

Epidemiology and diagnostics of venous disease in Poland Epidemiologia i diagnostyka choroby żyłnej w Polsce

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Streszczenie

Choroby układu sercowo – naczyniowego są najczęstszą przyczyną zgonów w Polsce. Z roku na rok odsetek osób, które zmarły w wyniku chorób układu krążenia zimniejsza się, jednak w dalszym ciągu niezbędna jest odpowiednia edukacja pacjenta i dostęp do lekarzy specjalistów. Przewlekła choroba żylna jest jednym ze schorzeń tego układu, którego prawdopodobieństwo wystąpienia zwiększa się wraz z wiekiem. Do pozostałych czynników ryzyka należą: płeć, rodzaj wykonywanej pracy zawodowej, otyłość, nawyki żywieniowe i występowanie zaparć, ciąża, oraz czynnik genetyczny. Do objawów choroby należą: ból, obrzęki kończyny dolnej, uczucie zmęczenia / ciężkości nóg, mrowienie, poszerzenie drobnych naczyń krwionośnych, poszerzenie i uwypuklenie żył podskórnych, zmiany skórne, przebarwienia skóry, swędzenie skóry nóg, zastoinowe zapalenie skóry, owrzodzenia. Stopień zaawansowania choroby określa się przy użyciu skali CEAP. Działania profilaktyczne i wczesne wykrycie choroby skutkuje krótszym czasem leczenia i ograniczeniem jego kosztów. Niestety znaczna część lekarzy pierwszego kontaktu pomija badanie fizykalne kończyny dolnej, przez co wydłuża się proces postawienia diagnozy i pacjent trafia do właściwego leczenia ze schorzeniem o wyższym stopniu zaawansowania. Badania wskazują na różnice w częstości występowania przewlekłej choroby żyłnej i stopnia jej zaawansowania w zależności od województwa, które zamieszkiwał chory. Może to świadczyć o potrzebie ujednoczenia w całym kraju metod szkolenia lekarzy. Metodą leczenia najczęściej stosowaną jest połączenie farmakoterapii i leczenia uciskiem.

Abstract

Cardiovascular diseases are the leading cause of death in Poland. The percentage of people who die from cardiovascular disease is decreasing year by year, but adequate patient education and access to specialist physicians are still required. Chronic venous disease is one of the disorders of this system, whose probability of occurrence increases with age. Other risk factors include gender, type of occupation, obesity, eating habits and constipation, pregnancy, and genetic factor. The symptoms of

the disease include: pain, lower limb edema, fatigue / leg pain, tingling, enlargement of the small blood vessels, enlargement and constriction of the subcutaneous veins, skin lesions, skin discoloration, itching of the skin of the legs, congestive dermatitis, ulcers. The degree of disease is determined using the CEAP scale. Prophylactic and early detection of disease results in shorter treatment times and reduced costs. Unfortunately, a large number of primary care physicians are skipping the physical examination of the lower limb, thus prolonging the diagnosis process and the patient being treated for a more advanced disease. Studies show that there is a difference in the incidence of chronic venous disease and the severity of the disease, depending on the province that has been affected. This may indicate the need to standardize nationwide training methods for doctors. The most common method of treatment is the combination of pharmacotherapy and compression therapy.

