

Regional variations of symptoms of the chronic venous disease among primary health care patients in Poland

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The presented results were collected in the context of the PHLEBOS-2 research (multi-centre epidemiological study of patients suffering from chronic venous disease) carried out under the scientific grant of LEKAM Company with limited liability in the years 2011–2012.

Abstract

Introduction. *The diverse social and cultural contexts may cause differences in perceiving symptoms of the chronic venous disease (ChVD), not only in global, European terms, but also in a regional context. The purpose of the study was to find the regional differences of the reported symptoms and the applied conservative treatment methods among patients with ChVD diagnosed by the primary health care (PHC) doctors in Poland.*

Material and methods. *13 393 patients participated in the multi-centre PHLEBOS-2 research carried out by 330 PHC doctors in 15 voivodeships.*

Results. *In the study group of patients, 31.9% of patients had ChVD symptoms – the C₀ stage, telangiectasias and venulectasias (C₁ stage) occurred among 56.1% of patients, varices without symptoms of venous insufficiency occurred among 6% of patients and venous insufficiency among 6% of patients. Venous ulcers (active or healed) occurred among 0.6% of subjects. Essential differences in the ChVD structure between voivodeships were noted.*

Among the most frequently reported ChVD ailments were heaviness of legs (72.9%), ankle swelling in the evenings (68.4%) and nighttime leg cramps (58.6%). Leg swelling during the night hours occurred less frequently — 39.8%, paraesthesias — 30.4%, restless legs syndrome — 18.6%. The average intensity of calf pain was

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moderate (3.82 ± 1.86 points in the 10 point scale). The territorial diversity in the prevalence of symptoms was significant and resulted neither from the ChVD seriousness, nor from the age of the patients.

Compression therapy was applied on average by 12.5% of patients and 24.8% of patients used phlebotropic drugs with large territorial variations (respectively from 3.4% to 28.8% and from 11.2 to 56.1%). The differences between the voivodeships were greater than the regional differences and did not depend on the ChVD stage.

Conclusions. There are significant territorial variations in Poland in the frequency of the reported symptoms and in the conservative therapy of the chronic venous disease.

Key words: chronic venous diseases, venous insufficiency, restless legs syndrome, varicose veins

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Introduction

It is estimated that about 63% of the world population suffers from chronic venous disease (ChVD) of the lower extremities (C₁–C₆ stages) and 9.6% has symptoms of venous insufficiency C₃ to C₆ according to the CEAP (Clinical, Etiologic, Anatomic, Pathophysiologic) classification [1]. However, venous ulcers occur among 1–2% of patients [1, 2]. The epidemiological studies show a significant regional diversity of the morbidity rate [1, 2]. A milestone in the epidemiological studies was the systematization of the disease and its division into 7 stages in 1994 — the CEAP classification, which is commonly accepted in the updated version of 2004 [3].

The ChVD epidemiology in Poland was rarely investigated. The first significant study was carried out more than 10 years ago [4]. This study covered 40 095 adult patients who contacted 803 family doctors and gynaecologists seeking help for any reason. On account of a significant participation of gynaecologists, the percentage of women participating in this study was as high as 84%. 51% of women and 38% of men had ChVD symptoms. Venous insufficiency (stage C_{3–6}) was diagnosed among 10% of subjects and the past and active ulcers occurred among 1.5% of patients. Among the ChVD symptoms (stages C_{1–6}) reported by the patients, the most frequently occurring were: pain (70% of men and 77% of women), heaviness of legs (67% of men and 75% of women), cramps (61% of men and 57% of women) and swelling (48% of men and 57% of women). Only 23% of patients with ChVD applied conservative treatment recommended to tackle this disease (phlebotropic drugs, compression therapy).

Later, the epidemiological studies conducted in Poland analyzed the main aspects of treating patients suffering from ChVD, such as compression therapy and pharmacotherapy. It was ascertained that only 25.6% of the patients who were treated by primary health care doctors applied compression therapy, partly due to the fact that this form of therapy was not duly propagated

by family doctors [5], as well as, due to rejecting it by a lot of patients because of high therapy costs (33.0%), sweating (27.3%), itchiness (13.6%), cosmetic reasons (13.6), edema intensification (6.8%), exudate (3.4%) and application difficulties (2.3%) [6]. The percentage of patients who do not approve of the compression therapy decreases with the progression of the disease to 27.3%, in stage C₆ according to CEAP classification [7].

