Clinical characteristics of hypertensive octogenarians based on single-centre data analysis

Charakterystyka kliniczna populacji chorych powyżej 80. roku życia z nadciśnieniem tętniczym na podstawie analizy danych z jednego ośrodka*

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Abstract

Introduction. Arterial hypertension is one of the most common cardiovascular diseases in octogenarians. The aim of the study was clinical characteristics of patients with arterial hypertension over 80 years-old.

Material and methods. The study group consisted of 2512 hypertensive patients in mean age of 68.28 ± 11.15 years-old, including group 1: 2148 patients in age up to 80 years-old (85.51%) and group 2: 364 patients over 80 years-old (14.49%). Clinical data was analysed including comorbidities, laboratory results and echocardiographic indices.

Results. Persistent atrial fibrillation was more frequent in group 1 (10.3% vs. 2.5%), while in group 2 permanent atrial fibrillation was observed (59.2% vs. 41.3%, p < 0.0001). There have been differences between group 1 and group 2 in frequencies of atrial fibrillation (24.4% vs. 44.5%, p < 0.0001), hyperlipidemia (30.8% vs. 18.7%, p < 0.0001), heart failure (34.5% vs. 55.0%, p < 0.0001), past non-fatal stroke (4.5% vs. 8.2%, p < 0.0023). No differences in stable angina, diabetes, hypertriglyceridemia, left ventricle hypertrophy, history of myocardial infarction, thyroid dysfunction have been noted. Patients in group 1 had higher values of hemoglobin (group 1 > 2, p < 0.0001), total cholesterol (group 1 > 2, p < 0.0001), LDL-cholesterol (group 1 > 2, p < 0.0001), triglycerides (group 1 > 2, p = 0.0003), glycemia (group 1 > 2, p = 0.0034), creatinine clearance (group 1 > 2, p < 0.0001), potassium (group 1 > 2, p = 0.0482) but not left ventricle ejection fraction in comparison to group 2.

Conclusions. Atrial fibrillation, heart failure and stroke were more frequent in hypertensive octogenarians compared to younger patients. Heart failure in hypertensives was classified as diastolic irrespectively of age. Renal dysfunction was not dependent on age however it was more pronounced in octogenarians compared to younger patients.

Key words: arterial hypertension, blood pressure, cardiovascular diseases, octogenarians, clinical characteristics
Introduction

