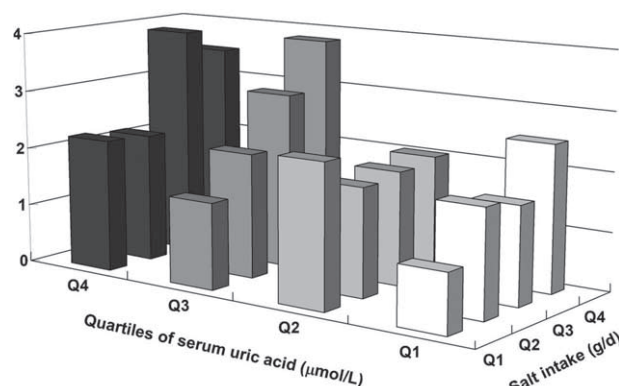


with the lowest quartiles, the highest salt intake and serum UA quartiles entailed 3.48 times greater risk of prehypertension.



Conclusions: Salt intake is associated with urinary UA excretion in prehypertensive participants. High levels of salt intake and serum UA simultaneously are associated with a higher risk of prehypertension.

VENTRICULAR ARRHYTHMIAS IN YOUNG ATHLETES: ARE THERE ANY POSSIBLE PREDICTORS?

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Objective: Long-term outcomes of frequent and/or complex ventricular arrhythmias in apparently healthy athletes are still controversial. Ventricular ectopy in young athletes often originates from the right ventricle. Arrhythmias can be a clinical expression of an initial cardiovascular disease that may not be easily detected in the growing age.

Design and method: The present study was designed to investigate the right ventricle morphology and function through echocardiography in young athletes with ventricular arrhythmias originating from right ventricle. 265 young athletes were recruited, aged 9 to 18 years, 158 male and 107 females. 97 of them presented frequent and/or complex ventricular arrhythmias at baseline EKG which did not disappear nor decrease during exercise test (group A) while 168 of them had no arrhythmias (group B). All athletes underwent echocardiogram focused on right ventricle, according to the American Society of Echocardiography's guidelines. A multivariate logistic regression analysis was performed to identify possible adjusted predictors of arrhythmias. The coefficients obtained were used to develop a scoring system to calculate the risk of arrhythmia.

Results: No sex differences were found. All echocardiographic parameters were between the normal range though the athletes with arrhythmias were older, heavier and taller. Group A presented different right ventricle systolic function indexes, namely a lower TAPSE, a higher MPI index and more positive values of strain; moreover, they had lower right ventricle longitudinal dimensions and higher end diastolic area (both absolute and indexed for subject's height). The likelihood of arrhythmic increase with age, with the decrease in systolic function parameters and with a glossier aspect of right ventricle. This score seems reliable in predicting the development of frequent and complex extrasystolia in young athletes (65% sensitivity, 86% specificity).

Conclusions: Athletes with a score value of 250 or more, should be more closely followed with EKG Holter and accurate echocardiographic study of right ventricle to detect early signs of cardiac disease.

MRI BASED DETECTION OF RENAL ARTERY ABNORMALITIES RELATED TO RENAL DENERVATION BY CATHETER BASED RADIO-FREQUENCY ABLATION IN DRUG RESISTANT HYPERTENSIVE PATIENTS

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Objective: Endovascular renal denervation (RDN) using catheter-based radio-frequency (RF) ablation has emerged as a potential treatment option for drug re-

sistant hypertension. Its efficacy is currently under debate. We aimed to evaluate the capability of contrast enhanced MRI to assess the effects of RDN on the renal arterial wall in patients presenting with drug resistant hypertension.

Design and method: Patients were included prospectively following IRB approval and written informed consent. Renal arteries were imaged using a 2D T1-w TSE sequence pre- and post-administration of a Gadolinium based contrast agent, before (D0), 2 days (D2) and 6 months (M6) after RDN. Mean enhancement of the wall (mENH) and mean wall thickness (mWT) were compared across time using an ANOVA with repeated measures and post-hoc paired t-test.

