	ns
CPP	52(41,5;59)	44(42;52)	ns
MAP	105,5(97,5;115,5)	104(98;110)	ns
AIX	32,5(27,5;41,5)	38(30,38)	ns
FMD	5,6(3;6,5)	6,5(3,3;7,1)	<0.05
NYHA FC	2(1;2)	1(1;2)	<0.05
MQL	39,5(27;48)	33,5(25;41)	ns

**Conclusions:** The present study demonstrates that short-term perindopril therapy improved endothelial function, led to favourable trends with regard to the reduction of arterial stiffness and resulted in improvement of NYHA functional class in diastolic heart failure patients, that suggests that perindopril is therapeutically useful in the therapy of diastolic HF.