The process of ageing and associated with it issues of medical and social care have become one of the leading matters of interest of our civilization recently. Improvements of living conditions, hygiene and medical care, especially in developed countries, have led to gradual increase in life expectancy. Senescence has been divided into early (60–74 years) and late (age > 74 years) including long-living people (more than 90 years old) [1]. After the II World War the percentage of people in Poland aged more than 65 years grew from 5.2% in 1950 to 13% in 2004. In the years 1970–2000 a 70% increase in number of octogenarians and 160% increase in number of people aged 90–94 years was observed [2]. The increase in life expectancy has resulted in higher incidence of aging-associated diseases, including cardiovascular diseases with leading arterial hypertension (AHT) and its complications. The population of octogenarians is very diverse in terms of health condition and psychomotor function. Therapeutic decisions are difficult due to intensification of age-related pathological processes such as arterial stiffening, individual treatment tolerability and anticipated life expectancy and quality of life. According to data from NATPOL 2011 study the percentage of AHT in general population in Poland rose from 30 to 32% during 10 years. In addition, 9.5 million out of 10.5 million people with AHT were people aged 18–79, while almost 1 million were patients aged 80 years and older [3]. In this study an increase in incidence of other atherosclerosis risk factors such as diabetes and obesity was noted [3]. In POLSENIO study that ended in 2010 the authors presented high incidence of AHT in a group of patients aged 64 years and older — 76% and in patients aged more than 80 years — 73%. In both groups a higher prevalence of AHT was found in women [4]. The results of many epidemiological studies have indicated interesting correlation between cardiovascular mortality and blood pressure (BP) in a group of older patients. Initially elevated BP in patients aged more than 84 years were associated with reduction of the cardiovascular mortality rate. According to some authors this observation could be caused by low BP and poor general condition of elderly people due to, for instance: cancer cachexia, heart failure, chronic obstructive pulmonary disease [2, 5, 6]. Other important phenomenon found in analyzed group is the high prevalence of isolated systolic hypertension associated with increased incidence of arterial stiffening [7]. Staessen et al. [8] in metaanalysis of 8 controlled trials in 2000 proved that elevated systolic and pulse pressure are risk factors of general mortality in patients aged more than 60 years. Active hypotensive therapy significantly reduced cardiovascular mortality and morbidity [8]. Studies published before 2008 concerning impact of hypotensive therapy on prognosis in AHT patients suggested reduction of percentage of cardiovascular complications (mainly strokes) but on the other hand indicated increase in general mortality. This observation was reflected in European Society of Hypertension/European Society of Cardiology (ESH/ESC) guidelines for the management of AHT in 2007 in patients aged 80 years and more [9]. A randomized study HYVET (The hypertension in the Very Elderly Trial) published in 2008 was crucial in clinical management of abovementioned group of patients with AHT. In this placebo-controlled study 3845 AHT patients aged 80 years and more were recruited and randomized. Before the end of trial, HYVET proved efficacy of hypotensive therapy with indapamide in addition with perindopril in reducing all the endpoints (with primary endpoint of fatal and non-fatal strokes reduction by 30%) [10]. Although this study was not free from limitations in terms of selected population of elderly people with no significant concomitant diseases, use of medications regarded as safe and efficacious in general population, elimination of patients with an increased tendency to orthostatic hypotension, it clearly determined the relevance of hypotensive therapy in patients aged 80 years and more. Due to careful recruitment of patients in HYVET study some questions concerning clinical practice and evidence-based medicine arose: what was the impact of concomitant diseases in AHT patients on mortality, morbidity and what was the efficacy and safety of treatment in patients aged more than 80 years?

These observations seem to have clinical implications — in this group of patients the goals of therapy should be alleviated in order to increase tolerability and safety of hypotensive therapy. This issue has been raised in current ESH/ESC guidelines for the management of hypertension [11]. The guidelines have emphasized that the goals of hypotensive therapy depend not only on age and initial BP values but also on the biological condition of patients. The optimal therapeutic values of systolic blood pressure in patients aged more than 80 years with initial blood pressure of ≥ 160 mm Hg who are in good health should be 140–150 mm Hg (class I/level of evidence B) [11]. In addition, the proper tolerability of treatment with avoidance of orthostatic hypotension is very important [11]. Moreover, this group of patients is heterogeneous in terms of several clinically significant parameters, which creates lot of difficulties in determining the clear rules and goals of hypotensive therapy.

The aim of the study was to clinically characterize the population of patients with AHT aged more than 80 years in comparison with population of younger patients based on a retrospective data analysis from one centre.

Material and methods

The retrospective analysis was performed in 2512 AHT patients hospitalized consecutively in cardiac referral centre for the years 2009 to 2010. The authors have analyzed...
clinical data taking into account concomitant diseases, biochemistry and chosen echocardiography parameters in AHT patients aged more than 80 years in comparison with patients aged up to 80 years.

The mean age of patients was 68.28 ± 11.15 with median age 69 years and it ranged from 25 to 95 years. The study group was divided into 2 subgroups depending on age: group no. 1 — aged up to 80 years (2148 patients, that is 85.51%) and group no. 2 — aged more than 80 years (364 patients, that is 14.49%). The mean age in both groups was 65.59 ± 9.71 and 83.13 ± 2.89 years, respectively.

