

puncture may reduce the number of big pseudoaneurysm after long time from procedure thus to reduce surgery procedure repairing.

Topic: Risk factors and atherosclerosis

P21

SEVERITY OF CAROTID DISEASE AND RENAL HEMODYNAMICS IN HYPERTENSIVE PATIENTS WITH AND WITHOUT IMPAIRED RENAL FUNCTION

G. GERACI¹, G. MULÈ¹, M. MOGAVERO¹, C. GERACI¹, S. COTTONE¹

¹ DIPARTIMENTO BIOMEDICO DI MEDICINA INTERNA E SPECIA-LISTICA - UNITÀ DI NEFROLOGIA ED IPERTENSIONE, PALERMO, ITALY

Renal hemodynamic parameters, and intrarenal resistance index (RI) in particular, are not only expression of parenchymal perfusion but they seem also to be influenced by systemic alterations of the vascular system.

Several studies have shown that intimal-media thickness (IMT) and plaques of the common carotid are both an expression of atherosclerotic carotid disease and a well-documented marker of subclinical organ damage, and that they get worse with the progressive deterioration of renal function.

The aim of our study is to evaluate the relationship between RI and severity of atherosclerotic carotid disease in hypertensive subjects with and without impaired renal function.

264 hypertensive patients between 30-70 years were split into 2 groups, the one with normal renal function (n=140), the other with CKD stage I-IV (n=124). All patients were also divided into 3 subgroups based on IMT values and presence of plaques (1: IMT < 0.9 mm and no plaques; 2: IMT > 0.9 mm and no plaques; 3: plaques).

Patients with plaques and IMT > 0.9 mm showed higher values of RI in both the overall study population (p<0.001) and the subgroups with and without CKD (p<0.01). A strong positive correlation was observed between RI and IMT both in the entire study population (r=0.43; p<0.001) and in subgroups with (r=0.42; p<0.001) and without CKD (r=0.39; p<0.001). These correlations remained statistically significant even after adjustment for various confounding factors in multivariate analysis.

Our results seem to confirm that RI is associated with severity of carotid disease in hypertensive patients and that it can be considered as a marker of systemic vascular changes.

P22

RELATIONSHIP BETWEEN AORTIC STIFFNESS AND RENAL RESISTANCE INDEX IN HYPERTENSIVE PATIENTS

G. GERACI¹, G. MULÈ¹, M. MOGAVERO¹, C. GERACI¹, L. GUARINO¹, S. COTTONE¹

¹ DIPARTIMENTO BIOMEDICO DI MEDICINA INTERNA E SPECIA-LISTICA - UNITÀ DI NEFROLOGIA ED IPERTENSIONE, PALERMO, ITALY

The assessment of renal hemodynamic parameters by duplex Doppler sonography has been used as a diagnostic tool in kidney diseases. Recent data suggest that these parameters, especially the intrarenal resistive index (RI), may be also associated with systemic vascular changes and with an enhanced cardiovascular risk.

However, conflicting data exist in literature about the independent association of aortic stiffness with RI.

The aim of this study was to evaluate the relationship between RI and arterial stiffness, assessed by aortic pulse wave velocity (aPWV), in hypertensive patients.

We enrolled 264 subjects, aged between 30 and 70 years. They were divided into two groups, either with normal renal function (n=140) or with chronic kidney disease (CKD) stage I-IV (KDIGO classification) (n=124). The aPWV was measured by a computerized oscillometric method (Arteriograph). RI was calculated as the average of six measurements (three from each kidney) obtained along the interlobar arteries.

Patients with renal RI>0.7 showed higher values of aPWV, both in the overall population (p<0.001) and in the subgroups with (p<0.01) and without CKD (p<0.01). Statistically significant correlations were observed between aPWV and RI in the whole population (r=0.38; p<0.001) and in the subgroups with (r=0.35; p<0.001) and without CKD (r=0.31; p<0.001). These correlations held even after adjustment for several confounding factors in multivariate analyses.

Our results, showing a strong independent association between renal RI and aPWV, seem to corroborate the concept that the RI, beyond its prognostic renal value, may be considered as a marker of systemic vascular changes and therefore a predictor of cardiovascular risk.

Topic: Telematics in angiology

P23

TELEMEDICINE SCREENING FOR VASCULAR DISEASE OF LOWER LIMBS

M. PETRIK¹

¹ ANIOLOGY ITALSKA PRAGUE, PRAGUE, CZECH REPUBLIC

Introduction. Statistics still show a bad situation in detecting early stages of arterial and venous disease of the lower extremities.

The aim of our study was to design a rapid screening system with simple operation that could provide a timely warning about the suspected or clear vascular pathology of the lower extremities and test it in practice.

Method. In principle, this is a classic air plethysmography. However, the unit of measurement is to some extent autonomous and performs

analysis of the captured waveform and the first evaluation: NORMAL, SUSPICION, PATHOLOGY

In addition, the measured curves are automatically sent to the center by internet, where the values are analyzed by an experienced angiologist. He also confirms the definitive conclusion of the examination.

Results. The system is currently installed in Czech - Itaska Praha 2, Zdar nad S. New telemedicine centrum in Brno, Brazil - Rio Grande do Sul, Centro de Saude da Reserva - Portugal - Lisbon

Conclusion. Telemedicine screening for vascular disease of lower limbs is simple and can be operated in remote areas. The demonstrated high sensitivity and specificity can be operated in the form of 'services'

Advantages: Instant detection of pathology, supervision of Angiology. In addition to the detection

of PAD and CVI. Monitoring treatment of PAD, CVI

Topic: Traumatic vascular diseases

P24

VASCULAR COMPLICATIONS ASSOCIATED WITH PERCUTANEOUS ECLS IMPLEMENTATION ONE INSTITUTION EXPERIENCE

A. BOROWSKI¹, H. DALYANOGLU¹, E. GODEHARDT¹

¹ UNIVERSITY OF DÜSSELDORF, DPT. FOR CARDIOTHORACIC SURGERY, DÜSSELDORF, GERMANY

Objectives. Percutaneous implementation of extracorporeal life support (ECLS) is associated with considerable risk for acute vascular sequelae at the cannulation site. The purpose of this study is to report on our experience with venoarterial (VA)-ECLS, implanted in in-house and out-of-house setting, with focus on vascular complications requiring surgery.

Methods. The investigation is based on a single-centre, retrospective study of 85 consecutive patients who required VA-ECLS for cardiogenic shock.

Results. Between 09/2011 and 03/2014, a total number of 85 adult patients (age 18-80, 23 females) received percutaneous VA-ECLS via femoral access; of them 64 patients while on CPR. Perfusion cannula for lower limb was inserted in 52 patients, in most cases at the second occasion. In 24/85 pts (28%) vascular complications requiring surgery occurred, in 18 patients associated with lower limb ischemia. A total number of 64 surgeries were necessary (for bleeding control, hematoma - 25, vascular reconstructions - 9, thrombectomy - 10, fasciotomy - 14, femoro-popliteal bypass - 1, change to axillary perfusion site - 4, upper limb amputation - 1). 56/85 patients (66%) died. The vascular complication rate in survivors was considerably lower compared to non-survivors (13% vs. 32%).

Conclusion. In patients with percutaneous ECLS (femoral access) the risk for lower limb ischemia is high. In case of suspected ischemia unhesitating and safe insertion of perfusion cannula is crucial to prevent further vascular sequelae.