In the era of aggressive TV, radio and newspaper advertisements, the most widespread treatment method among the patients with ChVD is pharmacotherapy, being often changed after seeing a consecutive advertisement of “a significantly better” drug. Phlebotropic drugs are accepted by over 95% of patients entering ChVD treatment [7].

If the compression therapy is not applied regularly or it is discontinued, the disease progresses and the treatment costs incurred by the health care system increase. According to the data of NFZ (National Health Fund) 41–44 thousand vein surgeries of lower extremities were carried out annually in Poland in the years 2009–2013, most frequently saphenous veins were removed with the varicose veins. The NFZ data do not include all surgeries, especially those advanced ones which are still not reimbursed.

The perceptions of one’s own disease by patients is a complex process depending on the possessed knowledge and convictions as to its significance in view of their past life.

The individual features of people related to behaviour focused on the reduction of psychological stress and related to health measures determining the course of a given disease, have a significant impact on the mental condition, functioning of the patient. These features, as well as accessibility to medical services also determine actions taken by the patients, including such actions as obtaining medical aid and self-medication. More and more patients decide to start treatment after looking up information on the Internet and watching and reading advertisements in the mass media.

Different social and cultural variations may be caused by a different way of perceiving the ChVD symptoms not only in global, European terms, but also in a regional context. That is why the purpose of this study was to explore regional differences of the reported symptoms and the applied methods of conservative treatment among patients with ChVD diagnosed by the primary health care (POZ) doctors in Poland.

Material and methods

The PHLEBOS-2 research was conducted by 330 primary health care doctors in 15 out of 16 voivodeships. Patients with ChVD symptoms, who have not taken the phlebotropic drugs for at least 30 days and consulted the physicians, were successively recruited to the PHLEBOS-2 research. The criteria which ruled out the participation in the PHLEBOS research were: pregnancy, decompensated heart defects, congestive heart failure, chronic obstructive pulmonary disorder (COPD), liver cirrhosis, advanced cancer, atherosclerosis of lower extremities (with an ankle-brachial index /ABI/ of < 0.85), ulceration of the lower legs of a different etiology, patients with a significant disability caused by the osteoarticular diseases or postictal states. For carrying out the research, the approval of the Bioethics Committee of the Silesian Medical University was obtained. Each patient gave his/her informed consent for taking part in the study.

The research protocol assumed the baseline assessment of the disease progression in the CEAP scale (C_0 – C_6), of the occurring symptoms and ailments (swelling, heavy legs, night cramps, burning sensation and paraesthesias, restless legs syndrome, the assessment of calf pain intensity and the subjective assessment of the state of health in the VAS analog scale, measurements of circumferences of both lower limbs at an ankle level, $\frac{1}{2}$ of the leg length below the knee and $\frac{1}{3}$ of the length of the lower part of the thigh.

The research project assumed the recruitment of 16 thousand patients. After rejecting the incomplete protocols ($n = 1\ 956$), a group of 13 393 patients with ChVD was analyzed and furthermore 651 patients with C_2 progression or a higher one were referred for further treatment in the Vascular Clinics.

Analysis of data

The analysis compares the ChVD progression in the CEAP scale, the frequency of the symptoms reported by the patients, the frequency of applying compression therapy in respective voivodeships in relation to average values for the entire study group (Poland) prior to the application of phlebotropic drugs.

Statistical analysis

A statistical analysis was carried out using the STATISTICA 10 PL programme.

Variable values were presented as average values with a standard deviation. The chi-square test was applied for comparing the prevalence of features and the Student's t-test compared the difference between variances. The value of $p < 0.05$ was adopted as the value for statistical significance.

Results

Profile of the study group

Among 13 393 patients participating in the study, 83.6% were living in cities and 16.4% in rural municipalities (Table 1). In comparison with the data of GUS (Main Statistical Office) 2012 (rural population 39.4%), there was an essential over-representation of the urban population in the trial population. Coexisting chronic diseases were reported among 33.4% of subjects. The symptoms of ischaemia of the lower extremities were reported by 12.0% of patients (claudication distance < 500 m — 10.2% and < 200 m — 1.8%). 48.8% performed sedentary jobs and 37.2% of the subjects worked in a standing position. Significant variations between the voivodeships and even within the regions were ascertained (Table 2), amounting to 20% for those performing sedentary work and 15% for those working in a standing position. There was also diversity among the patients performing hard physical work.

