

132/81mmHg), but in hypertensive subjects, walking exercise significantly reduced BP. Central SBP reduced significantly by exercise (128±22 vs 125±21mmHg) in all subjects. In sedentary G, these parameters did not change.

Conclusions: Walking in for 8-weeks induced a significant reduction of HbA1c, TG, waist circumference and central SBP in subjects with Mets. Casual BP did not significantly change, but central SBP reduced. These results suggest that aerobic exercise respond favorably in insulin resistance, lipid metabolism and central blood pressure.

PP.23.427 CONSUMPTION OF HIGH POLYPHENOL GRAPE SEED FAILED TO LOWER AMBULATORY BLOOD PRESSURE

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Dietary polyphenols derived from fruits and vegetables have been shown to lower blood pressure (BP) in both normotensive and hypertensive subjects. The current study was designed to investigate the effects of a grape seed extract (GSE) on BP, and the mechanisms underlying the putative BP lowering effect of polyphenols. The GSE was characterized by a very high (~90%) total polyphenol content with particularly low molecular weights.

Seventy untreated subjects with elevated BP levels (54% male; mean age 64 and daytime ambulatory SBP/DBP 136/82 mmHg) were included in this double-blind placebo-controlled, randomized parallel group study. After a run-in period of one week, the subjects consumed each day a capsule with GSE (MegaNatural®-BP, 300 mg per day) or a placebo capsule, during 8 weeks. Ambulatory BP was measured on 2 separate days for 12 hours (daytime; at 20 min intervals) at baseline and at end of intervention. Blood and urine were collected to measure mechanistic markers.

Daytime ambulatory SBP/DBP decreased (-4.6/-2.1 mmHg) compared to baseline values, but these changes were not significantly different from the control group (-3.1/-1.4 mmHg, $p > 0.1$). Renin activity, endothelin-1 and NOx concentrations were similar in both study arms.

Conclusion: Consumption of high polyphenol grape seed extract does not lower BP significantly compared to placebo in untreated borderline hypertensive subjects.

PP.23.428 DIETARY INTAKE AND ARTERIAL STIFFNESS; A CROSS-SECTIONAL STUDY OF PATIENTS ATTENDING AN OUTPATIENT HYPERTENSION CLINIC

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Objective: Arterial stiffness is an independent predictor of cardiovascular morbidity and mortality. The aim was to investigate the relationship between dietary intake, metabolic profile and arterial stiffness in hypertensive patients.

Design and Method: Dietary intake was self-reported using a 3 day diet record. Brachial blood pressure (BP) was measured using an oscillometric technique (Omron) in the right arm. Using the same arm, augmentation index (AIx) and aortic BP were measured using radial applanation tonometry (SphygmoCor). Pulse wave velocity (PWV) was measured using the foot-to-foot method (Artech Medical). A fasting blood sample was collected for serum lipids and glucose determination, and bodyweight, height and waist circumference were measured.

Results: Eighty adults (female, $n = 40$) with a mean \pm sd age 49 ± 25 y, body mass index (BMI) 29.7 ± 5.1 kg/m² ($n = 70$) and waist circumference 101 ± 14 cm ($n = 42$) participated. PWV was 10.3 ± 2.4 m/s ($n = 36$) and AIx was $27.1 \pm 14.4\%$ ($n = 48$). Dietary intake data was collected from $n = 50$ patients. Energy intake (EI) was 8.3 ± 3.9 MJ/d, folate intake was 245 ± 105 μ g/d and calcium intake was 751 ± 504 mg/d. The metabolic syndrome¹ was present in 19/42 patients. AIx was inversely associated with bodyweight ($r = -0.354$, $P < 0.05$) and BMI ($r = -0.289$, $P < 0.05$). Dietary folate ($r = -0.648$, $P < 0.01$) and calcium ($r = -0.539$, $P < 0.05$) were inversely related to arterial stiffness as measured by AIx. Age and BP-adjusted correlation analysis showed EI was inversely associated with AIx ($r = -0.477$, $P < 0.05$). There were no significant associations between dietary intake of any macro- or micronutrients and PWV ($P > 0.05$).