The diagnosis of AHT was based on data from the interview (including use of hypotensive drug) and on data from physical examination — the mean value of 2 blood pressure measurements performed during at least 2 days of hospitalization was ≥ 140 mm Hg for systolic pressure and/or ≥ 90 mm Hg for diastolic blood pressure. The diagnosis of diabetes was made based on 3 complementary criteria: fasting blood glucose level exceeding 125 mg/dl (the test done twice during following days of hospitalization), casual glucose ≥ 200 mg/dl with clinical symptoms of hyperglycemia and positive glucose tolerance test — glycermia ≥ 200 mg/dl two hours after a 75 g oral glucose load. Heart failure was diagnosed based on a history of typical signs and physical examination. Coronary artery disease diagnosis was based on history of typical signs and/or myocardial infarction in anamnesis. Dyslipidemia was defined based on lipid profile with total cholesterol exceeding 190 mg/dl, LDL-cholesterol exceeding 115 mg/dl, HDL-cholesterol below 40 mg/dl, triglycerides > 150 mg/dl or based on a history of taking hypolipidemic agents. Left ventricular ejection fraction was assessed in echocardiography using Simpson’s method or visually. Left ventricle hypertrophy was diagnosed when interventricular septum thickness was ≥ 12 mm. Atrial fibrillation was found based on history of arrhythmia and/or echocardiography. Kidney dysfunction was assessed based on glomerular filtration rate calculated using MDRD formula.

The statistical analysis of presented results was performed with PQStat software version 1.4.2.324. The results of qualitative scales were analysed using chi-square test of independence (with Yates’s correction for continuity when numbers in certain combinations were lower than 10). The results of quantitative scales were analyzed using Student’s t-test (with independent variance estimation when variances in both groups were heterogeneous). The significance level for all tests was set up at p < 0.05.

Results

There was a highly significant correlation between sex and age group (Chi² = 29.63, df = 1, p < 0.0001). The majority of patients in group 1 were men (1221 out of 2148 patients, that is 56.8%), while in group 2 the majority of patients were women (213 out of 364 patients, that is 58.5%).

There was no significant correlation between place of living and age group (Chi² = 0.08, df = 1, p = 0.7757). The distribution of patients’ origin was similar in both groups. A little over half of patients in both groups (1168 out of 2148 patients, that is 54.4%, in group 1 and 195 out of 364, that is 53.6%, in group 2, respectively) came from the city.

There was a highly significant correlation (Chi² = 20.52, df = 2, p < 0.0001) between type of atrial fibrillation and age group. Persistent atrial fibrillation was found more often in group 1 in comparison to group 2 (54/523 patients that is 10.3% vs. 4/162 patients that is 2.5%; p < 0.0001). Chronic atrial fibrillation was observed more often in group 2 in comparison to group 1 (96/162 patients, that is 59.2% vs. 216/523 patients, that is 41.3%, in group 2; p < 0.0001). The correlations are presented in Table 1 and Figure 1.

There were significant differences between groups 1 and 2 in terms of concomitant diseases incidence: atrial fibrillation (523/2148 patients, that is 24.4% vs. 162/364 patients, that is 44.5%, p < 0.0001), hyperlipidemia (661/2148 patients, that is 30.8% and 68/364 patients, that is 18.7% respectively, p < 0.0001), heart failure (742/2148 patients that is 34.5% vs. 200/364 patients, that is 55%, p < 0.0001), non-fatal stroke in anamnesis (96/2148 patients that is 4.5% vs. 30/364 patients, that is 8.2%, p < 0.0023). No differences were observed in the incidence of concomitant diseases such as: stable angina, diabetes regardless of type, hypertriglyceridemia, left ventricle hypertrophy, history of myocardial infarction, thyroid dysfunction. The data are presented in Table 1.

There were statistically significant differences in chosen laboratory data and left ventricular ejection fraction (LVEF) between group 1 and 2: erythrocyte sedimentation rate (17.48 vs. 23.68 mm/h respectively, p < 0.0001), hemoglobin (13.5 vs. 12.65 g/dl respectively, p < 0.0001), red blood count (4.52 vs. 4.24 M/µl respectively, p < 0.0001) and platelets (237.55 vs. 219.36 K/µl respectively, p = 0.0002), total cholesterol (178.38 vs. 164.43 mg/dl, p < 0.0001), LDL-cholesterol (107.3 vs. 98.78 mg/dl respectively, p < 0.0001), triglycerides (145.05 vs. 120.57 mg/dl respectively, p < 0.0003), glycermia (119.17 vs. 112.85mg/dl, p = 0.0142), blood urea nitrogen (42.64 vs. 54.53 mg/dl respectively, p < 0.0001), uric acid (6.3 vs. 6.76 mg/dl respectively, p = 0.0034), creatinine clearance (57.59 vs. 47.61 ml/min, p < 0.0001, potassium (4.21 vs. 3.99 mEq/L respectively, p = 0.0482). No significant differences in hematocrit, white blood count, HDL-cholesterol, creatinine, sodium and LVEF were observed. The results are presented in Table 2.
The presented analysis encompassed large number of AHT patients — 2512 patients, half of whom were aged more than 69 years. In this group a subgroup was created with patients aged more than 80 years that comprised 14.5% of all the patients while the other patients (aged up to 80 years) — 85.5%. The age had normal distribution. The disproportionate number of compared groups may limit the accuracy of statistical inference.