Progression of the chronic venous disease

In the patient study group, 31.9% of patients only had ChVD symptoms — stage C_0 , 56.1% had telangiectasias and venulectasias (stage C_1), 6% had varices without symptoms of venous insufficiency and 6% suffered from venous insufficiency (Table 3). Active or healed venous ulcers occurred among 0.6% of subjects. Substantial differences in the ChVD structure were noted in some parts of the Podkarpackie, Podlaskie, Świętokrzyskie, Pomorskie and Warmińsko-Mazurskie Voivodeships. The lowest percentage of patients in stage C_0 was reported in the Warmińsko-Mazurskie Voivodeship (6.6%), the Świętokrzyskie Voivodeship (15.1%) and the Podlaskie Voivodeship (19.1%), whereas, the highest percentage was noted in the Pomorskie Voivodeship (41.1%). The above compilation did not include data of patients with venous insufficiency in four provinces — the Podlaskie, Warmińsko-Mazurskie, Opolskie and Podkarpackie Voivodeships. However, the primary health care doctors in the Świętokrzyskie Voivodeship diagnosed venous insufficiency among as many as 45.7% of the subjects.

Table 1. Demographic characteristics of patients suffering from the chronic venous disease with the division into regions and voivodeships

	Age (years)		Place of residence (%)		
		Village	Towns < 10 thousand residents	Cities 10–100 thousand residents	Cities > 100 thousand residents
Poland [n = 13 393]	50 ± 14	16.4	8.8	24.9	49.9
Central Region					
Łódzkie [n = 1 180]	52 ± 15	19.1	3.6	14.4	62.9
Mazowiecki [n = 1 604]	51 ± 14	11.5	5.4	19.5	63.5
Southern Region					
Małopolskie [n = 1 021]	51 ± 14	41.9	11.8	11.6	34.6
Śląskie [n = 2 238]	50 ± 13	4.3	5.0	32.2	58.5
Eastern Region					
Lubelskie [n = 947]	48 ± 15	23.6	10.5	44.8	21.1
Podkarpackie [n = 441]	53 ± 12	39.8	32.7	27.2	0.2
Podlaskie [n = 382]	46 ± 13	6.6	10.3	12.4	70.7
Świętokrzyskie [n = 1 23]	58 ± 16	44.2	5.8	49.2	0.8
Western Region					
Wielkopolskie [n = 2 014]	47 ± 14	15.4	15.7	30.3	38.7
Zachodniopomorskie [n = 480]	51 ± 13	8.8	6.6	33.3	51.3
South-western Region					
Dolnośląskie [n = 828]	53 ± 13	12.8	5.7	12.8	68.6
Opolskie [n = 463]	53 ± 12	23.4	19.3	46.8	10.6
Northern Region					
Kujawsko-Pomorskie [n = 734]	51 ± 15	4.5	1.3	2.5	91.7
Pomorskie [n = 778]	46 ± 14	13.0	3.9	32.6	50.5
Warmińsko-Mazurskie [n = 160]	57 ± 12	48.8	0	0	51.3

Symptoms of the chronic venous disease

Among the most frequently reported ChVD ailments were: heaviness of legs (72.9%), ankle swelling in the evenings (68.4%) and nighttime leg cramps (58.6%). The remaining symptoms occurred among less than half of the subjects (leg swelling during the evening hours — 39.8%, paraesthesias — 30.4%, restless legs syndrome — 18.6%). The average intensity of calf pain was moderate (3.82 ± 1.86 points in the 10 point scale; Table 4).

The prevalence of symptoms showed a substantial territorial diversity. Ankle swelling during the evening hours was more frequently reported by doctors from the Łódzkie Voivodeship and more seldomly by doctors in the Śląskie, Podkarpackie and Kujawsko-Pomorskie Voivodeships. Leg swelling during the evening hours was reported most seldomly in the Śląskie and Kujawsko-Pomorskie Voivodeships. As far as other cases than ankle swelling are concerned, there was a disproportionately high ratio of leg swelling record-

ed during the afternoon hours in other voivodeships (Małopolskie, Świętokrzyskie, Zachodniopomorskie, Opolskie and Warmińsko-Mazurskie). A big variability of frequency was noted for the recorded swellings. From merely 0.6–1.3% in the Warmińsko-Mazurskie Voivodeship to 70.7% in the Świętokrzyskie Voivodeship. The heaviness of legs rarely coincided with the prevalence of swellings. The convergence of symptoms was recorded for the Mazowieckie and Kujawsko-Pomorskie Voivodeships. Disproportionately heaviness was reported by patients from the Lubelskie, Podlaskie, Warmińsko-Mazurskie and Pomorskie Voivodeships. No relation between the heaviness of legs and calf pain intensification was noted.