Conclusion: These data suggest a paradoxical association between EI, bodyweight, BMI and arterial stiffness and may add further evidence to the 'obesity paradox'. This relationship was not observed with PWV, suggesting the association is related to peripheral vascular resistance and wave reflections, rather than the speed of the forward pulse wave. The inverse association between AIx and both folate and calcium intake suggest these nutrients may have a beneficial effect on arterial compliance.

PP.23.429 EFFECTS OF AEROBIC AND RESISTANCE TRAINING ON QUALITY OF LIFE AND FUNCTIONAL CAPACITY IN HYPERTENSIVE WOMEN

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Objectives: To compare the effects of aerobic and resistance training on QOL and functional capacity in hypertensive women.

Methods: Randomized clinical trial conducted at Hypertension League Federal University of Goias - Brazil. Sample: hypertensive women, ≥ 50 years, non-participants in exercise programs, satisfactory treadmill test (Bruce protocol) and with a minimum 6-month treatment. Subdivided: aerobic group (GA) ($n = 21$) and resistance group (GR) ($n = 20$). Interventions: 2 months (2x/week) of aerobic exercise (walking) and resistance training. Intensity of aerobic group: mild to moderate (4 to 7 of Borg Scale adjusted). Resistance: up to 60% of 1 RM Bench Press Test. Two series of 12 to 15 repetitions. Before and after the intervention was applied WHOQOL-bref to evaluate QOL, the SF-36 for HRQOL and Walk Test Six minutes (WT6') to measure the functional capacity.

Results: Initially the groups were homogeneous regarding clinical, anthropometric, sociodemographic and WT6' ($p \geq 0.05$). The groups were also homogeneous in WHOQOL-bref scores except on the psychological and personal domains, and the GR had higher scores on these aspects. On SF-36, the groups were different at the beginning only at physical aspects, and the GA presented higher score in this domain. After intervention, there was a significant improvement in all WHOQOL-bref domains in GA and at GR the improvement occurred only in physical aspects. Regarding SF-36 there was a significant improvement in 7 of 8 domains at GA (exception for mental health). At GR, were observed similar results. There were no changes in weight, body mass index, waist circumference, blood pressure and heart rate after the intervention. ($p \geq 0.05$). There was an increase at functional capacity (longer distance on WT6' - $p \leq 0.001$) in both groups.

Conclusion: The two types of EF, promoted beneficial effects in different magnitudes in QOL, similar in HRQOL and functional capacity. These results suggest that, according the focus and objectives established, both exercises can be effective as a treatment strategy in search of better QOL in hypertensive woman.

PP.23.430 GENERATOR EXCHANGE OF IMPLANTABLE CARDIAC DEVICE AND PATIENT RESTRICTIONS OVER DRIVING: A COHORT STUDY

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Objective: In many countries motor vehicle driving is restricted for patients with an implantable cardioverter defibrillator (ICD). They are advised to avoid driving for a week or months after an ICD generator exchange (GEx). However, there is no evidence which demonstrates increase in ICD discharges (ICD-d) after a GEx. Study aim was to investigate whether this restriction is appropriate or not. ICD-d was checked before and after GEx.

Methods: This cohort study was carried out at Cardiology department of Rawalpindi medical college hospital from January 2009 to July 2009. Among cohort of 446 patients with ICD, 89 patients who underwent a GEx (aged 52.6 ± 14.7 years, male 71) were reviewed and compared with the occurrence of the ICD-d in a 6-month period before and after the GEx. Also the incidence of ICD-d in 6 month after GEx between patients with an ICD-d before GEx and those without was evaluated.

Results: There was no significant difference in the occurrence of ICD-d in the 6 month period before and after the GEx in all of the 89 patients ($p = 0.12$). Moreover, patients without ICD-d before the GEx had significantly fewer episodes than those with ICD-d ($p = 0.01$).

Conclusion: Data indicated that a GEx did not effect on the clinical course in terms of the occurrence of the ICD-d. In patients without ICD-d before the GEx, the possibility of the occurrence of ICD-d after GEx was very low.