Lack of evaluation of implemented treatment impact on analyzed biochemistry may be another limitation of the study. Patients with AHT often use many other than hypotensive drugs including hypolipidemic agents. Some hypotensive drugs may cause adverse effects that affect lipid profile, kidney parameters, electrolytes or glycemia (for instance thiazides). We also did not analyze the percentage of treated and not treated patients and the length of use of hypotensive agents. Due to HYVET study we know that patients aged more than 80 years benefit from hypotensive treatment. This therapy, thus, should not be abandoned in this group of patients in case of good tolerability [10]. Hypotensive agents, however, may exert more pronounced adverse effects in this group in comparison to younger patients due to i.a. reduced kidney and liver metabolism efficiency. The patients were not differentiated according to BP values — BP profile is largely dependent on the applied treatment.

The presented analysis draws attention to specific features of population of elderly people with AHT who should be treated with hypotensive agents. The current guidelines for the management of arterial hypertension from 2013 have suggested that in those patients hypotensive therapy...
should be implemented with realistic therapeutic goals and taking into consideration the specificity of this group [11]. The analysis of concomitant diseases draws attention to significant clinical problems that can be seen in this group of patients in clinical practice and which hinders the effective treatment. Sometimes those diseases are also a contraindication to certain therapeutic methods or may contribute to secondary hypertension development.

In the literature there have been few studies concerning clinical characteristic of AHT patients aged more than 80 years. The 3500 AHT patients aged more than 80 years of the HYVET study, can be regarded as a model population [10]. When compared to far more numerous HYVET study population we observed that incidence of chosen cardiovascular diseases was significantly more pronounced in our study: heart failure (55% vs. 3% respectively), history of stroke (8.2% vs. 7%), history of myocardial infarction 7.7% vs. 3% and diabetes (29.1 vs. 7%). Creatinine and uric acid levels were significantly higher in our study group (2.7 mg/dl vs. 1.0 mg/dl and 6.8 mg/dl vs. 4.7 mg/dl respectively) but total cholesterol level was lower (164 mg/ dl vs. 200 mg/dl). Unfortunately these observations can reflect poorer effectiveness of Polish health care system for patients with heart failure and worse risk factors control of atherosclerosis in Poland. On the other hand, however, this can be caused by careful selection of patients to HYVET study which analysed the effects of indapamide in patients aged more than 80 years. These were mainly patients with the smallest possible number of significant concomitant diseases.

In Liu Wie’s et al. [12] study of Chinese population of 336 AHT patients aged more than 80 years there was significantly higher incidence of dyslipidemia in comparison with our study group (56.5% vs. 20.3% respectively). In our group, however, the incidence of dyslipidemia was calculated by adding hyperlipidemia to hypertiglyceridemia — a total number of 74/364 patients. In addition, in Wei’s study there was also higher incidence of stable coronary artery disease (41.4% vs. 31.6%) and diabetes (41.1 vs. 29.1%) while in our group there were more patients with atrial fibrillation (44.5% vs. 13.4%) and left ventricular hypertrophy (41% vs. 14%). Both populations were compared using quantitative synthesis but the main limitation of this comparison could be the racial differences in clinical characteristic of patients from Europe and Asia [12].