Nighttime leg cramps were reported by patients from the Podlaskie, Świętokrzyskie and Zachodniopomorskie Voivodeships and more seldomly from the Opolskie and Warmińsko-Mazurskie Voivodeships. The prevalence of cramps was not linked to paraesthesia and the restless legs syndrome.

Table 2. Analysis of the performed work by patients suffering from chronic venous disease with the division into regions and voivodeships

	Place of residence (%)			
	Sedentary work > 6 h/d	Work in a standing position > 6 h/d	Hard physical work > 6 h/d	Other
Poland [n = 13 393]	48.8	37.2	10.7	3.4
Central Region				
Łódzkie [n = 1180]	51.6	32.5*	13.7**	2.3*
Mazowieckie [n = 1604]	58.5 ^	31.2**	7.9**	2.4*
Southern Region				
Małopolskie [n = 1021]	48.0	34.2	15.3 ^	2.5
Śląskie [n = 2238]	48.9	40.3	7.4 ^	3.5
Eastern Region				
Lubelskie [n = 947]	35.3 ^	40.8	17.2 ^	6.7 ^
Podkarpackie [n = 441]	55.1	32.6	9.8	2.6
Podlaskie [n = 382]	45.0	45.3*	6.8*	2.9
Świętokrzyskie [n = 123]	59.7	30.6	8.1	1.6
North-western Region				
Wielkopolskie [n = 2014]	47.3	39.7	8.0 ^	5.1 ^
Zachodniopomorskie [n = 480]	50.7	34.6	11.9	2.7
South-western Region				
Dolnośląskie [n = 828]	50.1	36.4	10.2	3.3
Opolskie [n = 463]	46.1	36.2	16.7 ^	1.1**
Northern Region				
Kujawsko-Pomorskie [n = 734]	42.5*	38.7	15.6 ^	3.3
Pomorskie [n = 778]	48.6	40.2	8.9	2.4
Warmińsko-Mazurskie [n = 160]	51.2	44.6	3,3**	0.8

Statistical significance in relation to "Poland" χ^2 — *p < 0.05; **p < 0.01; ^ p < 0.001

These ailments showed big variations between the voivodeships, yet not between the regions (Table 4).

Quality of life of patients with chronic venous disease

The subjects perceived the quality of life in different regions and voivodeships in a similar way (Table 4). The lowest quality of life was reported by patients living in the Podlaskie Voivodeship and the highest quality of life was reported in the Kujawsko-Pomorskie Voivodeship. The quality of life in these voivodeships was related neither to the seriousness of ChVD, nor the age of the patients.

Application of compression therapy and phlebotropic drugs by the patients in the past

The compression therapy was applied on average by 12.5% of patients. Among the frequently used

compression products were knee socks (5.4%) and stockings/tights (5.2%) — Table 5.

Bandages (2.1%) were more seldomly used by patients. The differences between voivodeships were greater than regional differences. Compression products were used most frequently by patients from Zachodniopomorskie Voivodeship (28.8%) and most seldomly by patients from the Podlaskie and Świętokrzyskie Voivodeships (3.4 and 4.1% respectively). The frequency of using the compression products in respective voivodeships did not depend on the ChVD progression.

In the past only every fourth patient (n = 3272) took phlebotropic drugs and there was a large territorial diversity — from 11.2 to 56.1% (Table 5).

Discussion

The results of the conducted analysis indicate that the early stages of the chronic venous disease are dia-

Table 3. Progression of the chronic venous disease with division into regions and voivodeships

