

P-597**BRAIN NATRIURETIC PEPTIDE AND LEFT VENTRICULAR GEOMETRY IN HYPERTENSIVE PATIENTS PREDISPOSED TO PAROXYSMAL ATRIAL FIBRILLATION**

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BNP is a cardiac neurohormone secreted from the ventricles in response to ventricular volume expansion and pressure overload. BNP levels may also reflect diastolic dysfunction. We assessed the hypothesis that BNP plasma levels may be of prognostic value in hypertensive patients predisposed to AF.

For this purpose, BNP levels were measured in 30 hypertensive patients with history of paroxysmal atrial fibrillation (PAF) (group A) and 30 hypertensive patients without previous history of PAF (group B). In 8 patients from group A the BNP levels were measured during the paroxysm of AF and after the reversion to sinus rhythm.

There were no differences among the two groups regarding the clinical data (age, sex, body mass index, office blood pressure, duration of hypertension, EF: 65% vs 67%, p=NS for all cases). The left ventricular mass index and left atrial dimensions were significantly higher in group A ($135 \pm 27 \text{ gr/m}^2$ vs $105 \pm 19 \text{ gr/m}^2$, $p < 0.0001$ and 3.77 ± 0.3 vs 3.51 ± 0.4 cm, respectively). BNP levels were significantly higher in group A (49.04 ± 53.8 vs 12.24 ± 14.21 pg/dl, $p = 0.006$). In addition, BNP levels were significantly higher during PAF comparing with the levels after reversion to sinus rhythm (144.03 vs 36.49 pg/dl). By applied a multivariate model it was revealed that BNP levels were higher in hypertensive patients with LVH than in the absence of LVH.

In conclusion, there were also good correlation between plasma BNP levels and left ventricular mass index. BNP could be a significant and reliable predictive index for the detection of patient prone to the development of PAF in essential hypertensive patients while in sinus rhythm.

Key Words: Brain Natriuretic Peptide, Hypertension, Left Ventricular Mass Index

P-598**ASPIRIN IN THE PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE IN HYPERTENSIVE PATIENTS - THE HEALTH ECONOMIC PERSPECTIVE**

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Low-dose aspirin is standard care in patients with a history of cardiovascular disease (CVD). In primary prevention it is more controversial although recent meta-analyses and US and European guidelines support its use in persons at increased CVD risk, for example persons with hypertension. This study aims to evaluate the total costs and cost-effectiveness of low-dose aspirin in hypertensive patients.

A state-transition model was developed to compare the total cost of low-dose aspirin with placebo in the primary prevention of CVD over 10 years. Three populations were studied: new hypertensive patients (Group 1), treated hypertensive patients with blood pressure (BP) $< 160/95$ mmHg (Group 2), treated hypertensive patients with BP $\geq 160/95$ mmHg (Group 3). Ten year cumulative risk of CVD in the studied patients groups was provided by the PROCAM-investigators. Risk reduction with low-dose aspirin was based on two recent meta-analyses. Direct costs from the perspective of the German healthcare system (GKV), i.e. excluding patient co-payment, were used (base year 2003). Outcomes are expressed as difference in 10-year total costs (€) and gains in quality-adjusted life years (QALY).

As shown in the following table administering low-dose aspirin is cost saving and leads to gains in quality-adjusted life years in the 3 popula-

tions studied, with the largest savings found in the highest risk group. Sensitivity analyses proved robustness of the results.

We conclude that administering low-dose aspirin to patients with newly diagnosed hypertension, a BP treated to values $< 160/95$ mmHg and BP treated to $\geq 160/95$ mmHg is significantly cost-saving from the GKV perspective. Both on clinical and economic grounds, primary prevention with low-dose aspirin seems recommendable in hypertensive patients.

Difference in total costs and gains in quality-adjusted life years over 10 years

Group (10 year CHD risk)	Strategy	Total costs (€)	Difference in total costs (€)	QALY	QALY gained
1 (10.0%)	No aspirin	1,162		7.6772	
	Aspirin	921	-241	7.7070	0.0298
2 (11.9%)	No aspirin	1,376		7.6336	
	Aspirin	1,087	-289	7.6667	0.0331
3 (13.6%)	No aspirin	1,566		7.5948	
	Aspirin	1,235	-331	7.6307	0.0359

Key Words: Aspirin, Economic, Primary Prevention

P-599**RELATIONSHIP BETWEEN QT INTERVAL AND CARDIOVASCULAR RISK FACTORS IN HEALTHY YOUNG SUBJECTS**

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The aim of this study was to evaluate the prevalence of a prolonged corrected QT interval (QTc) in a healthy young population and to investigate the association of QTc with cardiovascular risk factors.

We examined 170 Caucasian subjects (aged 22-25, 84 males), evaluating height, weight, blood pressure, heart rate, fasting blood glucose and cholesterol, smoking habits and hypertensive familiarity. To determine QTc, a simultaneous 12-lead ECG was recorded by means of a 12-channel electrocardiograph (Mac 1200, Marquette Hellige Inc., Germany) at a paper speed of 50mm/s. QT interval (mean value of three calculated intervals) was corrected for the previous cardiac cycle length according to Bazett's formula. In both genders we evaluated the prevalence of a prolonged QTc (> 440 ms). Subjects were categorised in sex-specific tertiles of QTc; then we performed, separately in males and females, a multiple regression analysis to explain QTc (dependent variable, expressed in tertiles) as a function of the biological and environmental variables evaluated (body mass index, blood pressure, blood glucose and cholesterol, smoking habits, hypertensive familiarity).

A prolonged QTc was observed in 10% of females and 5% of males (p for differences between sexes = 0.24). In a multiple regression analysis, QTc was positively associated with fasting blood glucose concentration in females ($p = 0.04$) and systolic blood pressure in males ($p = 0.03$).

In conclusion, the significant positive relationship we found between QTc and blood glucose concentration (in females) or blood pressure (in males) suggests an association between potential cardiovascular risk factors and QTc duration, already present in young age and in subjects with QT interval, glycaemia and blood pressure values within the normal range.

Key Words: Cardiovascular Prevention, Cardiovascular Risk Factors, QT Interval