We are not surprised that in our study we found a higher incidence of heart failure, atrial fibrillation and history of

Table 2. The comparison of mean values of chosen laboratory tests and left ventricle ejection fraction according to age in patients with hypertension

<table>
<thead>
<tr>
<th>Variable</th>
<th>≤ 80 years (n = 2148)</th>
<th>&gt; 80 years (n = 364)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erythrocytes sedimentation rate [mm/h]</td>
<td>17.5</td>
<td>23.7</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Hemoglobin [g/dl]</td>
<td>13.5</td>
<td>12.7</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Hematocrit (%)</td>
<td>39.5</td>
<td>37.6</td>
<td>0.0058</td>
</tr>
<tr>
<td>Red blood mount [M/µl]</td>
<td>4.5</td>
<td>4.2</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>White blood count [K/µl]</td>
<td>8.0</td>
<td>8.0</td>
<td>0.9456</td>
</tr>
<tr>
<td>Platelets [K/µl]</td>
<td>237.6</td>
<td>219.4</td>
<td>0.0002</td>
</tr>
<tr>
<td>Total cholesterol [mg/dl]</td>
<td>178.4</td>
<td>164.4</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>HDL-cholesterol [mg/dl]</td>
<td>46.1</td>
<td>45.5</td>
<td>0.6099</td>
</tr>
<tr>
<td>LDL-cholesterol [mg/dl]</td>
<td>107.3</td>
<td>98.8</td>
<td>0.0004</td>
</tr>
<tr>
<td>Triglycerides [mg/dl]</td>
<td>145.1</td>
<td>120.6</td>
<td>0.0003</td>
</tr>
<tr>
<td>Glucose [mg/dl]</td>
<td>119.2</td>
<td>112.9</td>
<td>0.0142</td>
</tr>
<tr>
<td>Urea [mg/dl]</td>
<td>42.6</td>
<td>54.5</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Creatinine [mg/dl]</td>
<td>1.3</td>
<td>2.7</td>
<td>0.0778</td>
</tr>
<tr>
<td>Uric acid [mg/dl]</td>
<td>6.3</td>
<td>6.8</td>
<td>0.0034</td>
</tr>
<tr>
<td>Creatinine clearance [ml/min]</td>
<td>57.6</td>
<td>47.6</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Sodium [mEq/L]</td>
<td>139.7</td>
<td>139.5</td>
<td>0.3570</td>
</tr>
<tr>
<td>Potassium [mEq/L]</td>
<td>4.2</td>
<td>4.0</td>
<td>0.0482</td>
</tr>
<tr>
<td>Left ventricular ejection fraction (%)</td>
<td>49</td>
<td>48</td>
<td>0.1598</td>
</tr>
</tbody>
</table>
stroke in patients aged more than 80 years in comparison to younger patients. Interestingly, in both subgroups we observed mainly heart failure with preserved systolic function (left ventricular ejection fraction 48% vs. 49% respectively). In elderly patients we should expect changes in passive elastic properties of the myocardium and this observation was also confirmed in our study. The analysis of types of atrial fibrillation is also not surprising — it accounts for natural history of the disease. Atrial fibrillation tends to turn into chronic in patients with the most advanced age. Younger patients have a greater chance of sinus rhythm recovery (the paroxysmal and persistent type of atrial fibrillation). In group of patients aged up to 80 years the dominant type is persistent atrial fibrillation. This is probably due to age profile in this group — the mean age of patients was 66 years (low chance of sinus rhythm restoration). The tendency to decrease kidney function and hyperuricemia with increasing age has been also confirmed. The diminished filtration function of kidneys drew attention also in the younger patients (mean glomerular filtration 57.58 ml/min).

Conclusions

In AHT patients aged more than 80 years atrial fibrillation, heart failure and history of stroke were observed more often than in younger patients. The incidence of stable angina, history of myocardial infarction and diabetes was not associated with age in study population.

We found mostly diastolic heart failure in AHT patients irrespective of age.

Chronic atrial fibrillation was more often observed in AHT patients aged more than 80 years, while persistent atrial fibrillation was detected more often in younger patients.

Kidney dysfunction was observed irrespective of patients’ age. It was more often seen, however, in patients aged more than 80 years.