	C ₀	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆
Poland [n = 13 393]	31.9%	56.1%	6.0%	4.0%	1.4%	0.4%	0.2%
Central Region							
Łódzkie [n = 1180]	35.4%	55.4%	2.6% ^	5.0%	1.3%	0.2%	0.1%
Mazowieckie [n = 1604]	24.4% ^	57.9%	7.9%**	5.3%*	2.9% ^	0.7%	0.9% ^
Southern Region							
Małopolskie [n = 1021]	25.9%**	56.4%	7.4%	6.9% ^	2.7% ^	0.6%	0.1%
Śląskie [n = 2238]	37.2%**	56.5%	3.1% ^	2.7%**	0.3% ^	0.1%*	0.1%
Eastern Region							
Lubelskie [n = 947]	33.8%	58.3%	2.8% ^	1.7% ^	1.2%	0.9%*	0.3%
Podkarpackie [n = 441]	51.9% ^	46.3%*	1.8% ^	0 ^	0*	0	0
Podlaskie [n = 382]	19.1% ^	80.9% ^	0 ^	0 ^	0*	0	0
Świętokrzyskie [n = 123]	15.1%**	14.4% ^	23.8% ^	30.2% ^	9.0% ^	5.7% ^	0.8%
North-western Region							
Wielkopolskie [n = 2014]	30.1%	53.9%	10.0% ^	3.4%	1.3%	0.2%	0.1%
Zachodniopomorskie [n = 480]	32.2%	57.5%	7.9%	3.2%	0.2%*	0	0
South-western Region							
Dolnośląskie [n = 828]	20.5% ^	65.8%**	6.1%	6.0%**	1.0%	0.6%	0
Opolskie [n = 463]	35.3%	64.4%	0.3% ^	0 ^	0*	0	0
Northern Region							
Kujawsko-Pomorskie [n = 734]	39.2%**	54.1%	1.8% ^	2.0%**	1.9%	0.7%	0.3%
Pomorskie [n = 778]	41.1% ^	31.6% ^	16.3% ^	8.4% ^	2.6%**	0	0
Warmińsko-Mazurskie [n = 160]	6.6% ^	92.7% ^	0.7%**	0*	0	0	0

Statistical significance in relation to "Poland" χ^2 — *p < 0.05; **p < 0.01; ^ p < 0.001

gnosed in Poland more and more often. In view of the ongoing changes, the percentage of patients with venous insufficiency decreases. This percentage decreased from 10% at the turn of the century [4] to 6%, as this research shows. Currently, ChVD is diagnosed in every third patient (31.9%) merely on the basis of ailments with no telangiectasias, venulectasias, varices and skin lesions (stage C₀). This percentage is higher than the one indicated by Beebe-Dimmer and colleagues (23.6% — after recounting for ChVD patients) [1]. Patients in stage C₁ — 56.1% constituted the biggest group of patients. However, (active or healed) venous ulcers occurred among 0.6% of subjects not taking phlebotropic drugs on a regular basis, over two times less than in the research carried out by Jawień and colleagues (1.5%) [4]. The prevalence of the ChVD stages essentially deviated from the one indicated by Beebe-Dimmer and colleagues [1]: stage C₁ — 26.0%, C₂ — 17.9%, C₃–C₆ — 29.1% (values recounted for the ChVD patients).

The patients with stages C₂–C₆ (12%) were considerably less involved in the presented research. The

main reason for this were most probably the inclusion criteria for the participation in this study — exclusion of patients taking phlebotropic drugs on a regular basis.

The prevalence of the ChVD stages differed essentially in respective voivodeships. Significant diversity, even within the regions, points rather to essential variations of applied diagnostic criteria as a consequence of an insufficient awareness of the international CEAP classification. This is caused by the marginalization of ChVD in the training programmes of family doctors and internists in the past and a relatively weak dissemination of scale among doctors who are not engaged in treating vascular diseases.

The most frequently reported symptoms and ailments of ChVD are: heaviness of legs (72.9%), ankle swelling during the evening hours (68.4%) and nighttime leg cramps (58.6%).

Symptoms which occurred less frequently in the study group of patients were leg swelling during evening hours — 39.8%, paraesthesias — 30.4%, restless legs syndrome — 18.6%. It should be emphasized that the prevalence of the symptoms showed significant territorial diversity which resulted neither from the differences

Table 4. Symptoms of the chronic venous disease and the assessment of the quality of life of patients with division into regions and voivodeships