Słowa kluczowe: żylaki, otyłość, ciąża

Key words: varicose veins, obesity, pregnancy

Admission

Chronic venous insufficiency (CVI) is defined as a state of impaired drainage of venous blood from the lower limbs in a patient test upright occurring secondary to obstructive changes as in the veins of the excessive broadening of light conductors or disorders of the valve. The term chronic venous disease is a variety of symptoms caused by recurrent venous hypertension permanently, as a result of anatomical or functional changes in deep veins, superficial and / or bonding (or perforating). [1] discomfort felt by the person are both subjective and objective. Symptoms of chronic venous disease include pain, swelling of the lower limbs, fatigue / heavy legs, tingling, widening of small blood vessels, and the widening of veins bulge under the skin, skin lesions, discoloration of the skin, itchy skin legs, stasis dermatitis, ulcers. You can highlight chronic venous insufficiency primary and secondary. The original is closely related to the construction of a genetic weakening of the walls of veins and blood vessels. In the later stages of life often the patient is exposed to factors that cause further weakening of the vessels which include: pregnancy, trauma, hormonal changes, lifestyle. The causes of secondary chronic venous insufficiency is the most common obstruction and reverse flow (or both states at the same time), changes that are secondary to venous thrombosis. In large vessels most commonly observed consequence of disease, arising in connection with the excessive flexibility of the veins and reflux are varicose veins of the lower extremities. Primary varicose veins are the result of excessive flexibility of the wall, without thrombosis. Varicose veins usually develop secondary damage to the valves, traveled as a result of deep vein thrombosis. [1] valvular insufficiency due to their recanalization, then stiffening and loss of elasticity of arterial walls. Complications can occur with the chronic venous insufficiency are also formed by the reaction of an inflammatory reaction. Endothelial cells in this reaction may destroy important for the elasticity of vascular extracellular matrix components collagen and elastin. This mechanism may be a factor which plays a role in the formation of primary venous insufficiency, but it has its share in initiating the reconstruction of the venous valves, which is a consequence of venous reflux [2] and then the stiffening and loss of elasticity of arterial walls. Complications can occur with the chronic venous insufficiency are also formed by the reaction of an inflammatory reaction. Endothelial cells in this reaction may destroy

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A history of deep vein thrombosis, after 3 years following the occurrence of chronic venous insufficiency in 35% - 69%, and within 5 years, this percentage is higher and amounts to 49% to 100%. [1]

CEAP classification

The first standards for classification of venous diseases were created in 1988. It is now widely used to assess the severity of the disease is CEAP classification. Shortcut created with the words: Clinical, Etiologic, Anatomic, Pathophysiologic and scale aspect includes clinical, etiologic, anatomical and pathophysiological. This scale was created in 1994. By the Ad Hoc Committee of the American Venous Forum, and updated in 2005. Clinical classification includes 7 groups.

Division of Clinical:

Group C0 - no visible changes in the clinical trial

Group C1 - telangiectasia, reticular veins, redness of the skin around the hock

Group C2 - Varicose Veins

Group C3 - the presence of edema without skin lesions

Group C4 - dependent lesions of venous diseases (pigmentation, eczema, lipodermatosclerosis)

Group C5 - skin disorders described above, with traces of healed ulcers of venous

Group C6 - like lesions in the groups C1 to C4 plus active venous ulcers.

Etiological division:

Ec - changes in venous malformations,

Ep - change primary pathological venous system, without identifying their causes,

Es - secondary causes of venous insufficiency of known etiology (pozakrzepowe, post-traumatic, other).

The division of anatomic

Conductors - surfaced As:

1- telangiectasia

2- saphenous vein above the knee,

3- saphenous vein below the knee.

4- small saphenous vein.

5- vein side of the thigh and shin

Deep vein - Ad:

6 inferior vena cava,

7- common iliac vein.

8- internal iliac vein.

9- external iliac vein.

10- veins of the pelvis and uterine veins and nuclear

11- common femoral vein,

12 deep femoral vein,

13- superficial femoral vein,

14- popliteal vein,

15 and leg veins.

16- intramuscular vein (venous sinuses soleus muscle).

Veins piercing - Ap:

- 17- succeed,
- 18- drumsticks.

In determining the pathophysiology take into account the presence of reflux (Pr), patency of the vein (Po) and the coexistence of these pathologies (Pr, o). [3]

In Poland, the incidence of chronic venous insufficiency is comparable to Western Europe. This disease affects approximately 51% of adult women and 38% men. Varicose veins of the lower extremities complaining 34.3% of the population. The occurrence of all categories of varicose veins and the severity of CVI grow with age.[1]

Risk factors

Statistical data indicate a higher prevalence of CVI in developed countries than in the developed countries. Hence, many authors have studied the impact not only hereditary factors but also on the formation of environmental disease. The factors most influencing the incidence of CVI include age, family history of varicose veins, constipation, and not significantly sex.