Conflict(s) of interest

None declared.
References


Komentarz

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Wyniki dużych badań epidemiologicznych jednoznacznie wskazują, że niezależnie od wieku nadciśnienie tętnicze jest jednym z najważniejszych czynników ryzyka wystąpienia chorób układu sercowo-naczyniowego – choroby niedokrwiennej i niewydolności serca oraz udaru mózgu.
Mimo znacznej poprawy w rozpoznawaniu oraz kontroli nadciśnienia tętniczego w Polsce, rozpowszechnienie tego schorzenia, według badania epidemiologicznego przeprowadzonego w polskiej populacji osób starszych (65.–100. r.), sięga nawet 75%. Analiza podgrupy osób powyżej 80. roku życia wykazała częstość występowania nadciśnienia tętniczego równą 73% (66% u mężczyzn i 76% u kobiet), a dobrą kontrolę ciśnienia określono jako wartości poniżej 140/90 mm Hg stwierdzono u 25% pacjentów.
Celem komentowanego badania była charakterystyka starszych pacjentów (> 80. r.) z nadciśnieniem tętniczym oraz porównanie tej grupy chorych z młodymi chorymi. Badanie polegało na analizie retrospektywnej danych 2512 pacjentów z rozpoznanym nadciśnieniem tętniczym hospitalizowanych w referencyjnych ośrodkach kardiologicznych w latach 2009–2010. Porównywano dane dotyczące chorób współistniejących, parametrów biochemicznych oraz echokardiograficznych w grupie pacjentów powyżej 80. roku życia, którą stanowiło 364 chorych (14,49%), oraz w grupie do 80. roku życia włącznie (2148 chorych – 85,51%). Wśród pacjentów starszych zauważono częstsze występowanie takich schorzeń, jak: migotanie przedsionków, niewydolność serca, przebyty udar mózgu. Analizowane grupy różniły się również pod względem postaci migotania przedsionków, z przewagą występowania utrwalonego mi-
gotania przedsiomków w grupie powyżej 80. roku życia. Wiek badanej populacji nie wpływał na występowanie stabilnej dawicy piersiowej, przebytego zawału serca ani cukrzyce. W grupie starszych pacjentów zaobserwowano istotne statystycznie wyższe wartości: odczynu Biernackiego (OB), mocznika, kwasu mocowego. Natomiast niższe wyniki w tej grupie chorych odnotowano w zakresie: stężenia hemoglobiny, liczby erytrocytów i płytek krwi, stężenia cholesterolu całkowitego, stężenia cholesterolu frakcji LDL (low-density lipoprotein), glikemii, klimensu kreatyniny i stężenia potasu. Frakcja wyrzutowa serca, a także tarczy hematokrytu oraz stężenia leukocytów, cholesterolu frakcji HDL (high-density lipoprotein), kreatyniny i sodu nie wykazywały związku z wiekiem.

Problem strategii leczenia nacisku tętnicze u osób w bardzo podeszłym wieku pozostaje ciągle nierozwiązany. Brakuje danych naukowych, które w jednoznaczny sposób określiłyby sposób leczenia najstarszych chorych. Jest to niezwykle trudne, ponieważ — jak to przedstawiono w omawianym badaniu — grupa starszych pacjentów charakteryzuje się zwiększoną częstością występowania chorób współistniejących, szczególnie układu sercowo-naczyniowego. W innym badaniu retrospektywnym, dotyczącym pacjentów w podeszłym wieku z naciskiem tętniczym, obecność przynajmniej jednej choroby współistniejącej wykazano u 88%, natomiast kilka takich schorzeń występowało w 61% chorych [1]. W innym badaniu oceniano współwystępowanie pięciu przewlekłych chorób, takich jak: nacisk tętnicz, choroba wieńcowa (CAD, coronary artery disease), choroba naczyń mózgowych (CVD, cerebrovascular disease), cukrzycy, nowotwór złośliwy, wśród osób powyżej 65. oraz 100. roku życia. Najbardziej rozpowszechnionym schorzeniem było nacisk tętnicze (zgłaszane o 57% badań), a następnie, w kolejności malejącej cukrzyca (20%), CAD (15%), nowotwór złośliwy (9%) oraz CVD (9%). Spór badanych 29% cierpiało na dwie lub więcej chorób współistniejących [2].