	Swelling in the evening										Fixed edema (%)	Nighttime leg cramps (%)	Heavy legs (%)	Paraesthesias (%)	Restless leg syndrome (%)	Intensity of calf pain (pts)	The assessment of the quality of life (pts)
	Ankle (%)		Leg (%)		Ankle (%)	Leg (%)	Ankle (%)	Leg (%)	Ankle (%)	Leg (%)							
	Left	Right	Left	Right													
Poland [n = 13 393]	Left	68.4	39.8	12.2	58.6	72.9	30.4	18.6	3.82 ± 1.86	5.74 ± 2.27							
	Right	66.6	38.4	12.1	56.8	71.3	29.8	18.4	3.87 ± 1.80	5.96 ± 1.95*							
Central Region	Łódzkie [n = 1180]		80.6 ^	42.1	9.3**	65.8*	84.7 ^	34.7*	16.0	3.62 ± 1.69	5.93 ± 2.20						
	Mazowiecki [n = 1604]		77.1**	39.6	8.9	63.5*	80.0*	33.8*	15.1*	3.70 ± 1.99	5.86 ± 2.63						
	Left		74.3*	48.6 ^	13.6	57.4	67.9	29.6	23.4 ^	3.25 ± 1.39 ^	5.29 ± 2.49 ^						
	Right		74.4**	47.2 ^	14.1	55.2	68.1	28.4	22.1**	4.55 ± 1.87 ^	6.36 ± 1.88 ^						
Southern Region	Małopolskie [n = 1021]		63.0	38.5	21.7 ^	58.5	79.6	33.4	11.3 ^	3.86 ± 2.36	5.59 ± 2.13						
	Left		63.1	37.7	21.1	59.7	77.7	33.6	13.6**	4.07 ± 1.54*	5.95 ± 2.20*						
	Right		59.6 ^	33.4 ^	11.6	52.7**	64.3 ^	18.3 ^	10.5 ^	5.75 ± 2.22 ^	5.51 ± 2.20*						
	Śląskie [n = 2238]		58.3 ^	32.6 ^	11.2	50.4**	62.6 ^	18.5 ^	11.2 ^	3.58 ± 1.40*	5.95 ± 2.11*						
Eastern Region	Lubelskie [n = 947]		76.7*	44.6	16.2**	64.9	80.8*	50.2 ^	33.2 ^	4.35 ± 1.84 ^	5.62 ± 1.76						
	Left		72.3	43.4*	17.0	61.9	78.4	50.3 ^	32.0 ^	3.80 ± 2.15	6.75 ± 1.86 ^						
	Right		58.0*	35.8	19.3 ^	76.4 ^	69.8	43.5 ^	45.1 ^	3.45 ± 1.84 ^	5.43 ± 2.37 ^						
	Podkarpackie [n = 441]		57.6	37.0	17.7	74.8 ^	70.5	43.1 ^	43.8 ^	4.57 ± 0.75*	5.26 ± 0.96**						
North-western Region	Podlaskie [n = 382]		74.3	37.1	0.8 ^	72.5**	91.1**	22.5*	7.3 ^	3.87 ± 2.10 ^							
	Left		72.7	36.4	0.8	72.5**	88.7**	21.7**	7.3 ^								
	Right		73.2	67.5 ^	70.7 ^	55.3	77.2	26.0	44.7 ^								
	Świętokrzyskie [n = 123]		78.0	66.7 ^	62.6	56.1	78.9	31.7	46.3 ^								
South-western Region	Wielkopolskie [n = 2014]		67.6	36.5	9.8**	51.4**	66.3*	26.0**	15.0**	5.65 ± 2.25							
	Left		64.9	33.2**	9.3	49.0 ^	64.8*	24.3 ^	14.9**								
	Right		62.1	49.4**	4.6 ^	73.1**	79.6	18.5 ^	12.3**								
	Zachodniopomorskie [n = 480]		60.0	49.0**	6.5	71.9**	77.7	20.0 ^	13.3*								
Northern Region	Dolnośląskie [n = 828]		68.0	41.5	15.9**	62.7	75.1	51.2 ^	28.1 ^								
	Left		66.4	41.5	15.7	61.8	74.0	51.0 ^	29.3 ^								
	Right		70.2	49.0*	10.4	47.1**	65.4	35.8	32.2 ^								
	Opolskie [n = 463]		67.6	43.4	9.7	44.1**	66.7	34.3	29.6 ^								
Northern Region	Kujawsko-Pomorskie [n = 734]		61.2	27.4 ^	2.7 ^	49.6*	60.4**	24.8*	6.7 ^								
	Left		57.9*	27.2 ^	4.0 ^	49.2*	59.4**	24.5*	6.4 ^								
	Right		74.8	34.3*	10.4	66.1*	88.7 ^	29.7	17.4								
	Pomorskie [n = 778]		74.0	34.1	9.8	63.4	85.2**	27.6	16.7								
Northern Region	Warmińsko-Mazurskie [n = 160]		65.6	62.5 ^	0.6 ^	43.1*	83.1	19.4*	20.0								
	Left		63.7	61.3 ^	1.3 ^	43.8	82.5	21.3	21.9								