Age and sex

With age, increasing the incidence of varicose veins. Studies carried out in children already attending primary school, aged 10-12 years, they go to establish the presence of small veins in approximately 10% of the respondents. The percentage of children who had similar changes over the next four years increased to 30%. Less than 35 r. F. disease is rare in women and almost all men. In the age group 55-64 varicose veins are more common in men than in women. In most cases, the changes which have occurred are not very advanced, and the CEAP classification receive the degree I. Most authors believe that CVI is more common in women. This applies especially to children ages. With age the majority of women lost, and in the form of advanced CVI (ulcers) frequently men. These data may be due to the fact professional work

In developed countries (Western Europe), CVI applies to 29% of working women in the world is 17-20%. The disease incidence is associated with the working environment, the greatest number of cases is diagnosed in people in the industry [1]. Despite this, about the impact of work standing or sitting on the incidence of CVI they are not conclusive. Studies confirm the relationship between the extended time spent at work in a standing position and CVI. The longer the time to become, the more frequent are cases of CVI and varicose veins. The relationship between time spent in a sitting position and the occurrence of CVI is just the opposite. It has been shown less discomfort on the part of the venous system. Standing position is therefore more aggravating to the body and is a risk factor for CVI. [4] But this is not the only decisive factor.

Obesity

Risk factor which is the weight of the patient also has not been clearly confirmed. Some studies suggest a strong correlation between the severity of disease and the body mass index BMI (Body Mass Index). The higher the BMI, the higher the degree of classification CEAP. This relationship concerns mainly women, men analyzed for changes in BMI were not so important. Overweight and obesity and limited physical activity accelerate the development of the disease, especially in people with a predisposition to CVI. For the reason for this is considered an aberrant endocrine concerning changes of estrogen that are affected by the increased amount of body fat. It is likely too, that the compression of veins in the abdomen (also due to high amounts of fat located in the area and surrounds internal organs) influences the pressure in the veins. Body weight is thus another risk factor for symptoms of CVI. This also applies to deep venous thrombosis and varicose veins secondary.

Eating habits and constipation

It was suggested that constipation and poor residues diet favor the formation of varicose veins. Fecal masses surging in the cecum oppress the iliac veins which is associated with an increase in intra-abdominal pressure. Over the years, this condition can lead to widen the veins of the lower limb of light and thus to varicose veins. Association occurrence of varicose veins and constipation was confirmed only in case of men. [1]

The occurrence of CVI may also be associated with the use of a diet which is the insufficient amount of the components rich in vitamin E (common in Western Europe). Deficiency of this vitamin can have a negative effect on the wall of the vein.

Pregnancy

Pregnant women CVI symptoms occur in about 1/4 of cases. It was also demonstrated a relationship between the number of pregnancies and parity and the presence of varicose veins. Women who have given birth two or more times are more susceptible to the formation of varicose veins than the other, which gave birth only once or not at all (this risk increases by 20-30%). The most commonly observed changes in pregnancy are: telangiectasia, reticular veins and varicose veins. These changes begin to occur in the first trimester of pregnancy, and after giving birth often disappear. During this period, the economy dominates the hormonal women released from the corpus luteum progesterone. This hormone is also affects venous walls by increasing their deformability and compliance. Currently, it is believed that it has a greater impact on the condition of blood vessels than the pressure of a growing fetus in the iliac veins and inferior vena cava.

There is also a hypothesis that the formation of varicose veins is a defense mechanism against deep vein thrombosis and pulmonary embolism, which is a complication of her. The development of deep vein thrombosis was observed more frequently in women without evidence of varicose veins.

The genetic factor

Genetic predisposition, based on data from the interview on the prevalence of CVI in the immediate family members are considered to be one of the most important factors contributing to the incidence of CVI. This factor established on the basis of an interview in about 75% of people who observed symptoms of CVI.

If both parents present this disease, the child there is a 90% probability that the disease will appear in the future. If one parent suffers from this risk it is somewhat smaller and 62% in girls and 25% boys. If the disease has not occurred in the interview, the child's risk is 20%.

Despite the clear relationship between the occurrence of CVI parents and children have not been identified gene or genes responsible for the disease. In order to draw up a complete genotype-phenotype analyzes are carried out twin studies, which discusses the influence of hereditary and lifestyle typical of succession to the development of chronic venous insufficiency [1].

The occurrence of chronic venous disease in Poland

According to the survey conducted by Przybylska-Kuc et al., On the involvement of family doctors in the prevention and treatment of chronic venous insufficiency, about 35% of family physicians ignores the physical examination of the lower extremities during the visit. 5% of doctors examining patients very rare, about 23% occasionally. The test is performed always about 16.5% of family doctors. According to the authors, most patients do not obtain information about prevention and treatment of CVI. This condition results in delayed diagnosis and disease development to higher stages. Implementation of preventive measures and early diagnosis of the disease can reduce costs and shorten the time of treatment. Compression is one of the suggested by doctors preventive and curative measures, but more often it is proposed to pharmacotherapy [6].

