

differences were observed with lower amplitudes in HHb signals for less fit subjects. In control groups, middle aged and young subjects had significant higher performances in VO₂max, most of cognitive tests and higher amplitudes changes for NIRS indices while exercising.

Conclusion: Despite comparable maximal exercise tolerances and CO₂ CHD individuals presented reduced cognitive performances compared to healthy age-matched subjects. We evidenced an inter-individual variability among CHD patients for cerebral NIRS signals changes, especially with age and fitness. These results suggest that variations in HHb are much more related to exercise capacity than O₂Hb in CHD patients.

261

Endothelial function in children with sickle cell disease

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Background: Sickle cell anemia (SCA) is an inherited disorder characterized by recurrent painful crises with ischemia resulting from vascular occlusion. Reduction of the flow mediated dilatation (FMD), secondary to impaired release of substances such as nitric oxide, has been reported recently in adult patient with SCA, but little is known in children.

Objective: (1) To describe the vascular abnormalities assessed carotid and brachial arteries by ultrasound in a population of children with a major sickle cell syndrome (SS). (2) To compare with controls (children of the same age with no cardiovascular risk factor). (3) To compare vascular parameters with clinical, biological and transcranial Doppler data.

Study population: Thirty two patients with SCA were prospectively enrolled. Mean age was 12,3±4,5 years. Patients with SCA were closely matched for age, gender, to 50 healthy AA subjects. Carotid IMT, cross sectional compliance (CSC), distensibility (CSD) and FMD were determined non-invasively and compared among the two groups.

Results: FMD was significantly decreased in SCA patients vs controls (6,2±2,9 vs 8, 2±4%, p<0,05). Carotid IMT (0,45±0,03), CSC, CSD was comparable in SCA and controls. There was no correlation between FMD and age, number and severity of crises, hemoglobin and LDH level, transcranial Doppler.

Conclusions: This study demonstrated endothelial dysfunction in children with SCA which could influence therapies in this population to prevent cardiovascular risk factor.

262

Use of allopurinol and risk of myocardial infarction: a case-control study

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Background: While gout is considered as a risk factor for vascular diseases, the relation of allopurinol with the risk of cardiovascular events is

controversial. In some studies, drug use was associated with an increased vascular risk, while other studies described a protective effect.

Objectives: We conducted a case-control study to examine the relation between allopurinol use and risk of myocardial infarction (MI).

Methods: Cases (n=2277) were successive patients with a first-ever non-fatal MI referred to 63 cardiology centres throughout France between March 15, 2007 and November 30, 2010. They were matched to 4849 controls selected in a large (12,313) general practice patient referent population. Controls had no past history of coronary heart disease and were matched to MI cases on age, gender, number of visits to a doctor in the preceding year, date of consultation (MI) and past history of high blood pressure. Data about medication use during the two preceding years, and past medical history and life habits (smoking, physical activity, etc.) were obtained from patient's standardized interview and GP records. Odds ratios (OR) and their 95% confidence interval were computed using conditional logistic regression, adjusting for classical vascular risk factors (body mass index, smoking, diabetes, physical activity).

Results: MI cases and controls had a mean age of 59 years, 76% were men and 56% reported a history of high blood pressure. High body mass index, low physical activity, smoking and diabetes were more prevalent in cases than in controls. Overall, during the two preceding years, 3.8% of controls and 3.1% of MI cases had used allopurinol, and 1.1 of both cases and controls had used another hypouricemician. Use of allopurinol was associated with a non-significant decreased risk of MI (adjusted OR (95%CI): 0.75 (0.56 – 1.01).

Conclusions: This study showed that allopurinol use is not a risk factor for first-ever non-fatal MI and might rather be associated with a decreased risk of MI.

263

Atherosclerotic complications of hemodialysis in Marrakech

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Introduction: Atherosclerotic disease are a severe complications in uremic patients. They result in particular by an increased frequency of coronary ischemic events, responsible for 8-15% of deaths. The purpose of this study is to evaluate the frequency and severity of atherosclerotic complications in this population and their associations with traditional risk factors and specific uremia.

Patients and methods: This is a multicenter cross-sectional study, only prospective 6-months from March 2011 to August 2011, including 130 hemodialysis. Complications were defined by atherosclerotic coronary artery disease, cerebrovascular disease and peripheral vascular disease. They were classified according to severity using an index of existing co morbidities (ICED). Comparison of patients with and without atherosclerotic complications was performed using SPSS software

Results: The frequency of atherosclerotic complications was 29.2% (38 patients). 21 patients had coronary artery disease (16.2%), 7 patients had cerebrovascular disease (5.4%) and 16 patients had peripheral vascular disease (12.3%). The mean age was 55.6 ± 8.96 years. We noted a male predominance. 6 patients were smokers, 30 patients had hypertension and 17 patients were diabetic. Dyslipidemia was found in 13 patients. Coronary angiography was performed in 13 patients showing single-vessel disease 4 patients, 2 patients vessel disease and vessel disease in 1 patient. 5 patients had an ischemic stroke which was a transient. 1 patient had a hemorrhagic stroke and one patient had a carotid stenosis. 3 patients had peripheral arterial disease confirmed and 11 patients had intermittent claudication of the lower limbs. Atherosclerotic complications were significantly associated with age (p=0.001), hypertension (p=0.048), systolic blood pressure (p=0.038), diabetes (p=0.001), dyslipidemia (p=0.024), obesity (p=0.018), triglycerides (p=0.018) and left ventricular mass (p=0.003).

Conclusion: Uremic patients have a high incidence of atherosclerotic disease and traditional cardiovascular risk factors.