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EDIZIONI MINERVA MEDICA

Topic: Arterial hypertension and vascular complications

O18

RELATIONSHIPS BETWEEN SHORT-TERM BLOOD PRESSURE VARIABILITY AND EARLY RENAL DYSFUNCTION IN HYPERTENSION

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The prognostic significance of short–term blood pressure (BP) variability (STBPV), expressed as standard deviation (SD) of blood pressures (BP) intermittently recorded over 24 hours, is debated. Recently, indices of STBPV other than SD have been proposed. Among these, the 24-h BP Average Real Variability (ARV) seems to be associated more consistently than SD with an enhanced cardiovascular risk.

The relationship between mild-to-moderate renal dysfunction (MMRD) and ARV was not investigated.

Our study was aimed to analyse, in a large group of untreated essential hypertensives, the relationships between ARV, and other STBV indices, with MMRD. We enrolled 329 essential hypertensive patients, with an eGFR > 30 ml/min/1.73 m2. All the subjects were untreated for hypertension and underwent a 24-h ambulatory blood pressure monitoring. Ninety-six of the participants belonged to the first III stages of 2012 KDIGO classification of chronic kidney diseases (CKD) and were considered to have MMRD. Among the STBV indices evaluated [ARV of 24 h BP; Weighted SD of 24 h BP, SD of daytime and nighttime BP] only ARV of 24 h systolic BP differed in subjects with MMRD [9.93 (8.57-11.18) mmHg] compared to the hypertensives with normal renal function [9.1 (8-10.2) mmHg; p = 0.001]. This association held ($p < 0.03$) in multiple logistic regression analysis after adjustment for 24 h average systolic BP, age, gender and other confounding factors.

Our results seem to suggest that in essential hypertensive patients, ARV of 24 h systolic BP, but not other STBPV indices, is significantly associated with MMRD.

O19

A NEW CLINICAL CLASSIFICATION OF HYPERTENSIVE HEART DISEASE (V.I.A.) - OUR EXPERIENCE

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Hypertensive heart disease is the response of the heart to the increase in left ventricular afterload, secondary to the progressive raise of blood pressure and total peripheral resistance caused by hypertensive vascular disease. VIA classification aims to give an overview of patients with this framework, classifying them uniquely objectively and universally

Using VIA classification categories we analyzed a sample of 160 patients. The sample was composed by 91 males and 69 females and only 8 patients younger than 50 years. All patients were monitored with ECG and echocardiography.

The sample we analyzed demonstrated a strong correlation of hypertension with left ventricle damage, ischemic events (50% of the sample) and increased incidence of atrial fibrillation (42,5 % of the subjects included in our analysis presents this arrhythmia, while in the general population the incidence is much lower). With the VIA classification we can immediately evaluate the single patient, objectively, and we can follow if his condition worsen during the time.

the VIA classification, according to data we collected, can then give an overview of a population of patients with hypertension; this classification is unambiguous, objective and universal as the parameters considered can be easily shared and managed in different hospitals all over the world. In addition, we should in future introduce another parameter ("P") that will make this classification more accurate, with the analysis of the damage that high blood pressure creates on peripheral structures such as kidneys, blood vessels and brain.

Topic: Arteritis

O20

G-CSF IMPROVES EFFICACY OF BM-MNC TRANSPLANTATION

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Background. The safety and efficacy of autologous bone marrow-derived mononuclear cell (BM-MNC) transplantation in the treatment of lower limb ischemia is becoming established, although common treatment protocols are not yet agreed upon. We hypothesized that bone marrow mobilization with Granulocyte Colony-Stimulating Factor (G-CSF) improves the safety and effectiveness of cellular therapy.

Methods and results. 44 patients were randomly assigned to receive two injections of G-CSF (300 μg) prior to BM-MNC transplantation. BM-MNC were harvested from all patients and injected as equal aliquots of at least 108 cells into the ischemic leg muscles below the lowest patent artery. After 3 months, patients receiving G-CSF reported increased subjective relief of symptoms and showed increased transcutaneous oxygen tension (TcPO2). After 6 months, patients showed greater improvement in TcPO2, ankle-brachial index, and angiographic score compared to control patients. There were no increased number of side effects in patients receiving G-CSF.

Conclusions. G-CSF is safe and effective to mobilize BM-MNC and may allow reduced volume of aspirated bone marrow, potentially reducing procedural complications. G-CSF should be considered for use in patients that are candidates for angiogenic therapy. G-CSF may increase the number of patients that are candidates for therapeutic angiogenesis.

Topic: Asymptomatic carotid lesions

O21

COMBINATION OF INTRA-ARTERIAL THROMBOLYSIS AND OPEN STENT EXTRACTION FOR THE TREATMENT OF ACUTE CAROTID STENT THROMBOSIS

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Introduction. Acute thrombosis following carotid artery stenting (CAS) is a dreadful complication. Dual antiplatelet treatment has decreased its incidence (0-0.4%). Open stent extraction and thrombus removal or intra-arterial thrombolysis has been described as potential treatments. We describe a case where both techniques were used.

Case description. A 72-year-old male patient with an asymptomatic severe right carotid artery stenosis was admitted for CAS. Two hours after the uneventful procedure he developed two transient strokes (left pyramidal syndrome). An urgent duplex scan diagnosed a near-totally-occluded stent, while an emergency angiogram revealed complete right internal carotid artery (ICA) occlusion from its bifurcation to the syphon, above the level of 2nd cervical vertebra (C2). Intra-arterial thrombolysis with 2ml alteplase was performed, resulting to a near complete thrombus resolution along the ICA's entire length except the stenting area. A 360o ICA coiling just after the stent inhibited complete thrombolysis. The patient underwent emergency carotid artery exploration, stent removal, eversion endarterectomy and ICA shortening and recovered without neurologic defects but only an extensive neck hematoma, treated by surgical evacuation. He was discharged asymptomatic 4 days after.

Conclusion. Occasionally, thrombolysis proves insufficient as treatment for acute CST. In such a case, open thrombectomy without prior thrombolysis is inadequate as the thrombus extended above C2 level. Combination of thrombolysis and open repair successfully salvaged the case. In selective cases of CST with an ICA thrombosis along its entire length, combination of thrombolysis and open repair can prove useful. The possibility of postoperative hemorrhage is always to be considered.