Rarely studied the epidemiology of chronic venous disease in Poland. The first significant study was conducted in 2003. The study included 40 095 adult patients who contacted the 803 family doctors and gynecologists. Due to the significant share of gynecologists, the percentage of women participating in this study was 84%. 51% of women and 38% of men had symptoms of chronic venous disease. Venous insufficiency (Stage 3-6) were found in 10% of patients, and the ulcers were observed in 1.5% of patients. Among the symptoms reported by the patients the most frequent pain (70% of men and 77% women), the severity of the legs (67% of men and 75% women), cramps (61% of men and 57% women) and edema (48% of men and 57% women). Only 23% of the patients applied the conservative treatment recommended for the treatment of this disease (pain relievers, compression therapy). [7]

Territorial differences

A multi-center study involving research group numbering 13,393 people in 15 provinces. The study involved 330 doctors. The aim of the study was to find regional differences in reported symptoms of chronic venous disease and prescribed by primary care physicians conservative treatment. Considering the entire country, according to the classification stage C0 CEAP occurred in 31.9% of cases. Stage C1 (including telangiectasis) occurred in 56.1% of patients. Varicose veins without signs of venous insufficiency have been found among 6% of patients. In contrast, ulcers (active or healed) related to 0.6%. [8] In this study group was strongly represented urban population of sedentary work. Stage C0 occurred least often in Warminskie - (6.6%) while in Pomorskie it recorded the highest incidence of disease (41.1%). Ziaja et al. As the reason for this state of affairs give different interpretations of the CEAP classification, resulting from the weak scale prevalence among primary care physicians, who are not involved in the treatment of vascular diseases. The authors point to the problem of marginalization of vascular disease doctors in training programs. Among the most common symptoms reported were: feeling of "heavy legs" (72.9%), increased ankle circumference in the evening (68.4%), and night cramps (58.6%). Other symptoms occurred in less than half of people (swelling of the legs in the evening - 39.8%, paresthesia - 30.4%, restless legs syndrome - 18.6%). Calf average pain intensity was moderate (3.82 ± 1.86 points on a scale of 10 points). [8] Also, in the case signs of differentiation was observed in the individual regions. In case of differences symptoms can also arise from other systems training of primary care physicians. Not all areas were equally meticulously applied exclusion criteria of the study. Territorial differences symptoms can also result from different industries and services in the various provinces.

Vascular surgery

Vascular surgery is a separate part of surgery dedicated to the treatment of diseases of the blood vessels and lymph, whose main objective is the treatment of surgical complications and sequelae of many diseases, among other things, such as chronic atherosclerotic peripheral vascular disease, narrowing of the extracranial cerebral arteries, including primarily carotid stenosis, aneurysms of the aorta and peripheral arteries, diabetic foot syndrome and chronic venous insufficiency (varicose veins of the lower extremities, venous leg ulcers). [9] In the face of steadily lengthening life expectancy and birth rate, which in recent years does not guarantee the replacement of generations, we have to deal with an aging society. Chronic venous disease and its complications shows the increasing number of cases and its severity with age.

Cardio - vascular and their complications are the leading cause of death in Poland. However, for several years, in terms of mortality from these diseases is observed gradual improvement - in 2012. They were the cause of approx. 46 percent. of all deaths, while in the early 90s. accounted for approx. 52 per cent., and at the turn of the century - approx. 48 per cent. Among women, mortality due to cardiovascular diseases is much higher.

To estimate the availability of specialists for patients calculated indicator of the number of economically active vascular surgeons per 100 thousand. population in 2015. The highest rate reported in Mazowieckie (2.14 vascular surgeons / 100 thousand. inhabitants) Dolnośląskie (1.82 / 100 k.) and Śląskie (1.48 / 100 k.). The lowest rates were found in Lubuskie (0.49 / 100 k.) Świętokrzyskie (0.71 / 100 k.) and Podkarpackie (0.85 / 100 k.). The average value of the index for the Polish in 2015. vascular surgeons was 1.28 per 100 thousand. residents. The largest number of vascular surgeons worked in Mazowieckie (114 specialists), Śląskie (68 specialists) and Lower Silesia (53 specialists). The least vascular surgeons worked in Lubuskie (5 specialists) and Świętokrzyskie (9 specialists). [9]

Only five provinces in Poland: Mazowieckie, Dolnośląskie, Śląskie, Zachodnio-Pomorskie and Lubelskie, has a number of vascular surgeons index average level of this parameter for the European Union. Poland is among the countries with a low level, but the situation from year to year is improving.