Liczne schorzenia współistniejące z naciskiem są przyczyną polifarmakoterapii, która często jest przyczyną niekorzystnych interakcji zachodzących między równe, stosowanymi lekami oraz większej liczby działań niepożądanych, na które osoby starsze są bardziej podatne. Wykazano związek między polifarmakoterapią a większym prawdopodobieństwemżenia się w domu opieki długoterminowej, upośledzeniem sprawności ruchowej, chorobowością, upadkami, złamaniami, wyniszczeniem, ryzykiem hospitalizacji i śmiertelnością [3–5]. W badaniu REPOSI (Registro Politerapia SIMI) 52% pacjentów w wieku powyżej 65 lat przy przyjęciu do szpitala przyjmowało pięć lub więcej leków, natomiast przy wypisie takich chorych było już 67% [6]. Czynniki ryzyka polifarmakoterapii były liczba chorób współistniejących, działania niepożądane występujące w trakcie hospitalizacji i długość pobytu w szpitalu [6].

Ze względu na liczne schorzenia współistniejące u starszych pacjentów z naciskiem tętniczym oraz duże zróżnicowanie chorych pod względem całościowego stanu zdrowia, sprawności fizycznej, intelektualnej i psychicznej istnieje konieczność bardzo zindywidualizowanej oceny pacjenta oraz zastosowanej terapii. Badania naukowe ukazują korzyści płynną ze stosowania leczenia hipotensyjnego, wynikające głównie z obniżenia ryzyka sercowo-naczyniowego, także u osób podeszłych w wieku. W badaniu CASTEL (CAdriovascularSTudy in the ELderly) dowiedziono, że występowanie nacisku tętniczego jest związane ze zwiększoną śmiertelnością u chorych powyżej 64. roku życia poprzez zwiększanie ryzyka występowania udaru mózgu. Również na podstawie metaanalizy BPLTTC (Blood Pressure Lowering Treatment Trialist Collaboration) wykazano, że obniżenie śmiertelności całkowite, stężenia cholesterolu frakcji LDL (low-density lipoprotein), glikemii, klimensu kreatyniny i stężenia potasu.
zwrócić uwagę na to, że populacja pacjentów włączonych do badania HYVET cechowała się znacznie lepszym stanem zdrowia niż ogólna populacja osób w wieku powyżej 80. roku życia. Wśród chorych zakwalifikowanych do badania odsetek pacjentów z chorobami współistniejącymi (niewydolność serca, cukrzyca, przebyty zawał serca, przebyty udar mózgu) był znacznie mniejszy niż w populacji ogólnej [9].

Największym ograniczeniem komentowanego badania jest brak danych na temat występowania objawów typowych dla wieku podeszłego, który Autorzy — niestety — nie oceniali, takich jak zaburzenia w zakresie narządów zmysłów, demencja, depresja, upadki, nietrzymanie moczu czy utrudnienia w wykonywaniu czynności życiowych. Do pełnej oceny starszego pacjenta z nadcisnieniem nie wystarczy bowiem jedynie analiza wysokości ciśnienia tętniczego, obecności innych czynników ryzyka i uszkodzeń narządowych czy innych schorzeń [10]. Kluczowe jest uwzględnienie zarówno innych stosowanych leków, tolerancji na leczenie, obecności wspomnianych zespołów geriatrycznych, jak i sytuacji ekonomiczno-socjalnej pacjenta. Z tego względu konieczne jest przeprowadzanie całościowej oceny geriatrycznej i uwzględnianie jej wyników w wyznaczaniu celu terapeutycznego i strategii hipotensyjnej. Jest to szczególnie ważne u osób najstarszych i z ograniczeniami sprawności, gdyż sukces w postaci obniżenia ciśnienia nie zawsze musi być korzystny dla tych chorych, a wręcz przeciwnie — czasem może być przyczyną pogorszenia jakości życia lub wystąpienia groźnych dla życia powikłań, takich jak na przykład upadki.

Piśmiennictwo