Statistical significance in relation to "Poland" χ^2 — *p < 0.05; **p < 0.01; ^ p < 0.001

Table 5. Frequency of applying compression therapy and phlebotropic drugs by patients suffering from chronic venous disease with division into regions and voivodeships

	Compression therapy (%)			Phlebotropic drugs in the past (%)	
	In total	Stockings/tights	Knee socks		
Poland [n = 13 393]	12.5	5.2	5.4	2.1	24.7
Central Region					
Łódzkie [n = 1180]	10.2*	3.8*	4.2	2.2	28.6*
Mazowieckie [n = 1604]	16.5 ^	6.5*	8.2 ^	1.8	31.7 ^
Southern Region					
Małopolskie [n = 1021]	20.0 ^	7.9 ^	10.0 ^	2.1	35.1 ^
Śląskie [n = 2238]	9.4 ^	4.0*	3.8**	1.6	19.6 ^
Eastern Region					
Lubelskie [n = 947]	20.3 ^	9.9 ^	7.7**	2.7	36.6 ^
Podkarpackie [n = 441]	20.2 ^	12.9 ^	5.4	1.9	29.5
Podlaskie [n = 382]	3.4 ^	0 ^	3.4	0**	14.4 ^
Świętokrzyskie [n = 123]	4.1 ^	1.7	0.8*	1.6	56.1 ^
North-western Region					
Wielkopolskie [n = 2014]	9.0 ^	4.0*	3.1 ^	1.9	19.4 ^
Zachodniopomorskie [n = 480]	28.8 ^	11.0 ^	11.9 ^	5.9 ^	11.2 ^
South-western Region					
Dolnośląskie [n = 828]	9.3*	3.7	2.5 ^	3.1	23.7
Opolskie [n = 463]	14.3	6.1	6.5	1.7	23.1
Northern Region					
Kujawsko-Pomorskie [n = 734]	8.0**	4.8	2.2 ^	1.0*	20.0*
Pomorskie [n = 778]	8.0 ^	0.9 ^	4.8	2.3	12.6 ^
Warmińsko-Mazurskie [n = 160]	8.8	1.3*	5.0	2.5	21.9

Statistical significance in relation to „Poland” χ^2 — *p < 0.05; **p < 0.01; ^ p < 0.001

in the ChVD intensity, nor the age of the patients. Also in this case, a considerable diversity of the frequency of symptoms between voivodeships belonging to the regions implies rather variations in collecting detailed survey data by respective doctors, resulting from professional experience. Such an interpretation is also backed up by a significant percentage of patients (12%) with symptoms of lower limb atherosclerosis, despite the fact that they have been placed in the exclusion criteria of the ankle-brachial index (ABI < 0.85).

In the study group every fourth patient took phlebotropic drugs in the past and 12.5% of patients applied compression therapy. These values cannot be applied to the frequency of applying treatment methods among patients with the diagnosed ChVD, because in some patients this disease entity was not diagnosed earlier. Attention should be drawn to the structure of the used compression products. Knee socks and stockings/tights were used with the same prevalence (5.4% and 5.2% respectively). Using stockings/tights is more efficient in

most cases, yet due to the discomfort of putting them on, the use of knee socks is “the lesser evil” than not applying compression therapy at all.

It is difficult to explain the considerable diversity in the frequency of using phlebotropic drugs among patients in different voivodeships (from 11.2 to 56.1%).

The presented differences cannot be explained by the variability of ChVD progression, at least the one reported here. It is perhaps a consequence of a different training system of family doctors in the field of ChVD treatment in respective voivodeships.

The limitations of the conducted analysis result from the research methodology — recruiting patients who did not use phlebotropic drugs in the past or who discontinued this therapy. Hence, the study did not cover patients taking phlebotropic drugs on a regular basis. On the other hand, this study allows to assess the frequency of ChVD symptoms in a more reliable way, as they are not disturbed by the intake of these drugs.

Conclusions

There is a significant territorial diversity in Poland in the frequency of the reported symptoms and of the conservative therapy of the chronic venous disease. The differences in the frequency of diagnosing the respective stages of the chronic venous disease are most probably caused by the insufficient awareness of the diagnostic criteria of the international CEAP scale by a substantial number of PHC doctors.

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