Methods of treatment

Conservative treatment

The goal of treatment is to reduce the pressure in the venous limb microcirculation improving performance, strengthening the walls of blood vessels and improving microcirculation parameters. For this purpose, combined compression treatment (compression therapy) and pharmacological treatment of such conduct gives the best therapeutic effects. Compression therapy largely improves the efficiency of the muscle pump reduces venous reflux and when used regularly, can reduce the occurrence of edema of the lower extremities (especially at the end of the day). There are three methods of compression treatment:

- finished products using graduated compression (knee socks, stockings, tights)
- the use of elastic bands (bandage)
- the use of intermittent pneumatic massage.

Production graduated compression treatment are a very good alternative to traditional bandaging. This method is simple to use and provides calling a specific pressure on the different parts of the leg all day wearing the product. The key to the success of the use of compression is appropriate to the stage of selection of the degree of oppression and size selection. For this purpose, experienced person in the morning (when there is still swelling) measures the circuitry of the lower limb. Finished goods are as knee compression stockings and tights. It is also important to measure the length of the leg from the floor, because these products are available in several versions depending on the length of the patient's height. With unusual dimensions of many companies offer the ability to perform or knee stockings to measure, on the basis of measurements. [10]

Compression products of compression found in four classes of trouble (referred to the greatest pressure occurs at the level of the ankle, then decreases gradually to prevent the backflow of venous blood dysfunctional valve):

Class I oppression - 25 mm Hg

Class II oppression - from 25 to 35 mm Hg,

Class III oppression - from 35 to 45 mm Hg,

Class IV oppression - above 45 mm Hg. [2]

In practice, the most commonly recommended products are I or II class oppression. There are also two piece compression products designed for people with venous ulcers. The inner layer of fabric is designed to protect sensitive spot, and pulled her outer layer provides the appropriate pressure.

Compression stockings are also used in the prevention of deep vein thrombosis. This disease is one of the complications of stroke. Often, deep vein thrombosis leading to pulmonary embolism and its prevention in patients immobilized after stroke, resulting in a reduction in mortality. [11]

The use of compression is considered safe, it does not cause side effects. However, patients with severe peripheral neuropathy or peripheral vascular disease is not recommended their use, because they can lead to ischemia (and consequently to lower limb amputation). The efficacy of the methods of compression (whether they are of graduated compression stockings, intermittent pneumatic compression or pneumatic pump) evaluated on the third in the case of using only ½ of compression and when the compression method is combined with pharmacotherapy.

Compression dressing using elastic bands shall include lower limb from the base of the toes to the tibial tuberosity. Oppression as in finished goods decreases in the direction from the ankle to the knee. It is important to correct for the stage pressure was maintained until the next change the bandage. [12]

Increasingly popular are devices for intermittent pneumatic massage. Confirmed the usefulness of such a massage in the reduction of venous stasis and its positive effect on the activation of microcirculation.

Pharmacological treatment

The pharmacological treatment is to seal the capillary barrier, preventing changes in blood composition, improving venous tonus and reducing the blood viscosity. Flebotropic therapeutic to improve the elasticity of the capillaries and restore their proper permeability. Also increase the strength of vessels, lymphatics intensify peristalsis and thereby increase lymphatic drainage. Due to the origin, these drugs are divided into preparations of natural origin (benzopyrenes, and saponins), and synthetic origin (and trybenozyd calcium dobesilate). [2.13]

Conclusions

1. The incidence of chronic venous disease will increase having urbanization and socio-economic factors. Monitoring epidemiology is important in the context of the medical, social and economic.
2. Enter the necessary diagnostic procedures among practitioners to early diagnosis and early initiation of treatment.
3. Compression treatment is an effective and evidence based treatment of venous insufficiency and prophyllaxis.
4. Implement educational programs among the public, especially in urban centers, where the disease is most common.

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