CLINICAL-ANATOMICAL ASPECTS OF VARICOSE DISEASE

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SUMMARY: The varicose disease is very frequent, affecting appreciatively half of the population, with predominance in females which can reach up to 60%. It has been observed that a higher rate of the diseases incidence is in obese persons with high blood pressure, sedentary persons, etc.

We studied all the 1009 surgically treated cases, during 2005-2009, in the Surgical Ward of the Timisoara County Clinical Hospital, we divided them taking into account the gender and age groups, observing predominance in females, (706 cases, which represent 70%) in comparison to males (303 cases, which represent 30%).

The research of clinical-anatomical correlations regarding the varicose disease was based on analysis data which comprised of: patient’s age, gender, symptoms, the clinical picture, and radio-imagistic aspects, direct methods and indirect methods. For a correct and precise staging of the disease we used a detailed anamnesis regarding the risk factors in the occurrence of hydrostatic varicose, preclinical exams – containing: hemoleucogram, ionogram, flebography, color Doppler echography, angio CT, etc. and medical and surgical treatment, specific to each case. Regardless of the diseases stage, the clinical data focuses on identifying the reflux zones (for example Trendelenburg data, the 3 tourniquet data, etc.) and the appreciation of the profound venous axis permeability (Perthes); analysis done for all the patients in our study.

Key Words: varicose disease, chronic venous insufficiency, stripping, crossectomy

INTRODUCTION

Varicose veins are permanent ectasias of the subcutaneous veins, that present parietal alterations and whose diameter, in a declive position, is larger than 3 mm. They are often tortuous venous reflux is often recorded. According to Schwartz, varicose veins represent the most common vascular disease found in general population.

The varicose disease is very frequent, affecting approximately half of the population, with predominance in females (up to 60% of women); 15% of the affected population requiring surgical treatment (1,2). The favoring factors are: prolonged orthostatic position, some constitutional factors, (connective tissue disorders), some endocrines factors (varicose veins develop especially during pregnancy), excess heat or the association of excess heat with humidity. A higher incidence has been observed in obese persons with high blood pressure, sedentary persons, etc.

The disease begins with feeling of a tension in the calf, fatigue and edemas. The veins undergo progressive alteration until the apparition of complications: telangiectasias (red- lilac venules with up to 1 mm in diameter, as a spider net) and reticular veins (blue, with 1-5 mm in diameter) (3,4).

But not only the esthetic aspect is important for the varicose disease, but also the fact that they can determine complications.

MATERIAL AND METHOD

Our research of clinical-anatomical correlations regarding the varicose disease was based on analysis data which included: patient's age, gender, symptoms,
the clinical picture, and, radio-imagistic aspects, direct methods and indirect methods (5,6,7).

For a precise staging of the disease we used a detailed anamnesis regarding the risk factors in the occurrence of hydrostatic varicose, preclinical exams -containing: hemoleucogram, ionogram, flebography, color Doppler echography, angio CT, etc. and medical and surgical treatment, specific to each case (8,9).

During 2005-2009 at the First Surgical Clinic of the County Hospital Timisoara were surgically treated 1009 patients. Of these patients 706 were females, representing 70% of all cases and 303 were males, representing 30% of all cases. (Table I, Figure 1).

Regarding the distribution of cases based on age (Table II, Figure 2) it can be observed predominance in ages between 51-55 years (126 cases) for females and predominance in ages between 46-50 years (48 cases) for males.

The medical literature refers to numerous parameters with a different prognosis value. The separate prognosis value of biological indicators remains limited though, that is why we tried grouping them in different prognosis scores.

RESULTS AND DISCUSSIONS

We have classified inferior limbs varicose veins, - according to figure 3 - in:

- primary varicose veins (essential, hydrostatic) characterized by venous hypertension attacks which take action on a venous wall with low elasticity and an incompetent valvular apparatus that leads to a retrograde reflux and to a venous lumen dilatation are present in 435 cases, which represent 43.1%;
- Secondary varicose veins - symptomatically, they are the consequence of the over usage of the superficial venous system and are present in 574 cases, which represent 56, 9%.

We noticed a higher incidence of varicose veins in the left inferior limb - 524 cases than at the right inferior limb -
272 cases. In 213 cases both limbs were affected by varicose veins. (Figure 4).

In practice, the problem is to differentiate between primary varicose veins and the secondary ones in the post-thrombotic syndrome.

In regards to the symptomatology and the clinical evolution of the varicose veins disease, the varicose veins of the inferior limbs presents 4 stages, special from an phisiopathological and clinical point of view (10) (Figure 5).

- **Stage I** - 83 cases (which represent 8.2%) they are characterized by:
  - ostial valvulare insufficiency at the internal saphen level (axial avalvular is reduced) and moderate orthostatic reflux;
  - clinically presents venous cylindrical dilatation or sinuous on the saphena vein trajectory.

- **Stage II** - 491 cases (which represent 48.7%) characterized by:
  - ostial insufficiency affects the communicating veins (axial avalvular - important reflux),
  - clinically it presents weight, tensions in the shank, precocious tiredness (symptoms that appear in orthostatic); depressed venous dilatations, not painful, systematic sacciform in one of the saphena territory which disappear in the declive position and reappear almost instantaneously when reverting to orthostatic being covered by normal teguments.

- **Stage III** - 251 cases (which represent 24.9%) characterized by:
  - the multiplication of reflux zones (mostly at the shank level) with the appearance of edema and trophic disorders;
  - clinically present the declive edema (perimaleolar) which appears at night (after the orthostatic during daytime) and disappears at night (clinostatismul favors the venous turn), detensionable, with the appearance of scleroses cellulites (indurative - induration which determines the adherence of the tegument on the fascial surface, followed by an irreversible, definitive lesion).
Stage IV - 184 cases (which represent 18.2%) characterized by:
- valvular insufficiency at the profound venous torso level;
- clinically presents gigantic varicosities, complex trophic disorder and the decrease of the work capacity or even functional impotence of the limb.

Regardless of the diseases stage, the clinical data focuses on identifying the reflux zones (for example Trendelenburg data, the 3 to turniquet data, etc.) and the appreciation of the profound venous axis permeability (Perthes); analysis done for all the patients in our study.

CONCLUSIONS

1. The factors that have led to the apparition, development and progression of the disease were: hereditary, female sexual hormones, gravitational hydrostatic force and muscular dynamic force.

2. The associated symptoms with venous varicosities were unspecified pain and weight of the interested inferior limb, pain that is attributed to congestion and stagnation of blood at the level of the dilated superficial venous system.

3. The surgical treatment applied to all of the patients has as objective the elimination of hydrostatic forces of the saphena reflux, the annihilation of dynamic forces of the perforating vein reflux and the eradication of varicosities in an esthetic manner.

4. The removal of the saphena magna vein implies its detachment from the common femoral vein and the ligature of its collaterals at the level of the sapheno-femoral junction.

5. Historically, we considered the functional analysis with a tourniquet to be necessary in the evaluation of patients with chronic venous pathology of the inferior limbs. Also, the comparison of clinical results with the imagistic ones has highlighted the reduced information of the functional data of the tourniquet-test in the evaluation of hemodynamic changes of the venous system of the lower limbs in the case of severe chronically venous insufficiency.

6. For the initial clinical evaluation of valvular system competency of the inferior limbs we used classical functional tourniquet data: Brodie-Trendelenburg, Delbet-Perthes and the 3 tourniquet data. The functional data were conducted according to the standardized methodology.

References: