THE DOPPLER VENOUS PRESSURE INDEX IN THE SUPERFICIAL VENOUS INSUFFICIENCY OF THE LOWER LIMBS.

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BACKGROUND
The hemodynamic evaluation of chronic venous insufficiency (CVI) of the lower limbs (LL) is commonly based on duplex ultrasound examination (DUS). Only in few Centers the hemodynamic investigations as venous pressure measurements are systematically performed. Noninvasive measurement is mainly influenced by venous valvular function and many other factors as body weight, venous tone, climate, devices employed and operator's experience, therefore it will be defined as venous pressure index (VPI).
AIMS
To verify the value and significance of VPI in the diagnosis of CVI of the LL.
METHODS
2.098 LL of 1.049 patients affected with CVI and/or other pathologies of the LL were studied by clinical and DUS investigations. 1.212 LL of 606 patients with CVI were systematically subjected to VPI measurements. LL with venous malformations were excluded. VPI were detected by Doppler method in standing position and after 10 tip-toeing exercises (ambulatory VPI), at the ankle in correspondence of the greater saphenous (GSV), smaller saphenous (SSV) and posterior tibial (PTV) veins. The VPI mean values were correlated with the site, extension and various combinations of reflux and analyzed. The C of C.E.A.P., ranging from C2 up to C6, of every single limb was correlated with the mean VPI values.
RESULTS
Standing VPI are significantly related with the site, extension and combinations of venous reflux (R), while ambulatory VPI are more frequently influenced by exercise and muscle-skeletal alterations. Mean VPI values: GSV>SSV; GSV with isolated R at the leg>GSV at the thigh; additional R in perforators increases VPI in all the districts; superficial R increases VPI in PT. The mean VPI values are significantly related with the C of C.E.A.P. (P<0,05-0,0001).
CONCLUSIONS
Standing VPI are the expression of valvular incompetence of the various venous districts. Ambulatory VPI is related to venous insufficiency and/or muscle-skeletal alterations. R in GSV at the leg and in perforators increases VPI and the severity of the disease. Superficial venous hypertension leads to secondary deep venous hypertension in the majority of the cases. Doppler VPI measurement is a highly predictive diagnostic and prognostic investigation.

CHRONIC VENOUS INSUFFICIENCY: VENOUS REFLUX LOCALIZATION AND PREVALENCE.

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OBJECTIVE. To verify the distribution and frequency of the superficial and deep venous reflux (R) in chronic venous insufficiency (CVI) of the lower limbs.
MATERIAL AND METHODS.
According with the protocol study of CVI "CIF-REFLUX", the duplex filing data of 898 limbs in 449 patients have been collected in the "phlebologic archive" software (Tommix-Informatica).
R grading: absent; "moderate" (degree 1 and 2 if R<2.5 sec); "important" (degree 3 if R >2 sec).
Haemodynamic types of R: 1st type: sapheno-femoral (SFJ) and/or sapheno-popliteal joint (SPJ); 2nd type: SFJ and/or SPJ with perforating veins (PV); 3rd type: SFJ with degree 3 R in the deep veins (DV) and in PV; 4th type: degree 3 R in the DV and in PV; 5th type: reflux in upper districts; other types of R not included in the CIF-REFLUX.
RESULTS.
n°81 normal (9%); n°96 1st type (10.7%); n°143 2nd type (15.9%); n°52 3rd type (5.8%); n°53 4th type (5.9%); n°5 5th type (0.5%) = Total n°430 (47.9%).- n° 468 (52.1%) types not included: n°35 isolated DVI (3.9%); n°228 reticular veins and/or telangectases (25.4%); n°48 lymphoedema (5.3%); n°40 insufficiency of the venous-muscular pump (4.4%); n°12 congenital venous malformations (CVM) (1.3%); n°105 various (11.7%: venous thrombosis, post-thrombotic syndromes, R in peripheral superficial veins.
CONCLUSIONS.
The 5 types represent the 47.9% of the pathologic limbs, does not include the isolated deep CVI (3.9%), deep CVI + peripheral superficial R (11.7%) and the CVM (1.3%). It seems necessary to use more widely the available data in order to define a complete and precise distribution of the VI in the examined phlebopaties.
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