Results: Follow-up was completed for 23 patients (median age, 57 years; 16 men). mENH at D2 ($96.3 \pm 36.0\%$) was significantly higher than at D0 ($61.1 \pm 26.3\%$, $p < 0.001$) and M6 ($66.1 \pm 22.7\%$, $p < 0.001$). Similarly, mWT was significantly higher at D2 ($3.1 \pm 0.4\text{mm}$) than at D0 ($2.7 \pm 0.4\text{mm}$, $p < 0.001$) and M6 ($2.9 \pm 0.5\text{mm}$, $p = 0.002$).

Conclusions: MRI demonstrated abnormalities of the arterial wall two days after RDN that had resolved at 6 months.

THE LONG-TERM EFFECTIVENESS OF A SMARTPHONE APPLICATION TO REDUCE SEDENTARY TIME IN PRIMARY CARE. EVIDENT II STUDY

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Objective: The objective of this study is to evaluate the long-term effectiveness of adding an app to standardized counselling in order to reduce sedentary time

Design and method: Multicenter clinical trial with 12 month-follow up, including 833, recruited by random sampling in six primary care centers (415vs418). Interventions: Counseling on healthy and active lifestyle was given to both groups by a nurse. The intervention group (IG) received additional training in the use of an app that was designed to promote active lifestyle and healthy nutrition over a 3-month period. Measures: Sedentary time by Marshall sitting questionnaire and Physical Activity by 7-day Physical Activity Recall (PAR) questionnaire.

Results: Mean age was 51y. (SD12) in the IG and 52.3(SD12.0) in the group of only counseling (CG); women predominated in both groups (60.0% and 64.1%). In the baseline assessment, 114(27.5%) were active in IG and 118(28.2%) in CG ($p = 0.807$). The total sedentary hours per week (h/w) were 42.2 ± 17.8 in IG 41.4 ± 17.9 in CG ($p = 0.506$). There were also no difference in the hours of transport, work or watching television.

At 3 months there was a decrease in the sedentary time in both groups, IG: 0.37h/w (95%CI:-1.75to1.01) and CG: 0.77h/w (95%CI:-2.13to0.59), without intragroup or intergroup difference. Only a significant decrease of time was observed in watching television in IG: -1.18 (95%CI:-2.21to-0.14); $p = 0.026$, but not in CG: -0.36 (95%CI:-1.35to0.62), $p = 0.466$. Difference was not reached when comparing the changes between both groups ($p = 0.613$).

At 12 months, there was a small increase in sedentary lifestyles in IG: 1.03 (95%CI:-0.52to2.58); $p = 0.191$ and in CG: 1.85 (95%CI:0.41to3.30) $p = 0.012$, although it only reached statistical significance in the second, but not when comparing both groups ($p = 0.445$). There was also an increase in time watching TV in the CG: 1.84hw (95%CI 0.66to3.02) $p = 0.002$, but not in IG. The comparison of the change between both groups did not reach statistical significance ($p = 0.061$).

Conclusions: The intervention based on applications for Smartphone to promote healthy and active lifestyle decreased sedentary time, especially in leisure time in IG and increased in the control group with respect to the baseline, but without reaching the significance when comparing the changes between both groups.

DIFFERENCES OF EATING HABITS CAUSING HIGH SALT INTAKE OBSERVED IN SHIMANE COHRE STUDY

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Objective: To prevent hypertension, it is important to promote the reduction of salt intake, however, its practice is not easy. One of the reasons for the difficulty is that it will be ineffective unless differences in dietary habits in each region are considered. We conducted estimation of salt intake and eating habits for 2 consecutive years.

Design and method: We conducted the survey in 2 areas, one in the middle mountainous area (Town A) and another in isolated island area (Town B) at Shimane prefecture in Japan. We collected spot urine and acquired clinical data such